Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) has been widely considered to be the most important public works programme for improving livelihoods of the rural poor in independent India. It provides employment to nearly 7.5 crore persons every year. However, the programme has often been criticized for not creating durable and productive assets.

Based on a survey of close to 1000 irrigation wells constructed under MGNREGA in rural Jharkhand, this study provides an objective and comprehensive picture of the costs and benefits of construction of wells under MGNREGA, which are by far the most important asset under this programme, both in terms of number and expenditure. The study finds that wells have transformed the lives of thousands of rural poor by increasing their income from agriculture. This study is the first of its kind as it attempts to objectively measure the overall return on investment on an MGNREGA asset. Even after accounting for all the losses incurred on account of the abandoned and missing wells, MGNREGA wells still offer a return on investment of around 6 percent, which is quite encouraging. Overall this study shows the potential of NREGA for raising productivity and incomes through asset creation in a poor region like Jharkhand. The study will be useful for all those interested in rural development in general and those involved with the rural employment guarantee programme in particular.




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ALL'S WELL THAT ENDS IN A WELL Anjor & Pankaj

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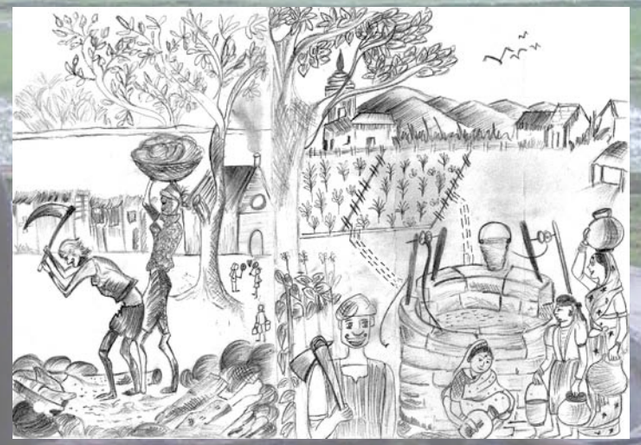

AN ECONOMIC EVALUATION OF MGNREGA WELLS IN JHARKHAND




Anjor Bhaskar and Pankaj Yadav

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Foreword

MGNREGA is the most and best researched programme in the development history of India. Over the last decade, different aspects of the programme have been widely studied, analysed, discussed and debated. The Ministry of Rural Development itself has come out with two *Sameekshas*, summarising the findings. While almost all the findings testify to its positive impact on the poor—far more than any employment programme of the past—there has not been much research into the relevance, usefulness, productivity and economic returns of the assets created.

This study by the Institute for Human Development, Eastern Regional Centre, Ranchi, is a path-breaking one in several respects, as it shows that:

1) Durable and economically productive assets can be created on a large scale under MGNREGA.
2) MGNREGA can succeed even in the most difficult circumstances, that is, in the face of a weak administrative machinery, difficult terrain, extremely indigent beneficiaries, and so on.
3) The beneficiaries have a strong preference for assets that would improve their livelihood, which highlights the need for improved local level participatory planning.
4) While establishing the relevance of MGNREGA for the poor and the marginalised, it has also highlighted the operational problems like corruption, patronage, and delays, among other things, which demand an urgent administrative response.

This study has been conducted using a large sample. It follows a rigorous methodology and explores all possible aspects and implications, making it truly holistic. It provides several pointers for policy makers, especially the need for genuine local planning, improving the capacity of the administrative support system, enhancing transparency and strengthening mechanisms against malfeasance. In a sense, it validates the recent attempts of the Ministry of Rural Development to promote participatory planning, improve the quality of assets, strengthen implementation capacity, deepen accountability mechanisms, actualise social audit, strengthen people's organisations like Labour Groups and Self-Help Groups (SHGs), and promote innovations like village level barefoot engineers.

I am sure that this excellent study would help in promoting a more realistic and rational appreciation of the strengths and weaknesses of MGNREGA, without indulging in either visceral antipathy or romantic eulogy, and pave the way for fortifying the implementation of MGNREGA.

S.M. Vijayanand
Director General
NIRD&PR

Message from the IHD Director

The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) has been widely acclaimed as one of the most important interventions towards improving the livelihoods of the rural poor in independent India. It is among the largest and most expansive public employment programmes in the world, and rightly so, for MGNREGA provides employment to nearly 7.5 crore rural individuals every year.

Hitherto, several studies have been conducted on the functionality, reach and pertinence of MGNREGA towards enabling India's rural poor to earn reasonable livelihoods. However, these studies have largely drawn inconclusive outcomes regarding the overall productivity of MGNREGA assets.

In contrast, this study, though limited in scope, as it focuses on only one type of asset in one state, provides an objective and comprehensive picture of the actual costs and benefits of well construction under the aegis of MGNREGA. In fact, this is the first study pertaining to MGNREGA assets, which accords serious consideration to the need for speedy implementation of incomplete projects. This study serves the dual purpose of calculating the proportion of MGNREGA wells that go missing and that have been abandoned mid-way apart from the costs associated with missing and abandoned wells. It is also one of the very few studies which takes into account the out-of-pocket expenses that the beneficiaries have to incur while constructing an MGNREGA asset.

The study clearly shows that the MGNREGA wells, if completed, could bring about a significant improvement in the lives of not only the proposed beneficiaries but also many other people. The wells, though constructed for the purpose of irrigation, provide several other extremely useful services including the unexpected benefits like rearing fish, a livelihood activity, which nearly 40 per cent of the beneficiaries of the wells are presently engaged in.

This is also the first study of its kind which attempts to objectively measure the return on investments from NREGA assets. It is encouraging to find that even after accounting for all the losses incurred on account of the abandoned and missing wells, investments into the NREGA wells still offer nearly a 6 per cent. This is encouraging, especially when we take into account the fact that this figure does not include several important benefits arising from NREGA wells. For instance, it does not consider the benefits accruing to the non-owners of the wells, which are found to be

quite significant, and often more than the benefits accruing to well owners. Nor does it take into account the benefits arising from uses of the well other than for irrigation. Finally, it also does not consider the benefits resulting from the provision of employment to rural households during the lean agricultural seasons, which is indeed the primary purpose of MGNREGA. It would thus be pertinent to obtain an estimate of the return on investments from MGNREGA assets in the future, wherein all these benefits are also taken into account.

This study also highlights the causes of non-completion of MGNREGA assets, the most important of which are administrative hurdles including payment delays and incomplete payments, non-payment of wage and material expenses, and financial leakages in the form of bribes and commissions, among other economic discrepancies. This study clearly indicates the need to tackle these roadblocks in the implementation of MGNREGA projects and a substantial overhaul of the existing system to improve the overall outcomes of and returns accruing from this livelihood creating mission. In the specific case of the NREGA wells in Jharkhand, such an overhaul would significantly reduce the risks associated with both the construction of the wells as well as the possibility of their abandonment.

I take this opportunity to congratulate the study team led by Mr. Anjor Bhaskar and Mr. Pankaj Yadav and ably supported by a dedicated group of field researchers and investigators for their sincere and relentless efforts in successfully completing this research..

I also take this opportunity to express my appreciation for the support offered by the IHD Eastern Regional Centre (IHD-ERC), led by its Director Dr. Harishwar Dayal, and Mr. Ashwani Kumar, Programme Coordinator, IHD-ERC, for this work.

We sincerely hope that this study would contribute towards a better understanding of the value as well as issues related to the construction of MGNREGA assets, while helping to overcome hurdles and promoting livelihoods in the process.

Alakh N. Sharma
Professor and Director
Institute for Human Development
New Delhi

Preface

The study is the result of the tireless work of Mr. Anjor Bhaskar and Mr. Pankaj Yadav, and their team. The study was conducted by the Institute for Human Development, Eastern Regional Centre (IHD-ERC), Ranchi, with support from National Institute for Rural Development and Panchayati Raj (NIRD & PR), Hyderabad. During the last eight years of its existence, IHD-ERC has conducted several important studies on diverse aspects of human development. The present study is another feather in its cap.

The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) is one of the most widely studied, discussed and debated programmes of the Government of India. The design of the programme, the problems in its implementation, and its impact on the economy, and particularly on promoting livelihood security of villagers, have attracted the attention of a large number of scholars. However, very few studies have made an effort to evaluate the quality and impact of the assets created under the programme. This study attempts to bridge this gap by assessing the impact of one of the most popular MGNREGA assets in Jharkhand, viz., irrigation wells.

Agriculture in Jharkhand is by and large rainfed—only less than 10 per cent of the net sown area is irrigated. The problem is further compounded by the fact that a large part of the state is drought-prone, which makes cultivation a risk-prone vocation. The irrigation potential created through major and medium irrigation projects, on the other hand, is very limited. This makes irrigation wells an extremely important asset in the rural areas of the state. Realising its importance, the Government of Jharkhand decided to construct 50 irrigation wells in each Panchayat under NREGA in 2010. By November 2013, nearly 1,15,000 wells were sanctioned for construction and about 80 per cent of these wells were said to be complete by the time this study was undertaken.

Contrary to the beliefs of many of those who oppose this scheme and consider the expenditure on it wasteful and the assets created under it useless, this study found that MGNREGA wells have proved to be extremely beneficial for the people. Besides promoting irrigation, these wells also provide various household services like provision of water for bathing, cooking, washing, drinking and even rearing fish, the economic benefits of which cannot be quantified accurately. However, it would be interesting for future research to study the impact of these wells on diverse aspects such

as hygiene, sanitation and even healthcare by making drinking water more easily accessible to people.

I hope that this study would prove to be useful for academicians, policy makers and people working at the grassroots level. I also hope that this study would inspire researchers to evaluate other assets created under this scheme. The authors and their team deserve acclaim for conducting this study and bringing out this report.

Harishwar Dayal

Director, Institute for Human Development Eastern Regional Centre (IHD-ERC), Ranchi

Acknowledgements

As always, this study is the culmination of the collective effort of many people. First and foremost, it is a result of the warmth and honesty of the people living in Jharkhand's villages. These include the NREGA workers; the *Mukhiyas*; the poor labourers; the beneficiaries of the wells (who gave us their valuable time and patiently answered our numerous questions to reveal crucial historical facts and figures); the victims of the failed NREGA wells (who, despite our best efforts, may still have believed that we could somehow reduce their losses and grievances); and the Rozgar Sevaks and Panchayat Secretaries, who welcomed us warmly, lavished their trust on us despite the possible ramifications, offered us all the information they could provide, fed us, sometimes kept us in their homes, or arranged for our comfortable stay in *anganwadis*, schools or even under a tree.

We would also like to dedicate this study to the inhabitants of Jharkhand's Naxal-affected villages in Palamu, West Singhbhum, Ramgarh, Dumka and Hazaribagh districts, without whose support it would not have been completed. These people stayed with us during the course of the research, inspiring confidence and faith in us to continue our work unfazed by fear. Among them, Nathul Oraon, the *Mukhiya* of Ratanpur Panchayat, Mahadev Murmu of Chortaniya village in Ramgarh, and Prashant Dutta, GRS of Pandanpahari Panchayat in Dumka were particularly helpful and motivated us to carry on our work even when we were being repeatedly warned to stay away from the concerned areas for security reasons. These people often put themselves at risk to ensure that we got to the truth. We sincerely hope that this study would contribute, even if in the smallest measure, towards improving their lives, livelihoods and working conditions. Most of them work under immense pressure from multiple stakeholders for little or no rewards.

We would also like to offer many thanks to several BPOs, BDOs, DDCs and DCs, who despite their demanding work schedules, gave their precious time to engage in detailed discussions on the issue. In particular, we would like to thank Mr. Sandeep Bhagat (who was, at the time, the BDO of Panki Block in Palamu), Mr. K.N. Jha (who was the DC of Palamu), and Mr. Ashok Kumar (BDO of Barkagaon Block in Hazaribagh) for their assistance and deep involvement in the research despite their busy schedules and complex duties.

The staff at IHD-ERC, especially Mr. Ashwini Kumar and Mr. Amit Kumar, also greatly helped us to handle the administrative and

financial complexities of such a large project. In addition, we thank Mr. N. Subramanian and Mr. Shyam Kumar at the IHD Delhi office for their unstinting support.

The members of the Committee constituted by the Ministry of Rural Development to look into the implementation of NREGA in Jharkhand, were hugely supportive and instrumental in realising the objective of this study and making it a reality. We would like to make special mention of Inayat Sabhikhi, who was our contact person from the Ministry of Rural Development in Delhi.

The Staff at the National Institute for Rural Development (NIRD), particularly Dr. Rajani Kanth, was always available to discuss and explain operational details. We thank them for sponsoring and enabling us to conduct this study, which was a memorable and enriching experience for all of us.

We offer our deep appreciation to Professor Harishwar Dayal, who allowed us to benefit from the informal but creative and nurturing environment at IHD Ranchi, which served as both our workspace and a home away from home during the course of the research. With his immense knowledge about Jharkhand, coupled with his analytical insight, Professor Dayal was also able to provide invaluable comments and suggestions for the study.

Mr. Avirup Mukherjee, Ms. Devika Modi and Dr. Rakesh Tiwari (formerly) of IHD, Ranchi, also provided very valuable support, encouragement and critical comments during several discussions over lunch and *chai*. Mr. B.K.N. Singh, Research Associate at IHD, deployed his unparalleled field experience and wisdom to assist us in improving the questionnaires.

We would also like to express heartfelt gratitude to Ankita Aggarwal, whose commitment towards improving the lives of the poor in Jharkhand has made her one of the key resource people on NREGA in Jharkhand. With her proximity to both the civil society and the Government, she helped us in procuring letters, getting appointments with officials, identifying contacts to guide us during the survey, improving the questionnaires and study design, and obtaining valuable data for the project.

Special thanks are due to all the members of the survey team, including Mr. Suresh Chandra, Mr. Sunil Gupta, Mr. Srinivas Pandey and Mr. Kishori Lal, who waded through the heavy Jharkhand rain, often walked for several kilometers over hills and fields, while remaining hungry many times, braving the feared Naxal villages, staying sometimes in schools, sometimes under trees, but did not give up their determination to complete the project.

During the course of the fieldwork spanning four months, the team, which worked in the deepest pockets of Jharkhand, remained undeterred despite several difficulties. They were surrounded by gun-toting Naxalites in the middle of the night in a village in Dumka. Their laptop was also stolen and later returned (for a price) in a village in Jamtara. They had to wade through waist-high water in fields during the monsoons in Hazaribagh, often getting soaked to the skin but doggedly preserving the precious questionnaires from damage and also managed to get photographs of the study. These and many other adventures characterised the course of the survey and created blockages which the team overcame through their sheer perseverance. We would also like to thank Ms. Khushboo Gupta for the cover drawing and Ms. Anupma Mehta for copy editing.

Last but certainly not the least, Professor Jean Dreze was the idea and inspiration behind this study, the one who pushed us to work beyond our potential at every moment, and guided us every time we were stuck. We hope that we have been able to come up to his expectations.

And finally, this published version of the report would not have been possible without the effervescent and eager spirit of Professor Alakh Sharma, Director of IHD, and Ms. Priyanka Tyagi, Communications Coordinator at IHD Delhi. We would like to extend our heartfelt thanks to all these people for fructifying this project and helping us to successfully conclude this study.

Anjor Bhaskar
Pankaj Yadav

Abbreviations

BDO	Block Development Officer
BPO	Block Programme Officer
Change in NICA	Change in the Net Annual Income from Agriculture in the Command Area of the Well experienced due to the construction of the well and excluding the change in income (or dropping the well owners which have experienced change in income) due to other factors
DC	District Collector/Deputy Commissioner
DDC	Deputy Development Commissioner
DoRD	Department for Rural Development, Government of Jharkhand
FGD	Focused Group Discussion
FY	Financial Year
GP	Gram Panchayat
GRS	Gram Rozgar Sevak
GS	Gram Sabha
IHD	Institute for Human Development
IHD-ERC	Institute for Human Development-Eastern Regional Centre (Ranchi)
MB	Measurement Book
MGNREGA	Mahatma Gandhi National Rural Guarantee Act
MIS	Management Information System
MoRD	Ministry of Rural Development
NICA	Net Annual Income from Agriculture in the Command Area of the Well
NIRD	National Institute for Rural Development, Hyderabad
NREGA	National Rural Employment Guarantee Act
OBC	Other Backward Classes
PC	Pay Commissions
PDS	Public Distribution System
PS	Panchayat Secretary
ROI	Return on Investment
RoR	Average Annual Rate of Return on investments made on the well
SC/ST	Schedule Castes/ Schedule Tribes
UNDP	United Nations Development Programme

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Executive Summary

In an effort to tackle drought and increase access to irrigation in rural areas, the Government of Jharkhand decided to focus resources accruing from the National Rural Employment Guarantee Act (NREGA) for the construction of irrigation wells on private lands. In 2010, it ordered the construction of 50 irrigation wells in each Panchayat under NREGA. By November 2013, nearly 1,15,000 wells were sanctioned for construction. According to government data, 80 per cent of these wells have so far been completed and work is ongoing on another 15 per cent.

This study attempts to verify the truth in these claims. Physical visits to 926 NREGA wells across six randomly selected districts in Jharkhand revealed that nearly 60 per cent of the sanctioned NREGA wells were actually complete. The completion rate rose to 70 per cent if the wells complete till the ground level (that is, without a parapet) were included. This is similar to the rate of completion obtained by using data from the NREGA MIS, according to which nearly 66 per cent of the sanctioned wells in the sample panchayats were complete. Thus, the completion rates obtained through the NREGA MIS can be said to be fairly accurate.

This study also attempts to compare the actual status of the wells with the 'official' status of the wells as mentioned on the official NREGA website (www.nrega.nic.in). Nearly 75 per cent of the 'officially' complete wells were found to be actually complete, with the figure rising to 83 per cent if the wells complete till the ground level (without parapet) were considered to be complete. Therefore, most wells mentioned as 'completed' on the NREGA MIS were actually found to be completed. Unfortunately, the same cannot be said of wells categorised as 'ongoing' or as 'suspended'. We found that only around one-third of the wells categorised as 'ongoing' can actually be said to be 'ongoing'.

The next question which arises is: What has been the impact of these wells, including wells which were constructed as also those which were not?

Firstly, the study found that nearly 96 per cent of all the completed NREGA wells were being utilised, while 95 per cent were being utilised for irrigation. A few wells could not be utilised as they had dried up.

Secondly, the study found that the completed NREGA wells led to a 190 per cent increase in annual net income from agriculture in the command area of the well (NICA). The annual average rate of return (RoR) on the expenditure incurred on completed wells was estimated to be 6.5 per cent (that is, the expenses incurred on construction of the completed NREGA wells by the Government as well as by the well owners would be recovered within 15.4 years, on an average). However, this figure does not account for the fact that nearly 12 per cent of all the wells have been abandoned and hence give no returns to investment. This figure also does not account for around 7.8 per cent of the wells which were found to be 'missing'. If such wells are accounted for, the overall RoR is estimated to be 5.7 per cent. On the whole, therefore, the cost of investment (both private and public) on the wells would be recovered within 18 years of operation of the well.

However, due to several reasons, this figure is likely to be a severe underestimate. This is because firstly, the estimate does not account for benefits to households other than the well owners. Secondly, we have not quantified the various household services offered by the well such as the provision of water for bathing, cooking, washing, drinking and even rearing fish. Thirdly, various external factors have pushed down the income of farmers in the two years prior to the survey. Because of these factors, there has been a downward pressure upon the change in net income and the real annual average Rate of Return is likely to be significantly higher than 5.7 per cent.

According to the policy, the Government is supposed to cover all the investments on NREGA assets. In the case of assets constructed on private lands (such as wells), the beneficiary is expected to provide labour for the construction of the asset (while getting paid for the labour at NREGA-stipulated wage rates). However, the Government rarely covers the entire expense on assets constructed on private land. The study found that 87 per cent of the respondents with completed wells actually had to incur significant out-of-pocket expenses for constructing the well. While 36 per cent of those whose wells had been completed had had to take loans to finance the out-of-pocket expenses (with the average value of the loans being around Rs. 18,000), another 9 per cent had to actually mortgage some movable or immovable property to finance their wells.

Yet, nearly 96 per cent of the owners of the completed NREGA wells felt 'happy' at having constructed the well, 92 per cent were satisfied with the quality of the well, 86 per cent were living and eating better due to the well, and 85 per cent felt that their incomes had gone up as a result of the well.

Finally, the census of 926 wells found that 11.8 per cent of the wells had been abandoned with no likelihood of their completion nor of these wells ever being of any utility. Such wells impose a huge burden upon the beneficiary household. Payment delays were found to be the single largest factor behind the abandonment of wells, as 71 per cent of the wells had been abandoned for this reason. The owners of the abandoned wells complained that these payment delays, coupled with other payment-related issues such as the demand for commissions/PCs or embezzlement of funds, force beneficiaries to incur significant out-of-pocket expenses on labour and material costs. Strangely, beneficiaries who are not able to incur these expenses are often blamed by officials for non-completion of wells. We often heard officials alleging that the wells were incomplete because the beneficiaries were 'not motivated enough'—in other words, they were not willing to spend out of their own pocket. In fact, 26 per cent of the owners of abandoned wells claimed that the wells remained incomplete as they could not meet these expenses.

This is the first comprehensive study of an MGNREGA asset which delves deep into the issue of non-completion of assets, missing assets, out-of-pockets expenses of beneficiaries, delays in construction and accuracy of official MIS data regarding status of assets. Even after accounting for all these problems, however, MGNREGA wells are found to have immense long term impacts upon the lives and livelihoods of the rural poor in Jharkhand. Despite the huge costs of non-completion, leakages and delays, the wells programme in Jharkhand is found to have an overal annual rate of return on total expenditure (RoR) of nearly 6 per cent, a respectable figure for any economic investment. However, major reforms are needed, particularly in governance and administration in order to achieve the true potential of the programme.

1

Introduction

1. Introduction

1.1 The Significance of NREGA

1.1.1. Pitting it against NREGA

The Prime Minister, in his reply to the Motion of Thanks to the President's Address, said, "Sometimes, we are told that we will or we are about to discontinue MGNREGA [Mahatma Gandhi National Rural Employment Guarantee Act] or have closed down MGNREGA.....I cannot make such a mistake because ***MGNREGA is a living monument of your failures. After 60 years of Independence, you had to send people to dig holes***. This is a monument of your failures and I am going to carry on beating the drum about it with much fanfare. ***I will tell the world that the pits you are digging, they are the result of your wrongdoings for 60 years.***" He went on to give his assurance that the scheme would not be discontinued, but would only be expanded. However, he stressed that the reason for this was that "***I believe in letting people know who has left these ruins from them. Even after so many years of Independence, who has forced them to dig these pits?***" (pmindia.gov.in 2015)

The Prime Minister's words can be understood to imply the following: *The Congress Party, which formed the government for most of the time after Independence, could not create conditions whereby the entire labour force could be engaged in productive, high-value employment in the private sector. Therefore, they still had to depend on the government to support them, which the latter did by engaging them in 'digging pits' and paying something for it.*

Would better governance actually have created conditions wherein the entire labour force could have been engaged in high-value private employment (or self-employment)? Would better governance in all these years actually have eliminated the need for provision of socio- economic security by the government? While this research does not engage in these questions, it seeks to explore the significance and feasibility of the programme of construction of wells in Jharkhand as part of the NREGA works, and how this project has had a major impact on the lives and livelihoods of the local populace.

However, underlying the Prime Minister's words was the assumption that employment in NREGA is 'unproductive', that is, it is low-skilled and does not contribute towards creating any value, let alone contribute to-

wards the nation's growth or economic development.

This belief is shared by various others as well. Recently, communications from the Ministry of Rural Development (MoRD), Government of India, revealed its intention to reform the NREGA by curtailing it to 200 of the poorest districts or 2500 of the most backward blocks, modifying the labour–material ratio to 51: 49 from the present 60: 40, thereby putting a cap on expenditure by state governments and removing the provision of compensation for delayed payments (Abreu, *et al*., 2014). The underlying assumption here is that all labour-intensive works are unproductive and hence NREGA works, being labour-intensive, are also unproductive.

The belief that NREGA assets are unproductive is shared by the Vice Chairman of the newly established Niti Aayog as well. In an article written with Professor Jagdish Bhagwati (Bhagwati and Panagariya, 2014), he calculates that out of every Rs. 5 spent on NREGA, only Re. 1 is transferred to workers as wages after deducting the 30 per cent spent on materials (*which is considered a waste*). The authors of the article, therefore, argue that a cash transfer would be a much more efficient way of transferring funds to the poor and increasing their purchasing power. Their argument assumes that NREGA is only about transferring incomes and increasing purchasing power and has nothing to do with the creation of productive assets.

Other authors have also reflected these sentiments. According to Barua (2014), NREGA has not only caused inflation but has also hampered industrialisation and hence economic growth. He explains that NREGA has led to a tremendous increase in wages, which, in turn, has led to a corresponding increase in the Minimum Support Prices (MSPs) for crops that h a s manifested itself in an increase in agricultural prices. Further, as NREGA has been providing incomes to the rural poor within their respective villages, it has disincentivised migration for work. This has led to a tremendous shortage of labour for industry and curtailed the movement of labour from the farm sector to more productive work in industry. However, an income transfer would lead to inflation only if it were to increase demand without leading to a corresponding increase in output or productivity. Barua's claim that NREGA has caused inflation is, therefore, implicitly built upon the assumption that the NREGA assets were unproductive.

1.1.2 Shooting in the Dark

Thus, the assumption among officials as well as certain academic circles is that NREGA work is unproductive. Even supporters of the programme usu-

ally highlight some of the known positive attributes of the programme including employment security, the reduced need to migrate, and improved bargaining power with regard to wages, among other things. They use these arguments because of the large amount of data available on these issues. Data sources such as the Government's own NREGA Management Information System (MIS) (available on the official NREGA website), the National Sample Surveys undertaken by the National Sample Survey Organisation (NSSO) as well as the India Human Development Survey have covered several aspects of NREGA such as coverage, targeting, workers' experiences and changes in rural labour markets. However, none of these large scale data sources provide information on asset quality or its impact.

The debate regarding the effectiveness of NREGA thus largely ignores the contribution of the assets constructed under the Act. Sceptics ignore the contribution of assets, assuming them to be of poor quality and hence unlikely to have any significant impact upon rural lives and livelihoods. On the other hand, advocates of NREGA extol the 'potential' of assets constructed under NREGA, which has been verified by several small surveys (for a thorough review of such studies, see the Sameeksha report prepared by MoRD, 2012). The report does point towards a significant body of evidence regarding the massive productive impact of NREGA assets in certain parts of the country. This evidence indicates that the quality, utility and durability of assets have been found to be satisfactory, though with tremendous scope for improvement. The evidence, however, is largely based on studies of 'best performing assets', or 'completed assets' and are thus unable to provide a comprehensive and overarching picture of the impact of NREGA on rural productivity.

According to the Government, NREGA led to the construction of 25.53 lakh assets in 2012-13 and 25.58 lakh assets in 2013-14 (www.NREGA.nic.in as accessed on 7 November, 2014). The MGNREGA Sameeksha (MoRD, 2012, p. 32) using provisional figures for 2011-12 reported that nearly 87 lakh assets had been constructed during the six years since the programme's inception with a completion rate of 60 per cent.

1.1.3 Where Light Is Needed

Were these assets actually constructed or did they exist only on paper? If they were constructed, were they durable, or, as the Prime Minster assumed in his speech, unproductive works? The answers to these questions can only be provided through rigorous evidence. The MGNREGA Sameeksha report

noted, "*There are only a few studies that have conducted rigorous scientific analysis on the actual productive performance of these assets*". Thus, the study concludes, "*This is also an area where more rigorous research is required*."

This study attempts to contribute to this very requirement—of rigorous research.

1.1.4 Why Jharkhand Most Needed the NREGA

According to 2011-12 data, Jharkhand is one of the states with the highest rates of poverty, second only to Chhattisgarh. The Tendulkar Committee points out that as of 2011-12, the level of rural poverty in Jharkhand was 40.8 per cent, as opposed to a national average of 25.7 per cent (with only Chhattisgarh registering a higher poverty level of 44.6 per cent). According to revised methodology for poverty measurement devised by the Rangarajan Committee, poverty in Jharkhand stood at a level of 45.9 per cent as opposed to a corresponding national average of 30.9 per cent. Thus, almost one in every two persons in rural Jharkhand fell below the poverty line in 2011-12 (Planning Commission, 2014).

The state also has one of the lowest rates of irrigation coverage, ranging from 2 per cent in some districts to 24 per cent in others. Agriculture is thus mostly rainfed, with most farmers cultivating only one crop in the year, that is, the kharif crop. To top it all, some regions of the state have been affected by droughts through successive years, leaving them on the brink of starvation.

Despite the high levels of poverty in Chhattisgarh, the state has managed to effectively tackle the problem of food insecurity through reforms in the public distribution system (PDS). However, no such major reforms have been witnessed in Jharkhand, with the likelihood of its 'effective poverty rates' thus being even higher than those of Chhattisgarh.

Logically, a state with such high levels of poverty and starvation, low levels of irrigation coverage, and hence lack of employment for several months of the year, which characterise Jharkhand, would have a very high requirement for employment under NREGA. It would also have a greater need for the creation of productive assets such as water conservation and harvesting works and drought-proofing.

1.1.5 Prescribing Wells for the Not-So-Well-Off State

In an effort to tackle drought and improve access to water in rural areas, the Government of Jharkhand decided to deploy NREGA resources for constructing irrigation wells on private lands. In 2010, it ordered the construction of 50 irrigation wells in each Panchayat under NREGA. One of the primary objectives of this initiative was to decrease the water shortage caused by the drought in the state at that time. By November 2013, nearly 1,15,000 wells were sanctioned for construction. According to Government data, presently, 80 per cent of these wells are complete and work is ongoing on another 15 per cent (Aggarwal, 2013).

However, in the present context, it is important to assess the impact of this initiative.

1.1.6 Previous Studies on the Performance of NREGA Wells in Jharkhand

A small pilot study of irrigation wells constructed under NREGA in Jharkhand conducted in March 2012 (see below) suggests that completed wells are quite useful and productive (Aggarwal, *et al.*, 2012). The study was based on a survey of 11 NREGA wells constructed in the Purio Gram Panchayat in the Ratu Block of Ranchi district. The study found an average increase of Rs. 4,539 per annum in NICA (that is, 1.5 times the income accruing to the beneficiaries before the construction of the well). On an average, an amount of Rs. 1.93 lakh was spent on one NREGA well, which reaped an annual rate of return of 2.29 per cent for the 'owners' of the well (implying that the cost of the well would be recovered within 40 years).

The findings of the pilot (Aggarwal, *et al*., 2012) hint that completed NREGA wells may lead to a significant increase in the incomes of the poor.

However, the pilot study had several lacunae, which are detailed below.

Firstly, it was based on a very small sample and the findings cannot be claimed to be representing the story of completed NREGA wells in Jharkhand. The study, therefore, concluded, "*This evaluation is based on a quick survey of NREGA wells in one gram panchayat. It would be useful to carry out similar evaluations in other parts of the country, to understand the benefits of completed NREGA wells as well as the hurdles that prevent their timely completion*" (Aggarwal, *et al*., 2012, p. 27).

Secondly, the study, like most other studies which have till date studied NREGA assets, focuses only on completed NREGA wells. The study admits,

"*It is important to note that a significant proportion of NREGA wells in Jharkhand remain incomplete, for reasons ranging from delays in wage payments to inadequate planning and limited capacity of local institutions*" (Aggarwal, *et al*., 2012). While it is important to undertake such a study in order to understand and assess the quality of completed NREGA works, it does not depict the entire picture. The study itself notes, "*Incomplete wells are not only useless and a waste of resources and labour, but also discourage people from taking up water conservation works under the Act*" (Mahapatra, *et al*., 2011). The estimate of the RoR on investment on NREGA wells is based only on expenditure and returns from completed wells. Hence, it is likely to be biased. This is because the estimate does not incorporate the costs of t h e 'failed' investment on incomplete wells.

It was these lacunae that motivated us to conduct a more representative evaluation of NREGA wells so as to be able to understand how they might (or might not) be impacting the lives of people in Jharkhand. The following sections describe in detail the aims, objectives, structure and methodology of the study.

1.2 Objectives

The primary objective of the study is to assess the returns from investments on NREGA assets, particularly irrigation wells constructed under NREGA in Jharkhand. In doing so, it also attempts to highlight obstacles encountered in the construction of these wells, and to identify ways to improve the returns from such investments. This objective would be fulfilled by undertaking the following proposed studies:

A study of the completed NREGA wells to assess the:

1. Costs involved (public and private) in constructing NREGA wells on private lands;
2. Factors which may or may not lead to private expenditure on NREGA wells;
3. Quantitative impact of completed NREGA wells upon NICA in the command area of the wells;
4. Other qualitative uses of NREGA wells (apart from their contribution to agriculture); and
5. Public good nature of private NREGA wells, that is, determining whether NREGA wells are used as private goods by the well owners or whether

they are shared as public goods.

A study of all NREGA wells in selected panchayats to figure out the:

1. Actual proportion of NREGA wells getting completed;
2. Actual proportion of NREGA wells getting abandoned, that is, wells which are unlikely to ever be completed;
3. Accuracy of Government data regarding the status of completion of assets; and
4. Comparison of status obtained through primary survey data and through government sources.

A study of incomplete NREGA wells (with little or no likelihood of completion) to understand the:

1. Quantitative estimates of costs borne by the beneficiaries; and
2. Causes for non-completion (abandonment) of the wells.

A study of beneficiaries, non-beneficiaries and functionaries to arrive at answers to the following questions:

1. Who gets a NREGA well?
2. What is the process entailed in obtaining a NREGA well?
3. How well is the programme for construction of wells targeted?
4. What is the nature of the demand for NREGA wells?
5. How does it compare with the demand for other NREGA assets?
6. Are sustainability concerns incorporated into the planning of NREGA works?
7. What are the problems and constraints faced by the NREGA functionaries?

1.3 Structure of the Rest of the Report

While Section 1 described the need to conduct this study and reviewed the existing debates as well as evidence on the subject, the rest of the study is divided into six sections as follows.

Section 2 delineates the methodology of the research, by describing the process of preparation of instruments for data collection, the sampling method-

ology, and the steps involved in collecting and verifying the data to ensure its quality. Section 3 analyses the data obtained through the survey of beneficiaries of the completed NREGA wells. Section 4 assesses the data obtained through a census of 923 NREGA wells in all 24 panchayats. Section 5 presents an analysis of the data obtained through the interviews with the prospective beneficiaries of NREGA wells that never got completed (and are unlikely to ever get completed). Section 6 tries to seek an answer to the question, "Can the poor afford NREGA wells—that is, are the rural poor able to access NREGA wells despite the need to incur significant private costs?" Section 7 concludes the study.

2

Data Collection and Verification Methodology

2. Data Collection and Verification Methodology

2.1 Sources of Information

The information for the study was drawn from the following four main sources:

1. **Literature:** The existing literature, including studies, legislations, orders passed by the state and Central governments, newspaper articles, and informal correspondence constituted important sources of secondary information.
2. **The NREGA Website:** One of the most important sources of information on assets constructed under NREGA was the official website of the Government of India for maintaining and updating information related to NREGA (www.NREGA.nic.in). Lists of assets along with their details in each of the sampled panchayats were obtained through the Management Information System (MIS), which is accessible to the public. The list of assets has then been manually filtered to obtain the list of wells in each panchayat. This is achieved by reading the detailed description of each asset and intuitively figuring out which asset would be a well and which would not. The website also provides details regarding the status of completion of each asset, the sanctioned amount, and the actual expenditure incurred by the Government on each asset.
3. **Primary Survey:** Armed with a list of wells obtained through the NREGA MIS, we conducted a census on the status of completion of each asset, while also analysing the costs and benefits of investments in NREGA assets.
4. **Department of Rural Development, Jharkhand:** Finally, information on NREGA assets was also obtained from the Department of Rural Development, Government of Jharkhand, which provided data on the status of completion of wells in different districts of the state. This information was also used to compare the level of accuracy of official data with the primary data.

2.2 Duration of the Survey

The study was carried out between May 2014 and March 2015 and involved the following three stages:

- Preparation and finalisation of tools, which took place in May 2014;
- The actual survey of NREGA wells across Jharkhand, which took place from 1 June 2014 to 10 September 2014; and
- Finally, the data entry, analysis, cleaning, and verification, which took place from September 2014 to March 2015.

Prior to the survey, a pilot was conducted in May 2014, in the Angara block of Ranchi district to test the tools, including the questionnaires, verification sheets and Focused Group Discussion (FGD) formats. Following the tests, these tools were also modified after several consultations.[1]

2.3 Quality Control Measures

Throughout the duration of the survey, the survey team lived in the survey villages itself. This allowed the researchers to spend more time on the project and to become familiar with the local context and local population in each village. It also helped the team members to engage in free-flowing conversations and ensure the genuineness of responses to the survey questions. Before the survey, all the respondents were informed that the questionnaire was intended only for policy purposes and that it would neither be used for procuring any immediate personal benefits nor cause any harm to them. After hearing this, some respondents actually lost interest in the survey, as they had initially agreed to participate in it with the hope of gaining some immediate personal benefit. For instance, many of them agreed to respond, hoping that this would lead to payment of money that had been pending under NREGA for several months. Some others, especially the local elite, agreed to respond only out of fear, perceiving that if they did not, or that if we got to know the truth, it might lead to action against them. Many of them lost interest in responding when they realised that they had nothing to fear from us. Those who actually responded finally were the ones who harboured a genuine interest in narrating their stories. We are grateful to all those respondents. We also believe that the process of informing about the survey and ourselves to the local population acted as a

[1] In particular, we would like to thank Professor Jean Dreze, Mr. B.K.N. Singh, Ms. Ankita Aggarwal and Professor Harishwar Dayal for their valuable suggestions on the questionnaires.

self-selection mechanism as it helped weed out the respondents who might have otherwise attempted to provide dishonest responses out of fear, greed or spite. We are thus fairly confident about the quality of data on otherwise sensitive issues such as incomes and bribes.

Further, the information we collected went through three rounds of verification. Firstly, in the evenings during the survey, the surveyors would sit with the questionnaires and notes, and verify their own data. This would be followed by a second round of cross-verification by one member of the team. Finally, all the data collected by using questionnaires was checked and verified for a third time during the stage of data entry.

These precautions further helped to ensure that the data was of good quality and contained minimum errors.

2.4 Panchayat Selection

We wanted to select a sample of wells that would be representative for the state of Jharkhand. We, therefore, decided to select six districts for our study out of the 24 districts in Jharkhand. These represent 25 per cent of the state of Jharkhand (in terms of the numbers of districts represented). These districts were selected by dividing the 24 districts in the state into six geographical zones—North-east, North, North-west, South-east, South-west, and Central. One district was randomly selected from each zone,[2] thus totalling six districts. From each of these six districts, two blocks were selected randomly. Thus, a total of 12 blocks were selected. Finally, from each of the 12 blocks, two panchayats each were randomly selected. The survey then involved five sets of activities in each panchayat.

2.5 Census of All the Sanctioned Wells

The first step was to conduct a census of the wells in each of the 24 panchayats. This was done in order to verify the actual status of all the wells and to compare it with the status mentioned on the NREGA website. A list of all the assets in the panchayat was obtained from the MGNREGA website (www.nrega.nic.in). It must be noted that the NREGA database does not categorise assets according to the type of asset. Rather, here assets are categorised according to the purpose they serve such as Flood Control and

[2] The random selection in each case was done by assigning a serial number to each of the districts. Then a random number was chosen from the entire range of numbers. An online random number generation programme was used for the purpose (see http://www.mathgoodies.com/calculators/random_no_custom.html).

Protection, Drought-proofing, Water Conservation and Harvesting, Land Development, Micro Irrigation Works, and Rural Connectivity, among others. An asset such as wells could fall under any of several categories, for instance Drought-proofing, Micro Irrigation Works, Water Conservation and Harvesting. Similarly, other assets could also be present in any or several of these categories.

Therefore, the only way to obtain an exclusive list of wells was to examine the description of each of the assets mentioned in the list. On the basis of the description of the asset, other assets were removed from the list, leaving only wells. Armed with this list, we visited each well mentioned on the list and met the well owner. This was done to match the actual status of the wells (such as complete, incomplete or ongoing) with the official status (as mentioned on the list obtained from the website www.nrega.nic.in).

2.6 Interviews with the Owners of the Completed and Abandoned Wells

After doing a physical verification of all the wells in the panchayat, we selected six well owners in each Panchayat for the conduction of detailed interviews. The condition for selection for interview was that work had to have begun on or before 2012. These included owners of both completed and incomplete (abandoned) wells in the proportion that they were present in the panchayat. For instance, if the panchayat had 60 sanctioned wells, out of which 40 were complete, 10 were abandoned and 10 were incomplete though ongoing, then we would select 4-5 beneficiaries of the completed wells for interviews and 1-2 beneficiaries of the abandoned wells for detailed interviews.

Separate questionnaires were designed for each of the two sets of owners, that is, a questionnaire for the completed wells and another one for the abandoned wells. The questionnaires for the owners of the completed wells were designed to identify the private and public expenses incurred on the well, the sources of finance, and the uses and the long-term impact of the well.

The questionnaires for the owners of the abandoned wells were used to pinpoint the expenses incurred as well as the reasons for the abandonment of the wells.

In all, nearly 4-5 owners of the completed wells and nearly 1-2 owners of the incomplete wells from each panchayat were interviewed. Thus, a total of 103 owners of completed wells and 46 owners of abandoned wells across 24 panchayats of Jharkhand were interviewed.

2.7 Focused Group Discussions (FGDs)

Having conducted the detailed interviews with the well owners, we went on to conduct FGDs in each of the panchayats. The FGDs revolved around the issue of 'who is likely to get an NREGA well and why?' Other issues included the reasons for completion and non-completion of the wells, the demand for wells with respect to other NREGA assets, and general perceptions about NREGA.

Figure 1: An FGD in progress in Dumka

Figure 2: An FGD in progress in Ramgarh

Photos: The NREGA wells survey team conducting FGDs with villagers in the Dhawadangal panchayat of Dumka district (left) and in Sadam panchayat of Ramgarh district (right).

It was not always possible to collect villagers for conduction of the FGDs. Further, twenty days into the survey, the monsoon season had begun. Many a times the entire village would be occupied with agricultural activities such as ploughing of the fields, sowing of seeds, and transplantation of saplings. Therefore, we were able to conduct around 38 FGDs in 18 out of the 24 Panchayats. Wherever the FGDs took place and where discussions took place freely, they helped us gain invaluable qualitative insights into the political and economic aspects of the implementation of NREGA at the panchayat level.

2.8 Interviews with NREGA Functionaries

The final stage of data collection in each Panchayat involved semi-structured interviews with panchayat functionaries such as the panchayat secretaries, Gram Rozgar Sevaks (GRSs), and the elected representatives (*Mukhiyas*). The discussions revolved around the findings of the survey, the problems faced in executing their functions, and way to overcoming these constraints. As in the case of the FGDs, we received mixed responses to the semi-structured interviews. Some functionaries refused to open up for fear or for

lack of interest. However, those who did open up to speak freely offered very valuable insights into the administrative aspects of NREGA. In fact, the initial responses of all local level functionaries seemed to be laced with fear and were consequently untrue. It was only after we spent a few days in the panchayat and became familiar with the people that even the functionaries would open up and talk freely, partly because they understood that we were aware of the situation so there was no use in lying, and partly because w e gained their trust and they realised that we had no intention of causing any personal harm to them.

3

Well Done: The Story of Completed NREGA Wells

3. Well Done: The Story of Completed NREGA Wells

3.1 The Story of Balo Dom

Balo Dom is a resident of Achaljamo Panchayat in the Bishnugarh Block of Hazaribagh, a district in Jharkhand. He belongs to the Dom community, which has been regarded as one of the lowest in the scale of untouchability. The traditional occupations associated with the Dom community include scavenging, mat-weaving and basketry, drum beating, removal of dead carcasses and attending to cremation grounds (Planning Commission, Undated).

Balo Dom lives in a mud house along with the other members of his community. Their hamlet, like most hamlets of the Scheduled Castes (SCs) or traditionally untouchable households, lies at the end of the village, at a little distance from the main, upper caste population.

According to the NREGA website (www.NREGA.nic.in), a NREGA well had been constructed on his land (work code 3416006021/WC/5518195). We began asking him about all that he had to go through to construct the well and the impact that the well had had on his life.

Figure 3: Balo Dom's Well

3.2 How Long Does it Take to Build a Well?

Balo Dom started constructing his well in December 2007 and it was complete by late June 2008, that is, it took about six months to complete it, which is quite impressive by Jharkhand standards. The survey of 103 owners of completed wells shows that, on an average, it takes around 309 days (over ten months from the date the digging begins) for a well to get completed. However, there is wide variation across well owners. While some wells have been found to be completed within 45 days, others have taken over two years. According to Bansi Mahto of Kaparphutwa village in Ramgarh, whose well took around 92 days to complete, "*if 10 labourers are employed, payments are made on time, and if there is not very hard rock in the ground, then a well of standard dimensions can comfortably be constructed in three-months' time, just as our well was. If labourers work overtime, then it can even be completed within 45 days*". However, there was only one respondent whose well was actually completed within 45 days. Dhanpati Mahto of Achaljamo Panchayat in Hazaribagh, also works as a *Krishi Mitra* (Agriculture Extension Worker). His well was completed within 37 days. He says that since rains were about to come, he wanted to finish the work early. So he paid the labourers extra (Rs. 225 per day, though the daily wage under NREGA was Rs. 122) and got them to work overtime to complete the well in 37 days.

3.3 What Are NREGA Wells Used for?

NREGA wells situated on private lands are primarily irrigation wells. However, they provide various other essential services as well. Balo Dom uses his well only for agricultural purposes. This is because his well was constructed slightly far from his house, on his farm land, which is nearly 2 km away from his house. However, normally well owners use the well for a variety of purposes as shown in Table 1.

Table 1

Purposes for which the Well Is Used	% of Well Owners*
Irrigation	95
Drinking water	51
Bathing	72
Washing clothes, dishes, etc.	71
Rearing fish	39
Earth removed from the well was used for land levelling	66

Source: *Based on a survey of 103 owners of completed NREGA wells.

The earth removed during digging of the well is often used for levelling land, which may be uncultivable due to its unevenness. On an average, respondents used the mud removed from the well to level nearly 0.14 acres of land (out of those whose land was levelled by using the mud from the well).

These observations reinforce the findings of the MGNREGA Sameeksha report (MoRD, 2012, p. 36), according to which most NREGA assets, particularly water-related ones, have multiple uses. The report, therefore, states, "*MGNREGA may be viewed as the world's largest laboratory for community-based multi-use water services (MUS). Thus, in order to quantify the impact of MGNREGA and the benefits accrued, it is important to take into account the nature and multi-utility of each asset*."

While our study records the use of the well for these services (such as bathing, cooking, etc.), it does not attempt to quantify the value of these services in monetary terms. In addition, these services are generally not restricted to well owners. Since the amount of water used for bathing, cooking, and washing, among other activities, is negligible, well owners do not mind others using the well for such purposes. In fact, in cases such as Balo Dom's, even though the well owner does not himself use the various water-related services (due to the distance of the well from his home), several others (living closer to the well) do draw water from his well for domestic uses.

3.4 The Implementing Agency

Which agency is responsible for construction of the wells? In Balo Dom's case, the well was sanctioned, financed and overseen through the forest department, that is, the implementing agency was the Forest Department. Therefore, the construction process was managed by the forest ranger. However, as Table 2 shows, out of 978 NREGA wells in the sample panchayats, 78 per cent of the completed wells surveyed were constructed by the Gram Panchayat as the implementing agency, 12 per cent by the Block Development Officer (BDO) directly, nearly 8 per cent by the Panchayat Samiti, and only 1 per cent by the Forest Department.

Table 2

Implementing Agency	Percentage of Wells (%)
Gram Panchayat	78
BDO	12
Panchayat Samiti	8
Forest Department	1
Others (Agriculture, Labhuk Samiti, etc.)	1
Total	**100 % (978 wells)**

Source: www.nrega.nic.in (Accessed on 25 May 2014)

3.5 Moving Mountains to Dig Pits—Hurdles in the Way of Constructing NREGA Wells

According to the NREGA guidelines, assets under NREGA can only be constructed on public land or on private land belonging to a job card-holder, in which case the landowner (who becomes the *de facto* owner of the well) has to work along with others on the construction of the asset.[3] Balo Dom and his family had to work for several days and nights at a stretch to complete the well. However, they had to do more than just perform manual labour on the well.

3.5.1 Private (Out-of-Pocket) Expenses

Besides undertaking manual labour on his well, Balo Dom also had to manage the worksite. This means that he had to hire the labour; make sure they had the necessary tools and equipments, and the required materials; provide food and alcohol to the labourers at the worksite; arrange for payment of wages to the labourers on time; and generally ensure that the work takes place smoothly. All this also meant that he had to incur huge private costs.

Firstly, work on Balo Dom's well went on for nearly 90 days with almost 11 labourers each day on the site. However, the labourers, including six members from the beneficiary's family, received NREGA wages for only 48 of the 90 days that they worked. As Balo was responsible for payment of wages, he had to pay all the workers' wages for the remaining 42 days out of his own pocket @Rs. 100 per day, which equals Rs. 21,000 (and out of the income earned from his own labour on the well).

Secondly, in 2007-08, when the well was constructed, the market wage rate for work such as digging of wells was Rs. 100, which was higher than the official NREGA wage rate of Rs. 86. Again, Balo Dom had to bear the difference between the market wage rate and the NREGA wage rate, which added up to Rs. 3,360. Thus, the total expenditure incurred by Balo Dom on *wage payments* totalled around Rs. 24,360.

Thirdly, the technical estimates for wells do not include the cost of certain items (such as provision of food for labourers, of tools used in construction such as hoes and hammers, and the preparation of land-related documents required for getting a well approved such as title deeds, and maps of the land). Balo Dom had to spend a certain amount of money on these expenses as well.

[3] The random selection in each case was done by assigning a serial number to each of the districts. Then a random number was chosen from the entire range of numbers. An online random number generation programme was used for the purpose (see http://www.mathgoodies.com/calculators/random_no_custom.html).

Fourthly, Balo Dom also had to spend on some items which are included in the technical estimate and are supposed to be provided under NREGA but which he was still not provided. Nor was he reimbursed the cost of those materials by NREGA after he purchased them on his own. For instance, the expenses incurred in extracting water from the well to facilitate the process of digging of the well were supposed to be borne by the Government under NREGA. However, Balo Dom was told to bear the expense on his own and was not even reimbursed for it later.

These expenditures on instruments, food, preparation of documents, dewatering of the well and other material expenses added another Rs. 13,050 to his out-of-pocket expenses.

In total, Balo Dom had to spend Rs. 37,410 out of his own pocket to construct the well (amounting to nearly 65 per cent on labour costs). Further, while most wage payments were made directly into the labourers' accounts, the payments usually came several weeks after the work was done. In order to sustain the labourers' interests, Balo Dom had no option but to arrange for money to pay an advance to the labourers every week, which they could repay when the NREGA wage came into their account.

The financial strain left his family without any money to take care of their own basic needs. Often they would even have to take rice on credit from the shopkeeper. At other times, they went without food.

Bribes Paid for Construction of Wells

Balo Dom did not pay any bribe for either getting the well sanctioned or for getting the payments. This is because the Forest Ranger managed everything from getting all the paper work done to supplying the materials. This, however, is not very common for wells constructed under NREGA. Out of 150 well owners surveyed, 82 owners reported that they had to pay bribes straightforward to get the well constructed.

Arjun Nag of Ghorabandha panchayat in the West Singhbhum district holds the distinction of reportedly having paid the highest bribe for getting his well constructed—a total of Rs. 42,000. According to him, Rs. 8,000 was given to the Junior Engineer for updating the measurement book, Rs. 14,000 to the material supplier as his commission,[4] and Rs. 5,000 each to the Panchayat Secretary and GRS, on one hand, and to the *Mukhiya* for processing

[4] Under NREGA, as in the case of many government businesses, the procurement of material is to be done through a supplier, and consequently, payments are made only to suppliers with a valid Taxpayer Identification Number (TIN). The suppliers with

the payment cheques, on the other. An additional Rs. 10,000 was given to the GRS in the name of the Block Development Officer (BDO), Block Programme Officer (BPO), Assistant Engineer and Executive Engineer (as per Arjun Nag's statement).

The fact that only 82 out of 148 owners reported having paid bribes, does not mean that the rest of the 67 wells were constructed without the payment of bribes or 'commissions'. Rather it signifies that, as in the case of Balo Dom's well, the construction of the wells was 'managed' by someone else—a contractor or an official—who handled the payment of bribes.

3.5.2 The Ones Who 'Manage' the Show

According to the provisions of NREGA, those who demand work are employed in the construction or renovation of assets. The deployment of contractors is strictly banned under the Act. However, in practice, under NREGA, the contractors are all-pervasive across Jharkhand. They are present in various guises and forms, and provide a host of useful services.

They may simply help by providing information about the programme and the application process, or they may arrange the necessary documents for interested applicants such as land titles, job cards, application forms, and eligibility certificates, among others. They may even hire labourers; negotiate wage rates; provide food and alcohol to labourers; pay advances to labourers where NREGA payments might be delayed; arrange for necessary materials (such as cement, sand, and stones), tools (including digging tools), and equipments (like pulleys for pulling up mud and rubble); submit bills and muster rolls in lieu of material and labour payments; pay commissions (also known in common parlance as 'PCs')[5] to officials to get payments approved and signed by panchayat and block level authorities; withdraw money from post office accounts or banks for payment of wages to workers;[6] make wage payments; and get measurement books signed by the engineers. All of these tasks are supposed to be taken care of by NREGA

TIN numbers often just provide bills for goods and services, which are paid for into their accounts directly by the government without their having to actually supply any goods or services. They can then deduct their commission and return the money to the contractor or middleman who uses it to pay the actual supplier.

[5] The word 'PC' closely follows on the heels of 'manage' as the most popular word in the world of NREGA. Although by no means restricted to NREGA, it applies to all government work from road construction to laying electric lines to provision of subsidies or government assistance of any form. It is an abbreviation of the word 'percentage' and is used as it is fixed for all those involved in the provision of a good or service. The 'P.C.' system, or the percentage of the total amount going to each functionary, is generally well known by all those who have gotten any government work done. Those who are unsure of the system, or are too scared to explore, turn to contractors or middlemen to 'manage' the 'PCs'.

[6] Although wages are transferred to the accounts of workers, very often, the money is withdrawn by the contractors/middlemen, mates or well owners. The thumb impressions of the workers may be taken on withdrawal slips or they may be faked by

functionaries such as mates, Gram Rozgar Sevaks (GRSs), Panchayat Secretaries, *Mukhiyas*, Post Masters at the panchayat level as well as Block and District level functionaries.

However, the shortage of NREGA functionaries and hence excess load on existing staff, or simply their unwillingness to fulfil their responsibilities leads to the employment of contractors who fill the gaps. The presence of contractors or middlemen, though widespread across the state, varied hugely between blocks. In some blocks, such as Panki block in Palamu district, the survey found that no NREGA work could take place without the intervention of a contractor who knew how to 'manage'[7] the system.

Often, in cases where assets are being constructed on private lands, the land owners may themselves 'manage' the construction of the wells and are responsible for all or some of the above- mentioned tasks.

We asked the beneficiaries to explain in detail about the process of construction of the well. The information we obtained suggests that contractors were involved in the construction of around 23 per cent (34 out of 149) of the wells (including the completed and incomplete wells) (see Table 3).

Table 3 Wells Constructed by 'Contractors'

District	Percentage
Palamu	52
Dumka	31
West Singhbhum	21
Jamtara	16
Hazaribagh	13
Ramgarh	0
Jharkhand	**23**

Source: Survey of 149 owners of completed and failed wells in six districts in Jharkhand.

Thus, where contractors or middlemen were involved, there is less likelihood that the well owner would have had to pay a direct bribe. Hence,

someone else, on the payment of a PC to the Postmaster, the money can be withdrawn by anyone. The system, however, is often approved by the workers themselves for whom the transaction cost of visiting the post office every week to withdraw money may be too high. Add to it the risk that they may be turned back empty-handed by the Postmaster for any excuse and the balance clearly tilts in favour of allowing someone else to withdraw the money on their behalf.

[7] The word 'manage' is indeed one of the most common and interesting words we came across during the survey. It has, as one would understand, very broad implications, but as we learnt during the survey, it is most commonly associated with the act of getting the work done in illegal/extra-legal/quasi-legal ways. It is used by everyone from the well owners, to mates, to Rozgar Sevaks, contractors, Mukhiyas, BDOs, and BPOs, though with less frequency as we go up the chain of command wherein the level of caution with which every word is spoken increases.

out of the 67 well owners who claimed that they did not have to pay any direct bribe, several are likely to be those whose wells were constructed by 'contractors' who 'managed' the payment of bribes on their behalf. Another significant minority is likely to be that of well owners like Balo Dom, the construction of whose well was 'managed' by a government functionary himself. In such a case, the functionary himself may have paid the bribes in order to earn money by inflating wage and material bills.

Among well owners who paid any bribe at all (82 out of 148), the average expenditure on bribes was Rs. 6,354 (that is, nearly 5 per cent of the total amount sanctioned for the well).

Amongst all well owners (148 well owners including those who did not pay a direct bribe), the average bribe amount was Rs. 3,497[8] (that is, nearly 2.5 per cent of the total sanctioned amount). This is somewhat less than the figure of 10 per cent of the sanctioned amount, estimated by Aggarwal, *et al.* (2012, p. 26) through their survey of 11 NREGA wells in the Ratu block of Ranchi. The other reasons for the well owners having to incur out-of-pocket expenses are detailed in Table 4.

3.5.3 Private Costs of Well Construction in Jharkhand

Balo Dom's story is similar to that of most others, whose wells were constructed under NREGA. Data collected from 148 owners of the completed (102) and abandoned (46) wells suggests that well owners in Jharkhand had to spend an average of Rs. 25,749 out of their own pockets to get their wells constructed. Out of this, nearly 28 per cent (Rs. 7,194) was spent on labour and 58 per cent (Rs. 15,015) on non-labour expenses. The average includes expenses incurred by owners of incomplete wells, who gave up their efforts even before their wells were complete. Given the significant out-of-pocket expenses that well owners had to incur (Table 4), it is no surprise that several wells, wherein the well owners were unable to bear these expenses, remained incomplete.

3.5.4 Why Did Well Owners Have to Incur Private Costs?

Table 5 delineates the reasons given by the well owners for having to incur out-of-pocket expenses. As Aggarwal, *et al.* (2012) point out, "*The policy of*

[8] It must be noted that the information collected on bribes is fairly accurate since people were not reluctant to tell us about the bribes. The phenomenon is so common and widely accepted that once they became comfortable talking to the survey team, they were not hesitant to talk about any issue, including that of bribes. Rather, most of them were particularly excited to talk about the prevalence of malpractices to vent their frustration and anger against the officials.

Table 4

	Reasons for Out-of-pocket Expenses	Percentage Saying Yes*
1.	NREGA wage rate was less than the market wage rate	26
2.	Delay in NREGA wage payment, which is why the owner had to pay from his own pocket	15
3.	Expenses which are not covered under NREGA:	
a.	Food for labourers	57
b.	Preparation of the required documents (like the Trace report, land titles, etc.)	44
c.	Diesel to draw water out	61
d.	Pump-set to withdraw water	43
e.	Bribe paid to officials	50
f.	Travelling to and from the Block office	46
4.	NREGA sanctioned amount was insufficient to build the well	13
5.	Non-receipt of all the necessary and sanctioned payment from NREGA	8
6.	No reimbursement of bills	25
7.	Not expecting to be reimbursed in the near future	3
8.	Any other reason (such as the digging equipments not provided by NREGA, or account not opened in the post office)	68

Source: Based on a survey of 148 beneficiaries of NREGA wells (includes owners of both completed and incomplete wells).

making well owners pay for material costs and reimbursing them later (after the bills and vouchers are submitted) creates serious uncertainties about the actual likelihood and timing of reimbursement."

Further, the study states, "*Delays in wage payments also lead to tensions between the well owners and NREGA labourers. Six respondents even fought with the workers over the delays. The delays often force the well owners to make temporary wage payments to the labourers from their own pockets, a practice that may lead to corruption or disputes."*

The non-payment of bills (wage bills, material bills) and siphoning off of payments constitute other major reasons as to why the well owners have to incur private costs.

3.5.5 Inter-district Variation in Private Costs for Well Construction

Tables 6 and 7 (based on data for 102 completed and 46 incomplete wells) show the massive variation in out-of-pocket expenditures across districts. On an average, the owners of wells in Dumka had to spend nearly Rs. 5,986 from their own pockets to get their wells constructed. The corresponding figure in Hazaribagh was nearly ten times higher, at Rs. 56,409.

What are the reasons for this variation? Do the low figures for the out-of-pocket expenses (in Palamu, West Singhbhum and Dumka) indicate better governance in these districts? Do they imply t h a t a greater proportion of the sanctioned money reached the intended beneficiaries? Not necessarily. In most cases, however, they simply imply the existence of middlemen who manage the construction of the well.

3.5.6 How Did the Well Owners Finance their Private Costs for Well Construction?

How did a poor person such as Balo Dom arrange for Rs. 37,410 to spend on the construction of his well? A small portion was obtained from his savings, which he spent on dewatering the well. The major proportion of the expenditure was met by taking on a loan of Rs. 25,000 from the village moneylender at an annual interest rate of 60 per cent (at a 5 per cent monthly rate of interest), which he used to pay the labourers' wages. Despite the fact that he regularly paid the interest, the amount remaining to be paid at the time of the survey had swelled to Rs. 27,000.

Aggarwal, *et al*. (2012) found that the owners of 7 out of the 11 completed wells which were surveyed actually had to borrow money to meet the expenses, and out of these 4 (that is, nearly 40 per cent), in fact, had to mortgage their lands to organise the funds. The survey also attempted to find out how the well owners arranged for the money to meet the private costs of the well. The results are presented in Tables 6 and 7. Table 6 shows how the 102 owners of the completed wells met their costs, while Table 7 shows how the 46 owners of the abandoned wells met their private expenses for construction of their wells.

Among the 102 respondents whose wells were completed under NREGA, 87 per cent of the well owners claimed that they had to incur private costs. It was found that 46 per cent of the 90 well owners who incurred out-of-pocket expenditure were able to meet these expenses through their savings alone and that none of them had to sell off any land. However, 18 per cent had to sell off some other assets, such as cattle including their cows, buffaloes, and goats, 9 per cent had to mortgage some movable or immovable property, and 36 per cent had to undertake a loan to be able to meet the expenses.

Further, out of 32 respondents who had to take a loan, 50 per cent had already paid off their loan amounts at the time of the survey. Some people had had to take a loan from more than one source, such as money-lenders as well as family members. In the case of those who had taken a loan, the average loan amount was Rs. 18,013, while the average rate of interest on the loan was 42.5 per cent per annum. As regards the 45 per cent of the well owners who had not been able to repay the loan amount, they still had to repay nearly 83 per cent of the principal amount.

Table 5
Average Private Costs Incurred for Construction of NREGA Wells
(Including Completed and Incomplete Wells)

District	Average Expenditure on Labour (Rs.)	Average Non-Labour Expenditure (Rs.)	Average Expenditure on (Out-of-Pocket) Bribes (Rs.)	Total Expenditure (Rs.)
Hazaribagh	16,907	33,710	5,792	56,409
Jamtara	11,019	21,258	2,468	34,745
Ramgarh	7,049	13,228	6,087	26,364
Palamu	3,365	11,620	2,469	17,454
West Singhbhum	2,443	8,916	4,042	15,526
Dumka	2,890	2,362	735	5,986
Jharkhand	**7,194**	**15,015**	**3,520**	**25,749**

Source: All the figures in the table are based on a survey of 148 beneficiaries of NREGA wells, including owners of both the complete and incomplete wells.

Out of the 46 owners of the abandoned wells, only 32 had to incur out-of-pocket expenses on the construction of the well. Out of 32 such owners, 63 per cent covered this expense from their savings alone, whereas 20 per cent had to take loans, 11 per cent had to sell off some assets, and 4 per cent had mortgaged assets.

Clearly, NREGA wells do not come for 'free' for most people in Jharkhand. They involve a significant private cost, and the cost can be met only by those having some private savings or assets, or those who are assured of getting enough returns from the well to pay off the debt despite the high rates of interest.

3.6 Impact of the Well upon Agricultural Income

At a glance, it may seem absurd that so many people (15 per cent of the 148 well owners) could actually sell or mortgage (8 per cent) their precious assets in order to pay for a well which should in any way be paid for by the Government or even why so many people, like Balo Dom, should take loans at huge interest rates in order to pay for the well and then struggle for years to pay back the loans.

Table 6
Sources of Finance for Owners Whose Wells Were Complete

1.	**Number of owners of completed wells who incurred some positive private costs**	**90**
	Means of financing expenses by well owners	*Proportion*
a.	Using their savings alone	46%
b.	Selling off some land	0%
c.	Selling off some other assets (such as cows, buffaloes, goats, etc.)	18%
d.	Mortgaging some movable/immovable property	9%
e.	Taking a loan	36%
2.	**Number of well owners who mortgaged some movable/ immovable property to pay for the well**	**8**
a.	Proportion of well owners who were able to retrieve their entire mortgaged property by paying off the mortgage amount	75%
3.	**Number of well owners who took a loan**	**32**
a.	Proportion of well owners who paid off their loan amount	50%
b.	Proportion of well owners who had to take loans from more than one source	19%
c.	Average annual rate of interest (of principal loan amount/larger loan amount)	46.61%
4.	**Number of well owners who had still have not paid off their loan amount**	**16**
a.	Average amount left to be repaid as a percentage of the total loan amount	85%

Source: Based on a survey of beneficiaries of NREGA wells in Jharkhand and particularly those 90 beneficiaries whose wells were completed and who incurred some out-of-pocket expenses.

During an interview where we presented our findings in brief, a senior administrative official refused to believe that well owners would pay out of their own pockets. The official believed that well owners would never invest their own resources for an asset which is essentially a 'public' asset, leave alone take loans or mortgage property for it.

3.6.1 How the Well Multiplied Balo Dom's Net Income from Agriculture

The actions of the well owners, however, begin making sense when we observe the impact that the wells have on the lives of the farmers. Till 2007,

Table 7
Sources of Finance for Owners Whose Wells Were Incomplete

1.	**Owners of abandoned wells who incurred some positive out-of-pocket expenditure**	**35**
	Means used for financing expenses by well owners	*Proportion*
a.	Using their savings alone	63%
b.	Selling off some land	0%
c.	Selling off some other assets (such as cows, buffaloes, goats, etc.)	11%
d.	Mortgaging some movable/immovable property	4%
e.	Taking a loan	20%
2.	**Well owners who mortgaged some movable/immovable property**	**2**
a.	Proportion of well owners who were able to retrieve their entire mortgaged property by paying off the mortgaged amount	0
3.	**Well owners who took a loan**	**9**
	Out of the owners of abandoned wells who took a loan:	
a.	Proportion of those who paid off their loan amount	56%
b.	Proportion of those who took a loan from more than one source	0
c.	Average rate of Interest (of principal loan amount or larger loan amount)	53.33%
4.	**Number of well owners who have still not paid off their loan amount**	**4**
a.	Amount to be repaid as a percentage of the total loan amount	65%

Source: Based on a survey of owners of NREGA wells in Jharkhand. The figures are for the 35 owners of incomplete NREGA wells who incurred some out-of-pocket expenses.

Balo Dom was able to grow only one crop throughout the year. During the rainy season (Kharif season), Balo grew paddy on his entire land (which totalled only 0.16 acres). During the rest of the year, the land remained barren due to lack of any irrigation facility. On an average, he would spend Rs. 643 on agriculture and earn a revenue of Rs. 5,000 from the sale of rice and its by-products. In all, his net income from agriculture was around Rs. 4,357.

Since the construction of his well in 2008, however, Balo Dom has been able to grow crops during all the three agricultural seasons. Now he grows paddy in the Kharif (rainy) season, potato and wheat in the Rabi (winter) season, and vegetables (like ladyfinger) in the Zayad (spring) season. The increase in intensity in agriculture has helped increase Balo Dom's agricultural income by 414 per cent (or five times). His annual average income from agriculture has thus gone up increased from Rs. 4,357 to around Rs. 22,377.

How did this transformation take place? One of the factors is the availability of water throughout the year, which has allowed him to cultivate and earn from crops during the Rabi and Zayad seasons as well. However, there is another way in which the well has contributed to an increase in his income. Due to the increased water security provided by the well, Balo Dom has been able to take the risk of adopting High Yielding Varieties (HYVs) of rice, which have both a higher input cost as well as high yields. The security of being able to irrigate his fields with water from the well in case of low rainfall has allowed him to make this transition, which is bearing fruit in terms of higher profits.

The increase in Balo Dom's income has been made possible by the fact that his well has over 15 feet of water even during the summers. As a result, he has sufficient water for irrigating his fields and even allows neighbours to make use of the well for irrigation, drinking water and other purposes.

Balo Dom, however, was one of the fortunate ones. Indeed, digging a well involves a fair element of risk, as before digging, one can never be certain as to how much water there would be in the well. Several NREGA wells have very low utility and impact because of the absence or insufficiency of water in the wells.

According to the NREGA guidelines, "to avoid failure of wells and optimum utilisation of expenditure made, [a] certificate from concerned Ground Water Department for the availability of water and well-to-well distance to be maintained should be taken, before sanctioning the work" (UNDP and MoRD, 2012). However, as the MGNREGA Works Field Manual (MoRD and UNDP, 2012) itself observes through field visits undertaken for preparation of the manual, "in almost all the cases (it was) found that certificate

from concerned Ground Water Department for the availability of ground water and well-to-well distance to be maintained has not been taken". It is not known whether groundwater departments themselves have the capacity and resources to be able to certify the availability of water in the case of each NREGA well.

3.6.2 Impact of Wells upon Net Incomes

Even among those who could make use of the well, NREGA wells had very varied impacts upon their lives and livelihoods. The primary indicator that we use to measure the impact of the well is the change in net profit to the well owner from agriculture in the catchment area of the well, that is, the area irrigated by the well, which we shall refer to as the Net Income from Command Area (NICA). This is calculated as the Total Revenue from the sale of agricultural commodities produced in the area irrigated by the well minus the Total Cost of Inputs used to produce those commodities.

In order to obtain information about NICA, we collected details about the cost of cultivation and the market value of the output (at constant 2014 prices) for each season. We collected this information, that is, NICA, for one year before the construction of the well, and for one year after the construction of the well. The difference between the two gives the change in NICA. However, some of the change in NICA may have occurred due to factors other than the well, such as a change in the rainfall pattern, crop damage due to pests, hailstorms, new agricultural practices, and a change in the seed quality.

An attempt was made to eliminate the impact of all these other extraneous factors. This process involved dropping 12 observations wherein the impact of the extraneous factors in causing a change in net income is likely to be overwhelming. We were left with 92 observations, which indicated with certainty that the change in net income is likely to be largely due to the well.

The results of the exercise, that is, the changes in NICA due to the wells, are presented below.

While NICA actually fell for some well owners, there were others whose NICA increased by over 10 times. For instance, in the West Singhbhum district, Arjun Nag's NICA actually rose by about 16 times. The increment would have been even higher had his summer crop (post construction of the well) not been damaged by pests. If one were to compare the years before and after the construction of the well, then Chand Mohammad's net income could be seen to have actually multiplied by over 60 times. Prior to the construction of the well, Chand would cultivate only during the Kharif (mon-

soon) season. The year prior to the construction of the well, however, saw poor rainfall, as a result of which most of his crops were damaged. His net income that year was only Rs. 30. The situation changed dramatically after the construction of the well. Despite low rainfall again, he managed to earn a net income of Rs. 1,810 as he could irrigate the crops with the well's water.

The survey data on 92 beneficiaries of the completed NREGA wells shows that, *on an average, beneficiaries witnessed an incredible increase of Rs. 12,635 or 190 per cent in their Net Incomes*. In other words, the well owners earned nearly three times more from agriculture after construction of the well. *The average increase in annual income due to the well was equal to the income earned through 100 days of work at 2010-11 wage rates (Rs. 122 per day)*. Clearly, with such a dramatic increase in annual income, the well would reduce the well owner's need to work on NREGA after its construction, thereby reducing the need and demand for NREGA over time.

The maximum increase in net income was seen during the Rabi (winter) season. The average net income rose by Rs. 6,753, that is, 3.36 times or by 237 per cent, as determined on the basis of the responses of 27 well owners who witnessed the increase. This is because most farmers did not have any source of irrigation before the construction of the well and could thus undertake much less farming during the Rabi season. However, even without any source of irrigation, a number of farmers used to grow dry crops such as millets, gram or lentils during the winter season.

There was a smaller increase in the Net Incomes of the beneficiaries during the Kharif season, that is, an average Rs. 3,487.[9] Finally, it was not possible to reliably compare the output during the Zayad season as very few beneficiaries used to grow crops during this season before the construction of the well.

(a) Why Our Estimates May be Biased

We estimated above that net incomes increased by 190 per cent due to the construction of the NREGA wells. However, we have reason to believe that this figure may actually be an under-estimate and the actual impact may be more, as explained below.

Till now we have assumed that any change in incomes before and after the construction of the well can be attributed to the well. However, in reality, the crop output and hence incomes can also be influenced by other

[9] In cases where the crop was damaged due to unforeseen reasons, the change in net income would not reflect the impact of the well. Therefore, in such cases, we have replaced the actual net income (for the season when the crop was damaged) with the last year's produce or the expected produce.

exogenous factors such as a change in the rainfall pattern and crop damage due to pests, frost, or untimely rainfall, among other things. Some of the external factors that negatively impacted net incomes during the years after the construction of the well are described below.

Low Rainfall during the Years after the Well Construction: Paddy is the most commonly grown Kharif crop in Jharkhand. The crop also entails a heavy requirement for water, which is met when there is adequate rainfall. Thus, if the monsoon fails or is scanty, the cost of drawing water from the wells makes it infeasible to grow paddy by using the well's water for irrigation. Therefore, due to the failure of monsoons during the two years preceding the survey, the paddy output was severely affected in large parts of the state. Amongst the sample districts, Palamu had witnessed the severest drought and a correspondingly severe decline in paddy output.

Change in Agricultural Practices—The Learning Curve: For some farmers, the construction of the well and availability of irrigation water led them to change agricultural practices and adopt input-intensive farming practices, thus shifting to the use of hybrid (and more expensive) seeds, more fertilisers and pesticides. However, in several cases, the increase in income as a result of these changes was less than the increase in input costs, which led to a fall in net incomes.

Crop Failure: Finally, failure of crops due to frost, untimely rainfall, attacks by pests or grazing by animals also prevented some farmers from witnessing a potential increase in income due to the well. The most significant factor affecting the crop output was the near-drought situation during the two years preceding the survey and its devastating impact upon the paddy output. In some cases, these external influences were large enough to cause the output to decline post the construction of the well.

In some other cases, the external influences were significant but not enough to cause a decline in output. The estimates of net change in income given above are unable to account for some of the negative influence of these factors. Finally, as Aggarwal, *et al.* (2012), point out, the "uncertainty is particularly high immediately after the construction of wells, when the owners are learning to grow new crops". During the initial years after the construction of the well, farmers would still be experimenting with different uses of the well for agriculture. Over the years, the returns from the well may grow as they learn how and what crops to plant so as to reap the maximum benefits from it.

We, therefore, believe that the impact of wells upon NICA may actually be significantly larger than the 190 per cent increase estimated earlier. The estimate itself is significantly higher than the estimate obtained by Aggarwal, *et al.*

(2012). In their survey of 10 wells in Ranchi district, they had found that the average net incomes rose by 50 per cent (1.5 times) as a result of the well. Our results, obtained by using data for 92 wells across 6 districts and 24 panchayats, depicts that the average increase in net income was actually more than nearly double their estimate.

3.6.3 District-wise Impact on the Net Income Due to the Wells

We estimated that net incomes rose by 190 per cent (or around Rs. 12,635) on an average due to the NREGA wells. This average estimate hides a large degree of variation across districts.

Table 8 depicts the impact of NREGA wells upon net incomes in the 6 survey districts. Clearly, the impact of the wells upon NICA varies hugely between districts. The largest impact was found in the Jamtara district, where the NREGA wells helped increase NICA by over four times. On the other hand, the lowest impact was found in Palamu where the net incomes were found to increase by just two times, on an average.

What explains these differential impacts of NREGA wells on agricultural incomes? We have described earlier how Palamu faced the brunt of a severe drought, particularly during the paddy-sowing season, during the two years preceding the survey, that is, 2012 and 2013. This led to not only widespread failure of the paddy crop, but also shortage of water in the wells due to the lack of ground water recharge. Most wells in the district were completed in 2011-12 after which the district suffered a drought. Hence, despite the construction of the well, the crop output was lower than what one would expect during normal rainfall years.

The other reason for the relatively smaller impact of wells on incomes in some districts, such as Palamu and West Singhbhum, was the poor quality of wells. As expected, the quality of the wells was also found to be poor in places with a heavy dominance of contractors. This is because contractors rarely have an incentive to ensure good quality. Their aim is to extract the maximum possible profits from the limited pool of money that is allocated for the construction of the well.

Finally, the productivity of wells is likely to be higher where the water table is higher. Due to the extremely high water table in Jamtara, nearly all the wells were reported to be filled with water throughout the year, even during the summer. The wells could, therefore, be easily used to cultivate crops throughout the year, not only by the well owners themselves, but also by all those with land in the neighbourhood. The extent to which one's net income would change due to the advent of a NREGA well, therefore, depends largely upon the level of water in the well throughout the year.

It would be interesting to see how the change in net income relates to the average expenditure in the districts. It is evident that no clear relationship can be derived. While well owners in Ramgarh and Jamtara had to bear high private costs on an average, they also benefited from a larger increase in net income. The same cannot be said about Hazaribagh where despite high average private costs, the returns were low. On the other hand, the average private costs were low in Dumka but the returns were relatively high.

3.7 Those Who Could Not Make Use of Their Completed Wells

Not all completed NREGA wells were as 'life-transforming' as those of Balo Dom, Arjun Nag, or Uttam Mandal. There were some owners of completed NREGA wells (constituting 4 per cent of the respondents) who were unable to use the well at all. Birender Prasad of Nawadih village in Ramgarh district said that he used the well earlier but could not use it any longer as it had dried up. Out of all the 103 respondents, however, Birender Prasad and Mansa Dehri were the only two farmers whose wells had dried up. Table 9 lists the number of people who were not able to use their completed NREGA wells due to various reasons.

3.8 Attempting a Cost-Benefit Analysis of NREGA Wells

3.8.1 Calculating the Average Annual Rate of Return Based on the Total Expenditure on the Well

Balo Dom had to incur out-of-pocket expenses of around Rs. 37,410 on the construction of his well, which led to a net increase of Rs. 18,020 in annual income from the command area.

Thus, his rate of return on his own 'private expenditure' is 0.5. This means that Balo Dom would recover the 'private investment' on his well in two years' time.

However, we are not just interested in the individual's private cost, but also in the public expenditure going into the construction of the well. We would, therefore, like to estimate the rate of return on 'Total Expenditure' on the well, including the private and public expenditure.

(a) Calculating the Total Expenditure Incurred on the Well

The estimation of the total expenditure on the well is, however, a complicated affair. The Government spends money on the well, part of which goes into well construction and part in leakages. How then does one cal-

culate the government's expenditure on the well? Do we then include the leakages as 'investments' on the well?

The individual also spends money, part of which goes into construction and part into payment of bribes, or completion of paper work, among other things. Do we include the expenditure on bribes as investments on the well?

Table 8
District-wise Estimates of Average Change in NICA due to the Well

District	Average Income Prior to the Well	Average Income Post the Well	Change in Net Income	% Increase in Net Income	Number of Well Owners
Jamtara	3,457	15,440	11,983	347	19
Ramgarh	7,379	26,199	18,820	255	12
Dumka	5,063	16,197	11,133	220	13
West Singhbhum	6,229	15,857	9,629	155	11
Hazaribagh	7,311	22,721	15,410	211	19
Palamu	10,181	19,377	9,196	90	18
Jharkhand	**6,638**	**19,274**	**12,635**	**190**	**92**

Source: Based on data from those beneficiaries of completed NREGA wells in Jharkhand for whom the change (or no change) in income could clearly be attributed to the NREGA wells.

Table 9
Reason for Not Using the Well

	Number of Respondents
No water in the well	2
Not able to engage in agriculture due to illness, disability or any other reason	1
No pump to draw water from the well	1
Overall number of people not able to use the well	4

Source: Based on a survey of completed NREGA wells in Jharkhand. The table was based on responses of four beneficiaries of completed wells who were not able to make use of the wells.

Two Sources of Data on Public Expenditure on the Well and Their Limitations

The problem is further complicated by the lack of accuracy of data on public expenditure incurred on a NREGA well. The NREGA website (www.nrega.nic.in) provides information on the expenditure incurred on each well. However, the information appears to be quite unreliable. For instance, there were several wells which were actually complete, or nearing completion. During the interviews with the owners of these wells, we learnt that a significant portion of the expenses were borne by the Government, in some cases, the estimates went up to Rs. 50,000. However, according to the NREGA website, the Government expenditure on the wells is zero.

The other source of information regarding the public expenditure is our survey that asks questions about the cost of well construction borne by the Government. However, this is also not likely to be accurate since it does not take leakages into account. The money which was siphoned off by post-masters, contractors, mates or material suppliers did not really contribute towards the cost of the well. Hence, though the expense is borne by the Government, we do not have data on it.

Final Choice of Data on Public Expenditure

The final data on public expenditure has been arrived at by using the higher figure for public expenditure, on a case by case basis. Thus, for each well, the figure for public expenditure used has been taken either from the MIS or through the responses of the beneficiaries, whichever is higher.

Total Expenditure on the Well—Sum of Private and Public Expenditure

The figure for the public expenditure has been added to the total amount of the private expenditure borne by the well owner to arrive at the 'Total Expenditure' on the well.

Now, if the Total Expenditure on the well is considered as an 'investment', then the average annual Rate of Return (ROR) on the investment can be calculated as follows:

(b) Calculating the Average Annual Rate of Return on Investment

Finally, a comprehensive measure of the return on investments made on NREGA wells must account for the fact that nearly 11.8 per cent of the wells remain abandoned and an additional 7.8 per cent of the wells are missing and hence reap no returns on investment. Therefore, in order to account for the non-performing investments, we use the following formula:

$$\text{Average Annual Rate of Return from the Well (ROR)} = \frac{\text{Change in NICA}}{\text{Total Expenditure}} \times 100$$

* where the Total Expenditure is the sum of Public Expenditure under NREGA and the Private Expenditure Incurred by the Well Owner.

We do not include the ongoing or new wells in this calculation since such wells are neither leading to any return on investment nor can they be said to be a waste of investment. For all of Jharkhand, the proportion of completed wells was 0.78 while the proportion of abandoned wells was 0.13 and the proportion of missing wells was 0.87.

$$\textbf{ROR} = \frac{\text{Average of Change in Income Due to Well}}{\begin{array}{l}(\text{Proportion of completed wells}) \times (\text{Average Cost of Completed Wells}) \\ (+)(\text{Proportion of Abandoned Wells}) \times (\text{Average Cost of Abandoned Wells}) \\ (+)(\text{Proportion of Missing Wells}) \times (\text{Average Cost of Missing Wells})\end{array}}$$

Note: $\text{Average Change in Income Due to Well} = \text{Proportion of Completed Wells} \times \text{Average Change in Income Due to Completed Wells}$

Note: Proportion of wells are arrived at using only the sample of wells which are either completed (78%), abandoned (13%) or missing (8.7%). In other words, wells which are ongoing, new, approved or suspended have been excluded from this sample)

Using data on 138 wells (completed or abandoned) and 72 missing wells, we can estimate the Average Annual Rate of Return (RoR) on Total Expenditure to be 5.7 per cent. If we use only data pertaining to Public Expenditure rather than Total Expenditure, the Average Annual RoR on Public Expenditure amounts to 6.7 per cent. Finally, if we calculate the returns from only completed NREGA wells, the RoR for 92 such wells turns out to be 6.5 per cent.

The last measure of the ROR follows Aggarwal *et al.* (2012), which had estimated the ROR on the cost of construction on NREGA wells to be 2.29 per cent. It is worth noting that there is a significant difference between our estimate of the ROR at 6.5 per cent and the figure of 2.29 per cent as estimated by Aggarwal, *et al.* (2012).

It is interesting to note that our estimate of average annual rate of return is nearly thrice the estimate obtained by Aggarwal, *et al.* (2012). Even the overall RoR of 5.7 per cent, which includes the abandoned wells, is more than twice the RoR estimated by them (that is, 2.29 per cent). This is despite the fact that our estimate incorporates the expenditure on abandoned or incomplete wells.

The major reason for this difference in estimates lies in the fact that the impact of wells upon incomes is much greater at the state level than that estimated by Aggarwal, *et al.* (2012). On the basis of their survey undertaken at the Ratu block of Ranchi district, they estimate that the wells lead to an increase of around 50 per cent in net incomes. However, our estimates from the state-wide sample suggest that the wells actually lead to an increase of nearly 200 per cent in incomes.

The average RoR for wells (both complete and incomplete) in each of the districts surveyed, along with the average figure for Jharkhand, is given below. Table 10 also shows the average RoR for the completed wells only for comparative purposes, by using the methodology deployed by Aggarwal, *et al.* (2012) wherein only completed wells were studied to arrive at the average RoR of 2.29 per cent.

Appendix Table 2 provides the completion rates, abandonment rates, proportion of missing wells and the RoRs for each of the six survey districts. The table clearly shows that the highest RoR has been observed for Ramgarh district while the lowest RoR on expenditure on NREGA wells is found in West Singhbhum district. Thus, while Rs. 100 spent on NREGA wells in Ramgarh yields an annual return of Rs. 10 in Ramgarh, in West Singhbhum, it only yields an annual return of Rs. 3.7.

3.9 Do Private NREGA Wells Serve Public Good As Well?

In its review of the assets built under NREGA, *MGNREGA Sameeksha* finds that the Return on Investment (RoI) for public assets (or assets constructed on public land) are higher than the RoI for private assets. This is because the assets built on public land are used by several users whereas the assets constructed on private lands have only one user. However, it is difficult to classify NREGA wells as either purely private assets or as purely public assets either. The Sameeksha report states, "Studies show that while private assets are preferred by beneficiaries, public assets benefited a larger area and more people, leading to higher returns on investments". The report goes on to state, "*A significant share of MGNREGA works (12 per cent in FY 2011–12 and 20 per cent in FY 2010–11) is taken up on private land. Research on the subject compares and contrasts the advantages and challenges of these works vis-à-vis works on Public Lands. A study on best performing assets in Bihar, Gujarat, Kerala and Rajasthan, estimated a higher RoI of 116 per cent for water-related public assets, due to the number of people they benefit, as against an RoI of 35 per cent for private assets, in a single year of use. However, private assets were found to be better maintained and hence more sustainable, due to definite ownership and rights"* (MoRD, 2012, p. 34).

Table 10
District-wise Average Annual RoR on Well Construction

District	Number of Well Owners*	Number of Owners of Completed Wells	ROR Using Data on Only Completed Wells
Dumka	25	13 (52% of the total well owners)	6.99
Hazaribagh	25	19 (76%)	8.24
Jamtara	23	19 (83%)	5.08
Palamu	24	18 (75%)	4.86
Ramgarh	21	11 (52%)	12.90
West Singhbhum	21	11 (52%)	4.58
Jharkhand	**139**	**91 (65%)**	**6.52**

Source: Based on a survey of NREGA wells in Jharkhand and includes responses of owners of both completed and incomplete wells.

Note: The number of wells here is less than the total number of wells surveyed (150). This is because we could not use data on 11 wells due to unreliable expenditure data (obtained from the NREGA website) or due to a change in net income, which was predominantly the result of factors other than the well.

3.9.1 Survey Findings on the Sharing of Well Water

During summer, the houses neighbouring Balo Dom's well use the water from the well for drinking because their wells dry up. Besides, two families other than Balo Dom's make use of the well for irrigation, free of cost.

In fact, the NREGA wells are generally used by several people living near the well or with land which is in its command area. It is generally observed that the owner of the well has the first right over the well's water, which means that when the supply of water is insufficient, then only the owner may use it for irrigation. However, when there is sufficient water, and it is needed for irrigating the neighbouring fields, others also generally make use of the well. In all the cases that we came across, the well owners never charged any money from others for making use of the well. In some cases, the well owners even allowed others to use their own motors as well as their own diesel. In most cases, however, people had to use their own motors and fuel to draw water from the well.

For Jharkhand as a whole, a NREGA well is used by an average of around five families. In fact, in several cases, we found that even though the well owners themselves are unable to use the well for irrigation due to some reason, others with neighbouring lands make good use of it. In the Karar Panchayat of Palamu district, Krishna Oraon's well irrigates nearly

10 acres of land, though Krishna himself irrigates only around 0.40 acres by using the well. We saw two pump sets fitted to the well, ready to draw water, though none of them belonged to Krishna. The villagers were utilising the well very effectively, though the main beneficiary of the well was unable to do so since he did not own a pump set himself.

In the Kuldangal panchayat of Jamtara district, Uttam Mandal's well was overflowing with water, and so the water was free to be used by anyone who wanted it. His well had a one- foot high parapet and a square cut hole on the parapet right at the ground level for the pump set pipe to pass through. There was so much water in his well that the water was literally overflowing from the square cut hole, equalising the water level on the paddy fields with the water level in the well. The well had a command area of 3 acres, which could be extended with the help of extra pipes and pump sets to carry the water further.

3.10 Changes in Livelihood Strategies Due to the Wells

The construction of the well has also brought about changes in the way Balo Dom used to work through the year. Prior to the construction of the well, Balo used to spend nearly four months every year working as a casual labourer in the nearby villages. However, the construction of the well has meant that he can now spend more time working on his own field rather than working for others. He now spends only three months in a year working as a labourer.

Such changes in lives and lifestyles are common among those whose wells were constructed under NREGA. Amongst the beneficiaries whose wells were completed at least one year prior to the survey, the wells have led to an average increase of 34 days in a year spent by the well owners working on their own farms. Correspondingly, the number of days for which people migrate out of the village to work has reduced by nearly 18 days. The well owners have also reported small reductions in the durations that they spend working as casual labourers in or around the village.

One of the most notable impacts of NREGA reportedly pertains to migration. In fact, one of the primary objectives of NREGA is to reduce distress migration by providing the village population an opportunity to work at minimum wages within or near the village. Going a step further, it was hoped that the construction of rural assets would lead to long-term rural development, which would reduce the need to migrate out for work. The survey findings suggest that the wells have contributed towards these objectives. The wells have led to a small but significant shift, whereby people

Figure 4: Krishna's Oraon's Well

Figure 5: Uttam Mandal's Well

can spend more time on their own field rather than having to work as casual labourers. In other words, the wells have increased the farmers' productivity on their own farms, and reduced their reliance on others for wages and employment.

A reduction in the time spent on wage labour and an increase in self-employment on one's own farm may have improved the working conditions and quality of life of the beneficiaries, as the latter are now able to spend more time with their families and can work on their own terms. However, it also implies that some of the increase in incomes from agriculture post the construction of the well may be offset by a decline in income from other sources (primarily income from wage labour). It is, therefore, important to keep in mind the fact that our estimates of a change in net incomes refer to the change in net incomes from agriculture in the command area of the well, and not just a change in incomes *per se*. In the absence of data on income foregone from wage labour (or other sources) after construction of the well, we cannot really estimate the overall change in incomes.

3.11 Beneficiaries' Perceptions about Their Completed Wells

3.11.1 Most of the Farmers Are Happy

In the end, Balo Dom is very happy to have a complete well and feels that it has contributed to a change in his family's livelihoods. Now they are living and eating better, and also have more income. They are also happy with the quality of the well. They disagree that the building of the well was a bad idea or that it has become a headache. Now they have sufficient food for six months, while for the rest six months of the year, they earn money by selling items such as baskets and brooms made of bamboo.

We asked all beneficiaries with completed NREGA wells about their level of satisfaction with the well, its quality, its impact upon their lives, and their thoughts about the whole experience, that is, if the construction of the well was worth the effort. Indeed, we found that most beneficiaries with completed NREGA wells were satisfied and felt that the well was contributing positively to their lives. Out of the 103 beneficiaries of the completed wells, 99 reported that they were happy that they had got the NREGA well, 95 were satisfied with its quality, 89 said that they were living and eating better, and 88 said that their incomes had gone up as a result of the well (see Table 11). Thus, *for the majority of the beneficiaries with completed NREGA wells, the well was 'well' worth the effort!*

3.11.2 And the Not-so-Happy Ones

However, there were a few well owners who were unhappy with their completed wells. One beneficiary felt that he had made a mistake by constructing the well while another felt that the well was still a headache for him.

Hemlal Soren of Mahulbana panchayat, in the Nala block of Jamtara district was unhappy with the well. This is because the contractor who 'managed' the well, Suklal Besra, had used very poor quality material for its construction. Consequently, the well has already started developing cracks, and is also falling off, and may even collapse completely in the near future. Around 3 feet of sand has already fi up in the well. Further, there is very little water in the well during the summer (only around 2 feet), which makes it impossible to use it for irrigation.

In the Ratanpur panchayat of Palamu district, Jagmohan Oraon faced a similar situation. The contractor who 'managed' the construction of his well, Nagender Bharati, used very poor material for the construction of the well and did not even build according to the stipulated specifications. The well, which should have been 35 feet deep, is only 18 feet deep and has started cracking at the sides. Clearly, cement had been used in much lower proportion than what had been stipulated. As a result, it has barely any water and cannot be used for irrigation.

Table 11
Perceptions of the Owners of the Completed Wells*

	Agree (%)	Disagree (%)	Can't Say (%)
Happy at having constructed the well	96	4	0
Satisfied with the quality of the well	92	8	0
Living and eating better as a result of the well	86	7	7
Household income has increased as a result of the well	85	8	7
Constructing the well was a big mistake	1	99	0
The well is still a big headache	1	99	0

Note: Figures have been rounded off to whole numbers.

Source: Based on responses provided by 103 owners of completed NREGA wells in Jharkhand.

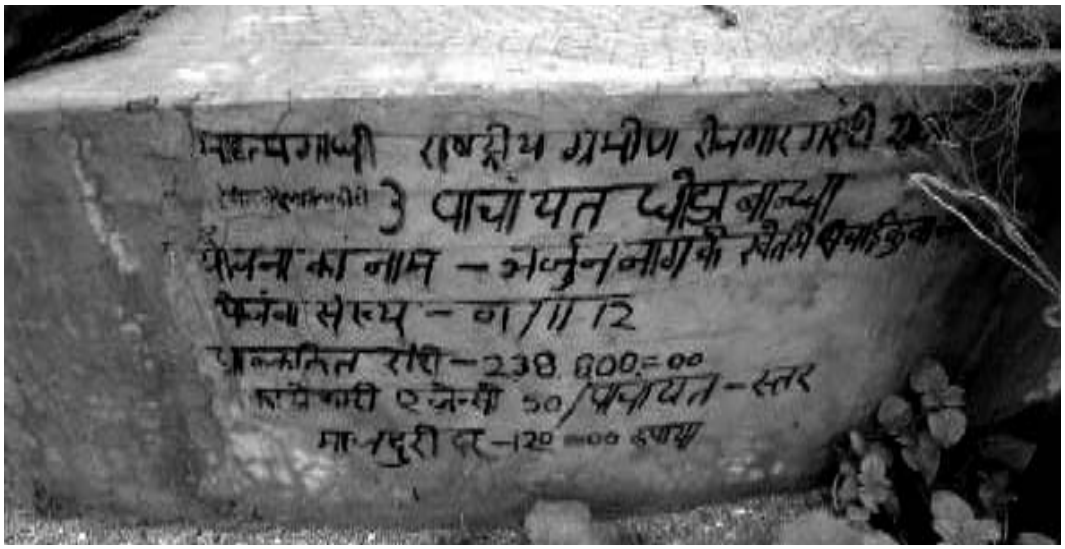

Figure 6: Arjun Nag's Well—First View

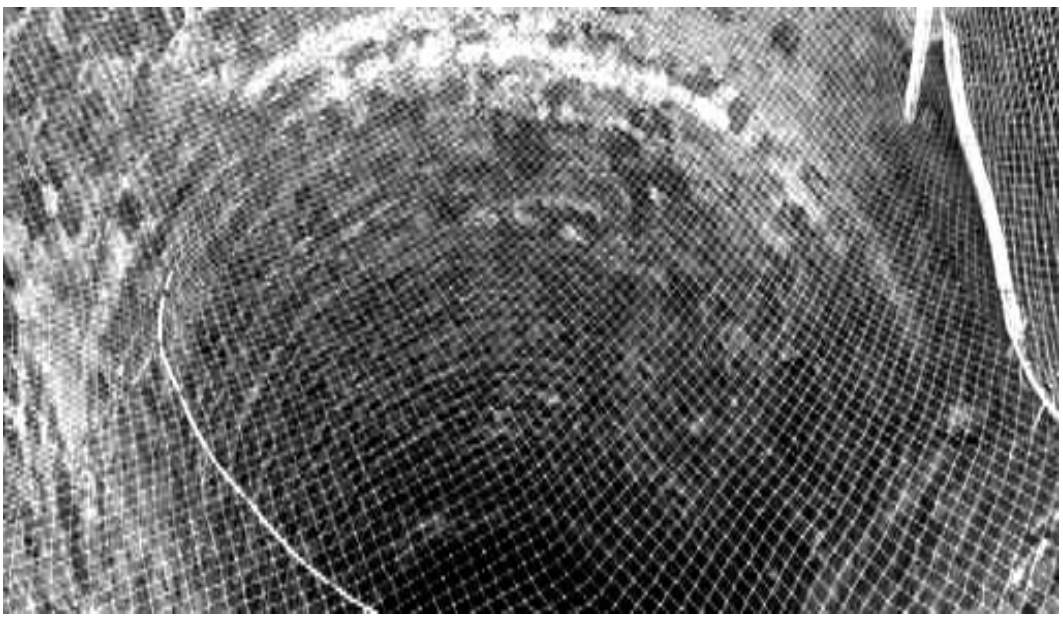
Figure 7: Arjun Nag's Well—Second View

In general, it was observed that the quality of the wells was the best where the beneficiary himself 'managed' the construction of the well. However, when the construction was managed by the mate, contractor or any other intermediary, then the quality of the well was relatively poor, in some cases rendering it almost useless as in the case of the wells owned by Hemlal Soren and Jagmohan Oraon.

Arjun Nag, on the other hand, is very happy with his well despite having paid the maximum in bribes to get his well constructed, because he has gained so much from the well. And he is not the only one who benefits from his well. Many other families of the village do so too. Before the construction of wells under NREGA, the entire village had only one well. All the villagers would have to stand in a long queue and wait for hours to get water. With the new wells having been built under NREGA, the villagers now easily get water for drinking, washing clothes, bathing, and irrigation, among other activities, throughout the year. Given the increased income and food security offered by the well, Arjun Nag also went on to take loans and bought a Tata Magic (a pick-up vehicle), a tractor and a thresher. Thereafter, with the increased income from all these sources, he managed to purchase bricks and cement, and hire labour to convert his *mud* house into a *pucca* one. The NREGA well, therefore, laid the foundation stone on which Arjun Nag built the steps that enabled his family to become one of the most prosperous families in the village.

Clearly, intermediaries such as contractors, who take over the construction of the well, do not have much incentive or interest to ensure that it is productive or of good quality. Rather, they have an interest in spending as little on material and labour as possible and siphoning off the rest of the sanctioned amount as a reward for their effort and involvement, and for paying bribes to officials.

4

How Many Wells in Jharkhand Are Actually 'Complete'?


झारखण्ड · सरकार

4. How Many Wells in Jharkhand Are Actually 'Complete'?

For Balo Dom, Arjun Nag and several others like them all over Jharkhand, the NREGA wells have led to a major transformation in their lives. However, completed wells like theirs depict only one side of the picture. Several of the wells whose construction was initiated under NREGA remain incomplete.

4.1 Official Completion Rates

Table 12 shows the district-wise status of the completion of wells in Jharkhand as on 18 November, 2013, according to the Department of Rural Development. The table shows that according to official records, nearly 80 per cent (91,885) of the wells whose construction was undertaken as part of NREGA, (that is, 1,15,063) were completed by November 2013; 14.5 per cent (or 19,601) of the wells were under construction (and hence likely to be completed), and only around 7 per cent (or 7,440) of the wells could not be completed (due to technical reasons).

4.2 Verification of Official Data on Completion Rates

How accurate are the figures? Were the completed wells actually complete? Are the wells under construction, actually under construction and not abandoned long ago? Were the wells which 'cannot be further worked on, due to technical reasons' actually abandoned due to technical reasons?

We attempt to answer these questions in this section.

4.2.1 Methodology for Verification

In order to verify details about the wells, we physically visited all the 987 wells in all villages of the 24 randomly selected panchayats, from 12 randomly selected blocks and 6 randomly selected districts. Data on the official status of these wells was obtained from the official NREGA website (www.nrega.nic.in).

The study team then visited each well to find out the following:

Actual Physical Status of each well. The study team would observe the

Table 12
Status of Completion of NREGA Wells According to Data Provided on 18 November 2013

District	Number of Wells Taken up (18 Nov 2013)	Wells Taken up as a % of Total Wells in the State (Nov 2013)	Completed Wells (18 Nov 2013)	% of Wells Comp-leted (18 Nov 2013)	Wells That Cannot be Further Worked on, due to Technical Reasons (18 Nov 2013)	% of Wells That Cannot be Further Worked on, due to Technical Reasons (18 Nov 2013)	Wells Currently under Cons-truction (18 Nov 2013)	% of Wells Currently under Cons-truction (18 Nov 2013)
West Singhbhum	5023.00	4.37	2551.00	50.79	738.00	14.67	1952.00	38.79
Lohardaga	4691.00	4.08	2898.00	61.78	443.00	9.44	1350.00	28.78
Saraikela Kharsawan	3080.00	2.68	2180.00	70.78	616.00	20.00	308.00	10.00
Khunti	3556.00	3.09	2542.00	71.48	267.00	7.51	939.00	26.41
East Singhbhum	3218.00	2.80	2308.00	71.72	910.00	28.28	0.00	0.00
Sahabganj	832.00	0.72	603.00	72.48	41.00	4.92	188.00	22.57
Palamu	3734.00	3.25	2806.00	75.15	0.00	0.00	928.00	24.85
Deoghar	11387.00	9.90	8590.00	75.44	527.00	4.79	2536.00	23.06
Latehar	5765.00	5.01	4363.00	75.68	475.00	8.24	927.00	16.08
Ranchi	10303.00	8.95	7965.00	77.31	370.00	3.59	1968.00	19.10
Bokaro	3767.00	3.27	2976.00	79.00	120.00	3.10	671.00	17.34
Hazaribagh	4055.00	3.52	3214.00	79.26	0.00	0.00	841.00	32.23
Garhwa	8073.00	7.02	6435.00	79.71	187.00	2.32	1451.00	17.97
Jamtara	2614.00	2.27	2124.00	81.25	0.00	0.00	490.00	19.71
Simdega	4032.00	3.50	3420.00	84.82	349.00	8.66	263.00	6.52
Pakur	2939.00	2.55	2497.00	84.96	241.00	8.20	383.00	13.03
Godda	5073.00	4.41	4346.00	85.67	259.00	5.34	468.00	9.65
Dumka	4264.00	3.71	3689.00	86.52	285.00	6.68	290.00	6.80
Gumla	5427.00	4.72	4788.00	88.23	621.00	11.44	18.00	0.33
Giridih	7975.00	6.93	7196.00	90.23	740.00	9.28	167.00	2.09
Koderma	2199.00	1.91	1987.00	90.36	12.00	1.93	176.00	28.30
Ramgarh	4642.00	4.03	4200.00	90.48	442.00	9.52	0.00	0.00
Dhanbad	3014.00	2.62	2932.00	97.28		0.00	242.00	8.03
Chatra	5400.00	4.69	5275.00	97.69	0.00	0.00	125.00	2.31
Total	115063.00	100.00	91885.00	79.86	7643.00	6.86	16681.00	14.50

Source: Department of Rural Development, Jharkhand.

physical status of the well, that is, the stage of completion (or incompletion) at which the well stood. This allowed us to answer whether, in reality, the well did not exist at all. Was it partially dug? Was it completely dug but not bound? Was it dug upto some level but had collapsed or was filled with mud now? Was it completely dug and partially bound? Was it completely dug and bound till t h e ground level? Was it completely dug and bound with a parapet?

Work Status of each well, that is, whether any construction activity had taken place on the well within one year preceding the survey or not. This helped us to identify the incomplete wells on which work was genuinely 'ongoing' and which could safely be called 'suspended' as no work had taken place on them since one year preceding the survey.

Well Owner's Responses regarding the possibility of completion of each well, that is, whether the owner believed the incomplete well was likely to get completed or not.

Tables 13-16 present the results of the physical verification exercise.

4.2.2 Physical Status of the Wells

Table 13 depicts the results of the physical verification exercise, that is, it presents the proportion of wells which were found to be in different stages of completion or non- completion.

Table 13
Physical Status of the Well

	Number of Wells	Percentage of the Wells (%)
Well does not exist	83	8.9
Dug to some extent but stopped mid-way	125	13.5
Dug completely and then stopped	8	0.9
Was dug but has now filled with mud	17	1.8
Bound to some extent	50	5.4
Completed without a parapet	91	9.8
Completed with a parapet	552	59.6
Total	**926**	**100**

Source: Based on a physical verification of 926 NREGA wells in Jharkhand.

The exercise revealed that as opposed to Government data, which claims that 80 per cent of the wells whose construction was initiated were completed in Jharkhand, we found that only around 60 per cent of the wells had been completed. Another 10 per cent of the wells were complete till the ground level, that is, they were complete for irrigation purposes. However, in the absence of a parapet, they could be hazardous since children, animals or even adults could unwittingly fall into them. If we include 10 per cent of the wells which are complete till the ground level, the total completion rate of wells would be around 70 per cent. As would be seen later on, this completion rate is actually very similar to the completion rate obtained by using data from the NREGA Management Information System (MIS), according to which nearly 66 per cent of the sanctioned wells are complete in the sample panchayats.

4.2.3 Government Data Regarding Status of Completion of NREGA Wells

While data from the Department of Rural Development helps us obtain district and state level estimates of the proportion of wells which have been completed, more micro level data can be obtained from the MIS data maintained on the official NREGA website (www.nrega.nic. in). The website provides several details of each asset, including the status of completion of NREGA wells. The status of NREGA wells has been described in one of five different categories, viz. 'Approved', 'New', 'Ongoing', 'Completed', and 'Suspended'. How accurate is this classification? Are the wells classified as 'completed' actually complete? Are there any wells which are actually completed but with their status shown differently on the website?

Table 14
Actual Physical Status of the Well against the Official Status as Mentioned in the MIS

		Official Status of the Well according to the NREGA Website						
		Approved	Completed	New	Ongoing	Suspended	Not listed on the Website	Total
Physical Status of the Wells	Well does not exist	30	28	10	13	2	0	83
	Well is incomplete	2	80	0	111	6	1	200
	Bound till the ground level	0	46	1	41	2	1	91
	Completed with parapet	3	467	0	76	4	2	552
	Total	**35**	**621**	**11**	**241**	**14**	**4**	**926**

Source: Based on a comparison of status of 926 NREGA wells mentioned on the NREGA MIS available at www.nrega.nic.in and their physical verification.

Table 14 clearly depicts that this is not the case. The status mentioned on the website was found to have an accuracy of around 80 per cent. A significant proportion of the wells which are classified as 'complete', are actually incomplete. On the other hand, a number of wells which are not classified as 'completed' were actually found to be complete. Out of 621 officially completed wells on which we have data, nearly 154 wells (25 per cent) are actually not complete. In fact, 108 wells (17 per cent of the total) are actually not even complete till the ground level. In other words, out of all 'officially' complete wells, 75 per cent are actually complete with a parapet while 83 per cent are almost complete (till the ground level at least). Further, out of 621 officially complete wells, 28 (4.5 per cent) did not exist on the ground.

Further, out of 241 officially ongoing wells on which we have data, 13 (5.4 per cent) did not exist at all on the ground, while 76 (31.5 per cent) were actually complete, implying that the status of these wells had not been updated online.

Finally, out of 14 officially suspended wells, 4 are actually completed, implying an error in data entry or that the status has not been updated online. We also came across 4 NREGA wells which were not found in the list of works on the NREGA website.

Among all the wells which are officially 'completed' or 'ongoing', nearly 5 per cent were not found at all. Thus, 'ghost wells' or wells that are only 'on paper' do exist and the issue needs to be addressed, but they are not nearly as prevalent as is often claimed by some sceptics who believe that NREGA assets exist 'only on paper'. Further, even among those wells that did not exist, there were very few wells whereby the well owners were unaware of the well. Only 0.04 per cent of the owners of the officially completed wells were not aware that a well was sanctioned in their name.

Ongoing, but for How Long?

How long could a work on a well be considered 'ongoing' before it became 'suspended'? At what point does the work stop being considered 'ongoing' and become 'suspended'? We did not get very clear answers for this question. Therefore, we had to create our own definition of which well we should consider as 'ongoing' and which well as 'suspended'. We defined 'ongoing' wells as 'wells on which were not yet complete, but on which some work had taken place during the one year preceding the survey'. Correspondingly, we defined 'suspended' wells as 'wells which were not yet complete and on which no work had taken place during the one year preceding the survey'. We then proceeded to find out whether the number of

wells which were classified as 'ongoing' were actually ongoing according to our definition.

During the physical verification of all wells, therefore, we also asked the well owners and/ or villagers who knew about the well, and when was the last time that any work had taken place on the well. The findings (presented in Table 15) suggest gross inaccuracies in the MIS data. They also reveal the fact that only one-third of the wells which have been classified as 'ongoing' should actually be considered to be 'ongoing'.

Out of the 241 (or 26 per cent of the total 926) wells, which are officially labelled as 'ongoing', nearly one-third (74) are such that no work had taken place on them during the one year preceding the survey, 9.5 per cent of the officially 'ongoing' wells could actually be said to be suspended since no work had taken place in the one year preceding the survey, yet the beneficiaries felt that there was some likelihood of their completion.

Another one-third (76) of the wells were actually found to have been completed, thus implying poor updating of official data on the status of the wells. Finally, only one-third (79) of the wells were actually incomplete and some work had taken place on them during the 12 months preceding the survey.

Table 15
Official Status of the Well against the Status of Work on the Well

		Official Status of the Well according to the NREGA website						
		Approved	Completed	New	Ongoing	Suspended	Not listed on the Website	Total
Actual Work Status on the Well	No work took place on the well during the last one year (suspended)	3	120	0	74	8	1	206
	Ongoing (some work has taken place during the last one year)	0	4	1	79	0	1	85
	Completed	3	469	0	76	4	2	554
	Well does not exist	29	28	10	12	2	0	81
	Total	**35**	**621**	**11**	**241**	**14**	**4**	**926**

Source: Survey of NREGA wells in Jharkhand and www.nrega.nic.in

4.2.4 Are There Wells Which Will Never be Completed?

The NREGA MIS does not categorise any well as 'abandoned', implying thereby that all wells on which work begins, would eventually get completed. The worst that can happen is that the work on a well may get 'suspended', indicating that it would resume in future. How accurate is this picture?

In order to find out, we asked all the well owners about the likelihood of completion of their well, that is, whether they felt that there was no likelihood, some likelihood, or certainty of its completion.

Out of 241 official 'ongoing' wells, 78 have either already been completed (32 per cent) or are nearly certain to get completed (30 per cent) or have some likelihood of completion (16 per cent). However, 16 per cent (39) of the 241 official 'ongoing' wells are unlikely to ever be completed. These wells can be termed as 'abandoned'. Similarly, 15 per cent (92) of the 620 wells, which are officially categorised as 'completed', can actually be considered to be abandoned. Overall, nearly 15.7 per cent of all wells, which are officially completed, ongoing, suspended, or not listed on the website, can actually be considered to have been abandoned.

Nearly 4 per cent of these wells, however, are those which are completed till the ground level but have no likelihood of getting a parapet. However, such wells can still be used for irrigation purposes. Excluding such wells, nearly 11.8 per cent of the wells have been abandoned at a stage where they

Table 16
Physical Status of the Well against Actual Status of Work on the Well

		Actual Status of Work on the Well				
		No Work Took On the Well during the Last One Year	Ongoing	Completed	(Not Applicable) Well Does Not Exist Because it is Officially 'Approved' or 'New'	Total
Physical status of the well	Incomplete	147	54	0	82	283
	Bound till the ground level	58	31	2	0	91
	Completed with parapet	0	0	552	0	552
	Total	205	85	554	82	926

Source: Based on a survey of NREGA wells in Jharkhand.

are rendered useless for irrigation purposes over the long term. In other words, approximately one out of every eight wells on which construction begun would never be completed.

4.2.5 Completion Rates of NREGA Wells (Comparing Survey Data with Official Data)

Finally, what is the actual proportion of wells that are complete, ongoing and suspended according to our definition? How do these percentages compare with the official estimates of completion rates?

We try to answer these questions through Table 17. It compares the statistics obtained through our survey by using our definition of 'ongoing' wells and 'suspended' wells with official data obtained through two sources. The first source of official data is the data obtained by using the NREGA MIS, which provides information on each of the surveyed wells. The second source of official data is statistics pertaining to Jharkhand as a whole obtained from the Department of Rural Development.

Table 17 shows that 4.1 per cent (38 wells out of the 926 'verified' can actually be termed as 'suspended' as opposed to the 1.82 per cent wells which are termed as 'suspended' according to the MIS. These are wells on which some work has taken place and there is at least some likelihood of their completion, but no work has taken place since the last one year. While 9 per cent of the wells (85) can be termed as 'ongoing' as opposed to 26 per cent, according to the MIS, and 14.5 per cent can be termed so according to data obtained from the Department of Rural Development. Of the 85 wells which can be considered to be 'ongoing', one-third are actually bound till the ground level whereas two-third are in various stages of incompletion.

4.3 Which Are the Best Performing Districts?

When we use the term 'best performing districts', we are measuring the performance of the states based on two separate criteria: firstly, the actual completion rate of the wells, and secondly, the accuracy of official data. Table 18 compares the rate of completion of wells according to data from three different sources—official data according to the Government of Jharkhand (updated till November 2013), MIS data of wells in the sample panchayats, and the physical verification of wells undertaken as part of the survey of Panchayats conducted by the study team.

Among the six districts surveyed, Ramgarh is found to have the highest rate of completion followed by Jamtara; that is, 74 per cent and 68 per cent of

Table 17
Comparison between Official and Survey-based Well Completion Rates

	All-Jharkhand	Sample GPs	
	(official figures for 2013)	Official estimates	Survey estimates
Number of wells for which complete information is available	1,15,063	926	926
Status of wells (%)			
Completed	80	67	60 (69)[a]
Ongoing	14.50	26.0	9 (6)
Suspended		1.5	7 (4.1)
Abandoned	6.50	0	15 (11.8)
Approved		3.8	
New		1.2	1.1
Missing**			7.8

Notes: [a] Figure in brackets are considering wells which are complete till the ground level (without a parapet) as completed wells

** Missing wells were wells which were on the list of wells in the MIS and on which some expenditure had also been incurred by the government but which were not found on the ground and the owners also were not aware of their existence.

In addition, around 0.4 per cent of the wells were not on the MIS on the NREGA website, but were found to be present in the sample Gram Panchayats (GPs).beneficiaries claim to have obtained the wells under NREG

Sources: Department for Rural Development, Government of Jharkhand; www.nrega.nic.in; Primary survey data.

the wells initiated were found to be complete in Ramgarh and Jamtara, respectively. Jamtara also had the most accurate data whereby the final data obtained from the MIS very closely match the final data obtained through our survey. Part of the reason for their better performance was the presence of some 'star performers' among the randomly selected sample panchayats. For instance, Tara Bahal panchayat in Jamtara had a nearly 100 per cent rate of completion. Similarly, Nawadih panchayat in Ramgarh had a completion rate of 95 per cent.

Among the worst performers, Dumka district heads the list with the lowest completion rate and massive data inaccuracies, followed by Palamu and West Singhbhum districts.

Table 18
Rate of Completion according to Different Sources

Districts	Official District Level Data Obtained from the Department of Rural Development, Government of Jharkhand (November 2013)	MIS Data from 4 Randomly Selected Panchayats in Each District	Physical Verification of All Listed Wells Carried out by the Study Team in 4 Randomly Selected Panchayats in Each District
Ramgarh	91%	86% (225/263)	74% (181/246) [83% = 204/246]
Jamtara	81%	65% (106/163)	68% (105/154) [73% = 112/154]
Hazaribagh	79%	65% (100/155)	57% (82/145) [79% = 115/145]
West Singhbhum	51%	66% (69/104)	54% (52/96) [62% = 59/96]
Palamu	75%	23% (25/109)	49% (52/107) [59% = 63/107]
Dumka	87%	71% (135/189)	45% (80/178) [51% = 90/178]
Jharkhand	**80%**	**67%**	**60% [70%]**

Notes: Figures have been rounded off to the nearest whole number.
Figures in parantheses represent the numerator and denominator (that is, the number of wells) which have been used to calculate the percentage.
Figures in square brackets represent the percentage and number of wells which have been completed with or without a parapet, and the number of wells sampled from the district.

4.4 Conclusion

What is the overall picture that emerges from these findings?

Impressive Completion Rates: Firstly, we find that the actual completion rate (at around 70 per cent, if we include wells without parapets and 60 per cent if we do not), is not hugely different from the completion rate reported by using official data (66 per cent for the surveyed panchayats by using MIS, and 80 per cent for the whole of Jharkhand according to the Department of Rural Development). In fact, this is quite impressive.

A significant share of the credit for this success in completion can be attributed to the grassroots movements and organisations which have worked tirelessly to strengthen the implementation of NREGA. Activists who were

interviewed described how continuous struggles and campaigning with the Government helped in building up pressure to complete the wells on which work had been initiated.

Reliability of Official Data—Fairly Reliable Data on Completed Wells but Not on Ongoing Wells: The study also shows that the status of wells, as shown in the NREGA MIS, is a fairly reliable source of information on the actual status of the wells, but only for the completed wells. Nearly 75 per cent of the wells which were officially 'complete' were actually complete (with a parapet). Similarly, nearly 20 per cent of the wells classified as completed had actually been abandoned mid-way. This would include several wells which were complete in all respects but did not have parapets.

During interviews, NREGA functionaries were asked as to why the wells which were not actually complete were shown as completed. The functionaries reported that there was a lot of pressure from the bureaucracy to 'close' pending works. The sanctioning of new works depended upon the completion of existing works. However, due to various reasons, several existing works (which are discussed later) could not be completed in a timely manner. In such a situation, the functionaries decided to 'close' the existing works, by showing them as being 'completed'.

According to official data from the Government of Jharkhand, 14.5 per cent of the wells are officially 'ongoing', that is, work on them is continuing. According to the MIS data for the 24 surveyed panchayats, the proportion of ongoing wells at 25.63 per cent. However, the physical verification of the existing wells, along with inquiries into the actual status of work on the wells, revealed that only about 9 per cent of the total wells could actually be said to be 'ongoing', that is, they were incomplete but some work had taken place on them during the one year preceding the survey.

Further, only one-third of all the wells that were officially 'ongoing' could actually be termed as ongoing, as nearly one-third of them were actually completed while another one-third were actually suspended since no work had taken place on them for over a year. This suggests a failure to update records in a timely manner. The available data on 'ongoing' wells, is thus unreliable and of very poor quality.

Variation across Districts in the Rate of Completion: On the whole, we find that the rate of completion of NREGA wells is variable across districts. Some districts such as Ramgarh and Jamtara have high completion rates of wells. As mentioned earlier, 74 per cent of the wells taken up in Ramgarh and 68 per cent in Jamtara were completed. On the other hand, less than half of the wells taken up in the Palamu and Dumka districts were found to have been completed.

Wells Which Died Before They Were Born: We also came across a number of wells on which work had begun but which do not show up in official data. These wells were approved and work on them was initiated but then stopped for some reason. The e-muster rolls for such wells were not generated and hence workers did not get paid. Such wells are not reflected in the official data. According to the experiences of field workers, there are a large number of such wells in several panchayats in Jharkhand. Several such cases were witnessed during the study as well. However, due to the lack of any official record of such wells, it was difficult to enlist or enumerate the extent of such cases. An informal exercise in one panchayat helped us locate five such wells.

One-Fifth of all Wells Are Abandoned: Secondly, there are a large number of wells which are unlikely to ever be completed. Such wells, which we term as 'abandoned' wells, should also be reflected in the data. However, the NREGA MIS does not even allow for any such categorisation of assets. In the NREGA MIS, such assets must hence be categorised as completed, ongoing or suspended, all of which are misleading classifications.

According to official data, 7 per cent of the wells were such that work on them had begun but could not be continued due to technical reasons. In all probability, the wells had collapsed mid-way (due to rain or poor design), and hence had to be abandoned. East Singhbhum district ranks the highest in this regard with nearly 28 per cent of the wells here being abandoned due to technical reasons. In the 24 panchayats that we surveyed, 2 per cent (that is, 18 out of a total of 987) wells were officially 'suspended' according to the MIS data, while none were actually declared to have been abandoned or such that work on them could not be continued further. A physical verification of the wells and an inquiry into the perceptions of the well owners regarding the likelihood of completion, however, reveals that nearly 15.7 per cent of the wells can actually be termed as 'abandoned' since there is no likelihood of their completion. Even if we consider wells constructed till the ground level as complete, 11.8 per cent of the wells would still be abandoned and of no utility to anyone.

It is only when we acknowledge the fact that such a large proportion of the wells are being abandoned, that we can begin to enquire into the reason for this state of affairs. The next section raises this question and tries to explore the factors that lead to the abandonment of wells.

5

Why Do Some Wells Remain Incomplete?

5. Why Do Some Wells Remain Incomplete?

5.1 Key Questions

What is the reason for the situation wherein nearly 15.7 per cent of the wells have been abandoned and another 7 per cent lie suspended? What does non-completion of a well mean for the well owner? Apart from the immense wastage of public resources arising from non-completion of an asset, do the owners of the well also have to incur any loss when a well remains incomplete?

5.2 Methodology

In order to find the answer, we interviewed 46 owners of such suspended or abandoned wells in the 24 surveyed panchayats. Through each such interview, we obtained information on the individual's background, the effort (in terms of time, money and labour) that the owner and his family had to put into the well, the reasons for its abandonment/suspension, and the likelihood of its completion.

5.3 Why Wells Are Abandoned: Survey Findings

We asked all the beneficiaries of wells that had been abandoned to identify the reasons for their abandonment. The responses of the beneficiaries are detailed below.

Payment Delays: Among the total beneficiaries, 71 per cent (that is, 32 out of the 46 respondents) with abandoned wells said that the wells had been abandoned due to delays in payments from NREGA, which led to the wells being abandoned after partial digging. On an average, we found that the wells were dug up to a depth of 22 feet before work was discontinued, never to be resumed again. The dug but unbound wells easily collapse or get filled up with mud during the rains as soil from the sides erodes and rushes into the well. The advent of the monsoon leads to a further collapse of the already suspended wells, making their completion even more difficult.

Out-of-pocket Expenses: The second biggest reason for the lack of completion of the wells, which is linked to the first reason, was that the beneficiaries could not afford to pay for the labour and material expenses all by

themselves, when they experienced delays in the payments.

Technical Reasons: Only 15 per cent of the respondents stated that the well construction was stopped because they had hit a hard rock while digging.

A number of wells were dug completely but since no water was found, the owners saw no point in spending money in binding the wells.

Some wells were dug on soil that became 'loose' as the digging progressed. Digging in such soil is extremely difficult since the sandy soil from the sides flows in, thus filling the hole that has been dug. Some of these wells ultimately could not be completed and remained abandoned.

In all, 'technical reasons' caused the abandonment or suspension of the wells in only around 24 per cent of the cases surveyed. The rest of the wells, that is, 76 per cent, were stalled due to payment issues.

Table 19 highlights different prominent factors leading to the non-completion of NREGA wells in Jharkhand.

The factors which generally lead to the abandonment of NREGA wells are further illustrated through examples below.

5.3.1 The Story of Tribhuwan Soren

The story of Tribhuwan Soren helps us to visualise the most common situation that leads to non-completion of several NREGA wells in Jharkhand. Tribhuwan Soren is a resident of Kusumbha panchayat of Bishnugarh block in the Hazaribagh district of Jharkhand. He was sanctioned a well under NREGA (work code WC/7080900916648). He started building his well in March 2011 and the construction went on for just a month when its construction process was stopped. Before the digging stopped, up to 15 feet deep earth had already been dug. The work on the well never resumed after that. Tribhuwan's well, however, was dug less than the average 'abandoned' well in Jharkhand. The 46 suspended and abandoned wells surveyed had, on an average, been dug about 22 feet deep before work on them stopped.

Why did work on Tribhuwan's well stop after a month? In order to determine why several wells in Jharkhand remain incomplete, it is important to understand the process of construction of wells. Tribhuwan 'managed' the labour for the digging work. In a sense, he was the 'labour contractor'[10]

[10] The term 'labour contractor' has been used here to emphasise the fact that the labour recruitment process is very different from what it is supposed to be under NREGA. Under NREGA, people desiring work must fill up a work demand form and work must be provided to them within 15 days in order to meet their demand. In reality, however, the demand-driven aspect of NREGA is ignored completely. The provision of work is entirely 'supply-driven', that is, whenever construction work begins, workers are found, their work demand forms filled up and submitted, and their muster rolls generated. Workers, therefore, have no control over when they may get work under NREGA. This is the aspect which has been highlighted by the use of the term 'labour contractor' here.

Table 19
Reasons for Non-completion of the Wells

		Percentage Saying Yes
1.	Well collapsed during construction (due to the following reasons)	70
a.	Rain flushed the incomplete wells while the late payments were on their way	52
b.	Poor quality of the well	0
c.	Poor design of the well	2
d.	Wrong location of the well (loose/sandy soil)	11
2.	Well collapsed due to hard rock beneath the soil which could not be broken	15
3.	No water even after digging to the appropriate depth	7
4.	Late payment from NREGA	71
5.	Beneficiary could not pay for the labour wage and material expenses	26
6.	Excess demand of bribes	7
7.	Problems in the house due to which the beneficiary could not give time for the well's construction	2
8.	Beneficiary and other responsible persons had some other work and could not give time for the well	2
9.	Difficulties in getting the materials from the supplier or contractor	7

Source: Based on a survey of 46 abandoned NREGA wells in Jharkhand.

for his own well, as he himself found labourers willing to work on his well at the NREGA wage rate. In all, 10 people began working on the well, two of whom were from within the family and eight were from outside.

Tribhuwan's son, Rajkumar Soren was responsible for taking the labourers' attendance on a normal register and handing it over to the Rozgar Sevak, who would himself fill up the muster roll. Neither Tribhuwan nor Rajkumar nor any of the labourers had any idea as to what was ultimately written on the muster roll.

After working for 25 days on the well, the eight labourers who were not family members demanded their wages. When NREGA wage payments did not come through, the workers stopped work and started pressurising Tribhuwan to pay up for 25 days of the work put in by them. The total

wage bill amounted to Rs. 24,400 (since the daily wage under NREGA was Rs. 122).

After waiting for several days, when the NREGA payments still did not come, the labourers further increased the pressure upon Tribhuwan to pay their wages. Finally, Tribhuwan had no option but to make the payments himself. He took a loan of Rs. 10,000 from the village moneylender at an interest rate of 120 per cent per annum. The money-lender demanded that the monthly interest of 10 per cent, that is, Rs. 1,000, be paid every month.

Figure 8: Tribhuwan Soren's Abandoned Well

Eight months after the work had stopped, the labourers received a part of their payments from NREGA. The total amount received by them was Rs. 14,400. While withdrawing the money, the postmaster deducted Rs. 400 as his commission. They thus received Rs. 10,000 less than their rightful earnings (Rs. 24,400). The advance payment made by Tribhuwan by borrowing Rs. 10,000 was, therefore, kept by the labourers since it filled the gap between their wage bill and the money received from NREGA.

Another Rs. 2,000 was spent in paying bribes to the Panchayat Secretary and the Gram Rozgar Sevak (GRS) for drawing up the agreement of the well. Apart from this, Tribhuwan also had to spend Rs. 1,900 on digging equipments, which are not provided by NREGA.

In all, Tribhuwan Soren had to spend around Rs. 14,000 towards meeting expenses related to the well and an additional Rs. 39,000 in interest payments for the loan that he was compelled to take to meet those expenses.

The other factors which prevent the completion of wells are further described in detail below.

5.3.2 Role of Payment Delays

Delays in NREGA payments have been widely recognised as the single most important factor causing a loss of interest in the programme. Authors and activists have consistently drawn the Government's attention to this problem and have demanded reforms which minimise payment delays. These delays also constitute a major factor responsible for the non-completion of NREGA wells. Where the well owners (or contractors managing their wells) do not have the capacity to bear the wage and material costs, they rely solely on payments from NREGA. However, delays in payment cause the work to get stalled, since labourers cannot work indefinitely without payment, and material suppliers cannot bear the losses arising out of non-payment of bills for a long time. Eventually, the prices of both labour and materials rise, raising the total cost of the well above the budgeted estimate. Often the wells also need repairs due to filling of mud over time or collapses caused by the rains. Hence, when the payments actually do come in, they are insufficient to meet the higher costs of completion of the well, leading thereby to the non-completion of the well.

Systemic Factors behind Payment Problems: In order to understand the reasons behind delays in payments and several non-payments which lead to non-completion of the wells, we interviewed the NREGA functionaries at the panchayat, block and district levels. The discussions revealed how a top-bottom un-coordinated approach of planning and execution of NREGA works led to the wastage of resources. In 2010, the Government of Jharkhand ordered the construction of 50 wells under NREGA in each panchayat. However, when construction work began, particularly in Palamu district, the district administration realised that it did not have sufficient funds to pay for all the works. Hence, the panchayats had limited funds which they were required to ration out among the beneficiaries. As the *Mukhiya* of Ratanpur panchayat in the Panki Block of Palamu district explained, "In such a situation, the beneficiaries (or their contractors) who were shrewd, active and resourceful, would manage to get payments made for their wells. They would run around, get the measurement books updated and signed by the engineers, the muster rolls and wage bills signed

and filled by the GRS and the *Mukhiya*, submit them to the block office, and receive payments from the panchayat. The less resourceful ones or those who came later would not be able to get any payment since the money with the panchayat would run out". Thus, a number of wells where the owners or their contractors could not compete in obtaining the limited resources would remain incomplete. At a fundamental level, this type of implementation of the project violates the spirit of the Act. By following a top-down approach to the planning of NREGA assets, it fails to respect the demand-driven nature of the action, reducing it to a mere welfare scheme. When we asked NREGA officials at all levels the reasons for this state of affairs, some of them justified the stance by saying that this was the only way in which serious work could get done in rural areas. They averred, "If targets are not fixed and instead, we have to wait for 'demands' to come, then no assets would get constructed. This is because the ground level functionaries can escape from doing work by saying that there is no demand—neither for work, nor for assets. It is for this reason that the targets for expenditure and construction of assets are given, so that the functionaries are unable to offer such excuses". To what extent are these explanations valid is debatable.

Apart from the shortage of funds in the districts, the mismanagement of funds is also an important factor behind non-payment for works. Funds are often transferred to the districts, from districts to the blocks and from blocks to the panchayats in an arbitrary manner, not necessarily being related to the demand for funds and the quantum of works being carried out. Thus, panchayats with a large amount of works on the anvil often have to ration out the funds while panchayats with less work have more than sufficient funds. Most NREGA functionaries believe that with the adoption of the Electronic Fund Management System (eFMS) and direct payment to beneficiaries from the block from a single NREGA bank account, this problem of coordination has been solved. However, this does not solve the other major cause for non- payment— if the allotted funds continue to fall short of the approved works, it would lead to persistent payment problems resulting in the non-completion of works.

5.3.3 Incomplete Payment

In the case of Tribhuwan Soren, it is not entirely clear as to why the labourers received only Rs. 14,400 from the Government when the total wage bill was around Rs. 24,400. However, Tribhuwan had to bear the burden of the gap between the wage bill and the actual payment from the Government.

Thus, while delays constitute a big problem in NREGA, an equally serious problem is that of non-payment of due wages. Various factors lead to

the non-payment of the due wages. Often contractors or mates collude with postmasters to collect the payments due to the workers and then pay the workers a lower amount. As in the case of Tribhuwan Soren, neither Tribhuwan's son, nor the workers had any idea as to what was being written in the muster rolls. Once Rajkumar gave an informal attendance list to the GRS, he had no clue what the GRS did with it—that is, whether he added fake names to the muster roll, whether he filled in their complete attendance or not, nothing was certain. The end result was that the workers did not receive their full wage payment.

5.3.4 Other Out-of-pocket Expenses

Tribhuwan Soren had to spend Rs. 1900 on digging equipments such as buckets, ropes, hoes, and baskets. These items are not included in the technical estimate for digging of the well. Similarly, most beneficiaries of the NREGA wells need to spend a considerable amount of money to procure equipments, rent a pump set to draw water out, and pay for diesel to run the pump set, among other activities. When the beneficiaries are not able to meet these expenses, there is a strong chance of their wells remaining incomplete.

5.3.5 Expenditure on Materials

Tribhuwan did not have to spend any money on materials used in the well except for the digging equipment. This is because work on his well stopped even before the digging was complete and before binding could start. However, often beneficiaries also have to spend heavily on procuring materials required for construction of the well. The example of Mohammad Jadid Ansari would illustrate how expenses on materials required for the well (such as cement, sand, stones, bricks, and iron rods) can cause a well to remain incomplete.

(a) Mohammad Jadid Ansari's Determination Not to Spend out of His Own Pocket

In the Sadam Panchayat in Gola block of Ramgarh District, a NREGA well was sanctioned in the name of Mohammad Jadid Ansari.[11] Moham-

[11] The customary practice for material procurement under NREGA is that the beneficiaries purchase the materials themselves and submit the bills to the Rozgar Sevak. The latter would then obtain fake bills from a supplier with a TIN number and submit them to the NREGA office. On the basis of the bills, the material payments would be made to the material supplier through the means of a Financial Transaction Order (FTO) from the block office. The supplier would charge his commission (around 14 per cent) and give the rest of the money to the Rozgar Sevak, who would then take his commission, along with that of the panchayat secretary's, and pass on the remaining amount to the beneficiary. After all the deductions, the amount received by the beneficiary would be less than the amount spent by him on materials.

mad Jadid Ansari's well was dug completely and awaited materials such as sand, cement and stones to bind it. However, realising all the hassles and risks, Mohammad Jadid Ansari did not want to purchase any material from his own pocket. The GRS and the Panchayat Secretary issued threats to him to purchase the material and build the well or else they would register an FIR in his name and recover all the labour payments that were made under NREGA, if need be then by selling off his house and other assets. Despite all the threats, however, Mohammad Jadid remained determined not to spend, partly because he was poor and did not have any money to spend and taking a loan to purchase materials was too risky because he was unsure if he would get reimbursed for his expenses by the Government. His well thus remained incomplete. On the other hand, if things had worked out as they should have, the NREGA functionaries would have told the registered supplier to deliver the required materials to the site of construction of Mohammad Jadid's well. The material would have been supplied, the bill submitted to the block office, and the payment made to the supplier within 15 days. Mohammad Jadid's well would have then been completed. Instead, it lies incomplete, rapidly getting filled in by the soil eroding from all sides, reducing to a nought all the effort of the labourers who worked to dig the well and all the public money that had gone into paying for it.

Stories such as Tribhuwan's and Mohammad Jadid's—stories of wells which remained incomplete due to the stopping of payment, embezzlement of funds, or lack of timely payment—are found aplenty in Jharkhand's villages.

5.3.6 Technical Difficulties Causing Abandonment of Wells

Payment problems clearly constitute the most common reasons for non-completion of wells in Jharkhand. However, technical issues such as the inability to dig through hard rock, lack of availability of water even after digging, difficulties in digging through sandy soil also contribute towards non-completion of wells. One such case is that of Saheb Ram Manjhi of Chhotki Dhundi of Mandu block in Ramgarh district, who dug the well up to a depth of 35 feet, yet no water was found. He could not even dig deeper since they had hit hard rock in the ground. He had chosen the site of the well himself, expecting to find water there since there was a river flowing-nearby. Work began but NREGA payments were delayed and work would have stopped had the labourers waited for payments to come from NREGA before resuming work each time. In his eagerness to get the well construction work done fast, Saheb Ram had to pay Rs. 10,320 to the labourers out of his own pocket. He did not even get reimbursed for his expenses.

5.3.7 Bribes, Commissions, 'Levies' and Embezzlement

(a) Bribes: Tribhuwan Soren had to pay a bribe of Rs. 2000 to the Panchayat Secretary in order to prepare and sign the agreement between the Panchayat and Tribhuwan, which was necessary for work to begin on the well. The survey showed that on an average, the owners of completed wells had to pay a bribe of around Rs. 4,116 to get their wells completed, while the owners of suspended or abandoned wells had to pay a bribe of around Rs. 2,200. The bribes or outright payments to functionaries include payments made for approval of the beneficiary, preparation of agreements and technical estimates, granting of approval to the technical estimates, and finally provision of the technical and administrative sanction to the well. For instance, Mohammad Jadid Ansari of Sadam village in Ramgarh had to start shelling out money even for getting his well approved, and for getting the well sanctioned by the Government, he thus had to pay Rs. 5,000 as bribe to the Panchayat Secretary. Dhaneswar Mahto (the Panchayat Secretary) explained to him that he had got orders from the Block Development Officer (BDO) and the Deputy Commissioner (DC) to charge the amount.

Data collected from the owners of abandoned well owners show that, on an average, about 15 per cent of their out-of-pocket expenses are incurred on bribes paid to officials. The owners of the suspended wells thus spend a slightly larger proportion of their private expenses on bribes than the owners of completed wells (who spend only 13 per cent on the payment of bribes).

(b) Commissions or PCs: These figures, however, exclude the commissions or PCs which are deducted from the payments by officials, contractors, mates or middlemen even before (or right after) they reach the beneficiaries. For instance, in a number of cases in Palamu, it was found that the contractors themselves would withdraw money from the labourers' accounts, take their commissions (as well as the commissions required to be paid to officials) and pay the remaining amounts, which were often far lower than what was due to the labourers.

Commissions, or PCs as they are commonly known, are a part of everyday parlance in the state. They are payments made to officials which depend on the percentage of money that the beneficiary would receive from the Government. As work began on Jadid's well, the workers soon started demanding their rightful payments. In order to get those payments released, however, he had to pay a PC or commission at every step of the payment process. First came the GRS, who charged Rs. 50 for every muster roll that

he provided, taking a total of Rs. 500 for ten muster rolls over the course of the digging of the well. He was followed by the Junior Engineer, who charged Rs. 1,000 for doing his job of taking measurements and filling up the measurement book (MB). Finally, when the cheques were passed on to the post office and the money had to be credited into the workers' accounts, the Post Office clerk demanded Rs. 1,000 for the job. However, officials are not the only people who charge a PC or commission. Material suppliers also demand a hefty commission for their job. Under NREGA, payments for materials such as sand, bricks, stones, cement, and iron, can only be made to Government-approved material suppliers with a valid TIN number. However, such suppliers are often rare and have a near monopoly in their area. They were found to charge commissions of up to 14 per cent for acting as gateways for the receipt of NREGA money.

(c) Levy: 'Levy' in Jharkhand parlance usually refers to the commission or money charged by Left-wing extremist groups for allowing works to take place in areas where they are active. Although most villagers and NREGA functionaries confirm that Left-wing groups do not charge a levy on NREGA works and particularly not on NREGA wells, yet functionaries were often heard using it as an excuse to avoid or deflect questions about leakages.

(d) Outright Embezzlement of Funds: This kind of embezzlement, that is, withdrawal of money without any work being done, is not very common in Jharkhand. However, it was found to be extremely prevalent in the villages which were supposed to be most affected by Left-wing extremism and thus categorised as 'sensitive'. During the survey, we found that the two panchayats which were most affected by Left-wing extremism, namely Ratanpur in the Panki block of Palamu district, and Tebo panchayat in the Bandgaon block of West Singhbhum district, were the two panchayats wherein the maximum discrepancies in NREGA works were found. Embezzlement of funds was, therefore, found to be taking place in the form of use of machinery, existence of 'ghost wells' for which payments had also been made, and siphoning off of money out of the labourers' wages and material expenses, leading to poor quality of the wells constructed.

It was apparent that most officials and functionaries use the threat of violence by Left-wing groups to ward off visits by any agency or individual who might come to inspect the wells. Simultaneously, as the *Mukhiya* and GRS of Ratanpur explained, both the contractors as well as the beneficiaries

use their connections with extremists to threaten local level functionaries into releasing payments even where no work has been done.[12]

Leakages such as bribes and commissions reduce the amount available for construction of the well. Sometimes, the money left is insufficient to construct a complete functional well, leading to its abandonment mid-way.

5.4 Burden of Abandonment

The entire lot of payments on bribes and commissions exhausted all of Mohammad Jadid's savings. He was then pressurised by the Panchayat Secretary and GRS to spend money and purchase materials for his well. When he refused to do so, work on his well stopped. Today, the well thus lies abandoned. A total amount of Rs. 69,050 was spent on the well, out which 63 per cent was received from the Government and 37 per cent was spent by Mohammad Jadid himself. On an average, the expenditure (private and public) on an abandoned well is around Rs. 89,109, out of which the average loss to the exchequer is Rs. 74,867. The total loss money spent on abandoned wells in Jharkhand till November 2013 (assuming that 12 per cent of all the 1,15,063 sanctioned wells were abandoned) was Rs. 123 crores. Out of this, the total public money spent on abandoned wells in Jharkhand was around Rs. 103 crores.

As for Tribhuwan Soren, he had to take a loan of Rs. 10,000, on which he paid Rs. 1,000 as interest every single month for 39 months! On top of that, he had to incur out-of-pocket expenses of Rs. 2000 on bribes and Rs. 1900 on digging equipment. In all, Tribhuwan had spent around Rs. 14,000 out of his own pocket (excluding interest payments on the loan) on the well, which ironically lies incomplete and abandoned. His expenditure was not very different from the average expenditure incurred by owners of abandoned wells in Jharkhand. These owners of abandoned wells had, on an average, spent around Rs. 14,242 out of their own pockets on their well. Out of this, 34 per cent was spent on labourers' wages, 50 per cent was spent on materials including food provided to labourers, and equipments which may or may not be provided by NREGA. Further, 15 per cent of the total out-of-pocket expense went on bribes to get the well sanctioned, or to get the payments released. These expenses not only reaped no returns, but also destroyed a significant portion of their land, rendered them indebted to money-lenders, took up a great deal of their time and effort, and gave nothing but stress and disillusionment in return.

[12] For details, see the 'Report on Discrepancies in the Implementation of NREGA in Ratanpur Panchayat'.

Table 20
Flows of Out-of-pocket Expenses of All the Beneficiaries (in Rs.)

	Total Out-of-Pocket Expenditure	On Labour	On Material*	On Bribes	Total Number of Respondents
Of Completed Wells	30,939	8,240 (27%)	18,554 (60%)	4,116 (13%)	102**
Of Suspended Wells	14,242	4,875 (34%)	7,167 (50%)	2,200 (16%)	46
Of Total Wells	25,749	7,194 (28%)	15,015 (58%)	3,520 (14%)	148

Notes: *Including miscellaneous items like food to labourers, digging equipments not provided by NREGA.

**102 well owners out of the 103 interviewed, as for one well, we could not get the expenditure data, due to non-availability of the well's mate, who was the son of the beneficiary.

Source: Based on survey of owners of NREGA wells in Jharkhand.

5.5 Conclusion

Unlike what is portrayed by the Government, administrative and governance-related issues constitute the most important reasons for abandonment of wells in Jharkhand. Nearly 76 per cent of all abandoned wells remain incomplete due to payment-related issues, such as non- payment due to non-availability of funds, delay in payments due to non-functional systems, demand for bribes and commissions and outright embezzlement of funds. These issues need to be addressed in order to reduce the wastage of money and resources associated with incomplete wells.

Only about 24 per cent of all the abandoned wells have been abandoned due to 'technical' reasons, such as finding hard rock, not finding water, and sandy soil, among other things. Individuals have to spend an average of Rs. 14,242 out of their own pockets on wells which do not get completed. Clearly, the abandonment of wells leads to a huge burden upon the individual. Therefore, every effort must be made to ensure that at least payment issues are addressed. That alone would bring down non-completion by three-fourths the present rate.

6

Who Gets a NREGA Well?


मनरेगा योजना के तहत
प्र. बड़कागाँव
पंचायत सिरमा यो.सं. 5/11-12
योजना का नाम- ग्राम पड़रिया में
मनोज महतो के खेत में 12" कूप निर्माण
मुखिया- मो. अताउल्लाह
अभिकर्ता- मनोज महतो
संकलित राशि-1,41,253 मजदूरी दर-120

6. Who Gets a NREGA Well?

6.1 Can the Poor Afford it?

Given the huge out-of-pocket expenditure that is normally associated with NREGA wells, an important question arises regarding its accessibility to the poor. Does the huge out-of-pocket expense act as a barrier for the poor in need of a source of water? We tried to answer this question by using quantitative as well as qualitative methods. Our findings are delineated below.

6.1.1 Most Well Owners Belong to Asset-poor Households

We used structured interviews to find out the answer to the questions, 'Who gets a NREGA well?' and 'Can a poor household afford a NREGA well?' The randomly selected participants with completed and incomplete wells, who were selected for interviews, were also asked about their respective asset portfolios. This gives us an idea about the wealth status of the beneficiaries of NREGA wells. The survey indicated that out of a total of 126[13] well owners, 69 per cent actually lived in a mud house and had nothing but a bicycle as their mode of transportation. Amongst the 37 beneficiaries of wells which never got completed, 78 per cent (29 beneficiaries) did not have any motorised vehicle. Thus, most NREGA beneficiaries are clearly not asset-rich.

6.1.2 The Rs. 5000 Poverty Line

We also used another method to find out the answer to the above questions. We know that most wells, which are not entirely 'managed' by contractors, require out-of-pocket expenditure. Let us assume a cut-off, say Rs. 5000, and say that for out-of-pocket expenditures above this amount, a poor household would need to rely on external sources of finance, while relatively well-off households would be able to bear the expense on their own. Then, in order to find out whether the wells are given to poor households or to financially well-off households, we calculated the percentage of the well owners (amongst those who incurred out-of-pocket expenses above Rs. 5000) who are able to incur the expense entirely through their savings. These calculations indicated that 31 per cent (29 complete + 17 incomplete

[13] Excluding Ramgarh district, as we did not ask this question in Ramgarh.

well owners) had financed the expenses entirely through their own savings. Thus, we can say that 69 per cent of the wells go to households that cannot even pay Rs. 5000 out of their own savings. Can we therefore conclude that NREGA is well-targeted?

6.1.3 The (Informal) Cost for Demanding a NREGA Well

FGDs in every panchayat with diverse groups of people to understand the factors that determined who would get a NREGA well. These FGDs revealed that in general, anyone could get a NREGA well if they could pay the bribe required to get it sanctioned. Does payment of bribe then constitute the strictest eligibility criterion for getting a NREGA well? In general, yes.

Figure 9: Jagmohan Oraon of Salamdiri Village in Ratanpur

6.1.4 The Middleman to the Rescue of Those Who Cannot Pay the Bribe

There were exceptions to the rule though. Jagmohan Oraon of Salamdiri village in the Ratanpur panchayat has only a small patch of land, one buffalo, one mud house and one newly built house which he received under the state government's Birsa Awaas Yojana. He earns barely any income to feed his family, let alone pay bribes. Yet, his well was not only sanctioned but also constructed and completed. This was possible because of two factors. Firstly, the Palamu district administration decided to sanction NREGA only on lands belonging to Scheduled Castes (SCs) and Scheduled Tribes (STs).

Since the population of SCs and STs in Palamu was 27.95 per cent and 9.03 per cent, respectively,[14] and the average income level among them was very low, there was no option but to construct wells on the lands of poor people. Secondly, Jagmohan Oraon's well was 'managed' by contractor Nagender Bharti, who took care of payment of bribes and other costs entailed in the sanctioning of the well, getting the agreement ready and signed, procuring the materials, employing the labour and the mason (*mistry*), paying commissions to officials for ensuring the timely payment of cheques, collection of payments from the post office and making payments to the labourers. Jagmohan Oraon did not have to spend on anything but simply had to feed the labourers and the masons for a few days. However, Nagender Bharti's *help* did not come free. When the NREGA wage rate was Rs. 127 or Rs. 138 (the following year), those working on the well got paid only Rs. 100 per day. Further, the eight labourers working on the well did not get paid anything for around 15 days of work. The material quality was so poor that the well had developed cracks within one year of its construction. Where according to the technical sanction, the well was supposed to be 35 feet deep, this well was actually only 18 feet deep, thus barely having any water in it. When Jagmohan (well owner) asked Nagender Bharti (the contractor) to dig more, he refused to dig further saying that he did not have more cement and that Jagmohan should put in his own money if he wanted the well to be more than 18 feet in depth.

The story of Balo Dom is very similar, and yet at the same time, very different. His family was also amongst the poorest families of the village. He owns a mud house and another room of poor quality which was constructed with support from the Indira Aawas Yojana. Their only asset, apart from the small 0.16 acre plot of land and mud house, is a bicycle. The figure of Balo Dom, clad in his *lungi* earning solely from the single crop he cultivates on his 0.16 acres of land and from selling some bamboo, clearly shows that he could never have imagined owning a well had it not been for NREGA. Yet, he managed to get a NREGA well approved and sanctioned. How? The process was 'managed' entirely by the forest ranger. This is where his similarity with Jagmohan Oraon stops.

Unlike Jagmohan Oraon, Balo Dom was himself the labour contractor for his well, that is, he managed the operations at the worksite himself. Only the administrative formalities were managed by the forester. Hence despite the involvement of the middleman, and the forester, Balo Dom himself se-

[14] From the website: palamu.nic.in/palamu_at_a_glance.pdf

lected workers, took attendance, and took responsibility for their payments and for fulfilling any shortfall that may take place at the worksite.

Hence, even though NREGA payments fell short of the total expenditure, he managed to fulfil the gap through out-of-pocket expenses. He spent nearly Rs. 21,000 to pay wages to labourers for 42 days of work—payment which should have come from the Government but either it did not come or it was siphoned off. He had to spend another Rs. 3,390 on bridging the gap between market wages (Rs. 100 per day) and NREGA wages (Rs. 88 at the time). In addition, he spent another Rs. 10,000 on documentation, and tools and equipment etc. All this came at a huge cost. He had to take a loan of Rs. 25,000 from the money-lender at an annual interest rate of 60 per cent. Yet, it was all worthwhile as his well was of excellent quality and overflowing with water for most of the year.

The stories of Jagmohan Oraon and Balo Dom illustrate that it is possible for poor people (who are unable to pay bribes) to get a NREGA well but only under one or both of the following two conditions:

Firstly, the construction of the well is managed by a contractor. The contractor can then take care of all the payments and get the well sanctioned, though in such a circumstances, the quality of the well is at risk since contractors usually do not have any stake in ensuring its quality, rather they do have a stake in getting the job done as cheaply as possible in order to pocket the balance of the sanctioned amount.

6.1.5 Belonging to the SC or ST Community Can Also Help

Secondly, a poor person may get a NREGA well if the person belongs to the Scheduled Caste (SC) or Scheduled Tribe (ST) community and the administration has an explicit policy of prioritising welfare measures for people from this community. During the survey, we found that the Palamu administration had given up its policy of constructing wells only on land belonging to the SCs and STs.

According to the NREGA Guidelines, "*All activities mentioned in items (iv), (x), and (xi) and items (xiii) to (xv) of Paragraph 1B of Schedule I of the Act (that is, works to be taken up on private land), shall be allowed on land or homestead owned by households belonging to the SCs and STs or below the poverty line (BPL) families or the beneficiaries of land reforms, or beneficiaries under the Indira Awaas Yojana of the Government of India, or that of the small or marginal farmers as defined in the Agriculture Debt Waiver and Debt Relief Scheme, 2008, or the beneficiaries under the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 (2 of 2007)*" (MoRD, 2013, p. 159).

In other words, as per the guidelines, most farmers in Jharkhand are eligible to get wells constructed since most of them (even the relatively well-off among them) are small and marginal farmers. In any case, discussions with officials revealed that apart from Palamu, the eligibility criteria are never considered when decisions are taken as to whose land to build a well on. In general, it is assumed that everybody with any amount of land in the village, is eligible for obtaining a well. The only 'exclusion' criteria which is sometimes applied is that the wells may not be sanctioned to those households wherein one or more members have a formal government job.

The FGDs revealed that there is a massive demand for the wells from all the communities. People from the general category felt particularly resentful against the policy of not sanctioning wells to them. The general category people, who are generally better off, claim that as they own larger plots of land, they would be able to make much better use of the irrigation wells than SC households with small tracts of land. Interviews with NREGA functionaries revealed that they find it somewhat 'safer' to sanction wells to people from the general category and the 'better-off' households. This is because they believe that even if NREGA payments do not come on time, the 'better-off' beneficiaries would be able to deploy their own personal resources to ensure the timely completion of the wells. On the other hand, poorer households would not be able to do anything in the face of the stalled NREGA payments. The stories of Tribhuwan Soren and Jadid Ansari of Hazaribagh are testimonies of such incomplete wells. Even though nearly half the work was complete on both the wells, in the face of stalled payments, the poor beneficiaries were unable to bear the expenses on their own, leading to the eventual abandonment of the wells. The resultant incomplete wells raise questions among higher authorities who often determine the approval of resources based on the rate of completion of the previous works.[15] However, sanctioning wells predominantly to better- off households would serve to perpetuate the existing economic inequalities, rather than mitigate them.

It was found that in the other districts, where wells were not restricted to SC/ST households, most of the wells were sanctioned to people belonging to the General category, who were better off and could at least afford to pay the bribes and/or exert pressure on NREGA functionaries to sanction

[15] In fact, this policy has also led to several forced 'closures' of wells. In several panchayats, we found that incomplete wells were also categorised as 'complete' in the MIS. One GRS explained that this was because of pressure from the district administration to complete all ongoing works in a hurry. In several districts, wells were not sanctioned for a few years due to the large amount of incomplete wells. Wells constitute a majority of the works under NREGA. Further, the salary payments of functionaries such as the GRS and Block Programme Officer (BPO) are linked to the amount of expenditure made under NREGA. Therefore stopping of works implies that functionaries such as the GRS and BPO do not get their salaries. In order to prevent this situation, GRSs were extremely eager to show the wells as complete even when they were actually incomplete.

their wells. At the time of the survey, the restrictions had been removed in Palamu and the list of wells which had been freshly approved was available in most panchayats. On inspecting the list in the Itko panchayat of Palamu, we found that all the newly approved wells belonged to the relatively well-off people from the General category.

6.1.6 Does the Mukhiya Favour His Own Caste?

Is wealth the only factor affecting the probability of getting a well sanctioned under NREGA? The study attempted to find out whether caste could also be a factor, that is, whether people belonging to the same caste as the *Mukhiya* (the *de facto* authority for deciding who gets a well) has any influence on the probability of getting the well. In Balo Dom's case, this was certainly not true since his well was sanctioned even before the first panchayat elections took place in 2010. It was also not true in Tribhuwan Soren's case, as Tribhuwan was an ST while the *Mukhiya* belonged to an Other Backward Caste (OBC). The survey respondents were also asked about whether caste played any role in deciding who gets a well. All the respondents denied any such linkage. In fact, the study found that, in general, there appeared to be no clear relationship between the caste of the well owner and the probability of getting a well.

6.1.7 Does One's Personal Relationship with the Mukhiya Matter?

We then tried to find out if an applicant's relationship with the *Mukhiya* affects his probability of obtaining a NREGA well.

Technically, the list of assets approved by the village is prepared by the Gram Sabha, which comprises all the village residents and the Gram Panchayat members. These village level lists give rise to the shelf of works for the panchayat. However, when the list goes to the district administration for final approval, the administration often selects a certain number of assets, on the basis of any criteria. The administration may have decided to sanction only a certain number of each type of asset per panchayat, or there may be a limited budgetary allocation for each panchayat, or there may be some other criterion. In such a scenario, the administration may approve only a certain number of works, starting from the one that is accorded the highest priority by the panchayat, moving down in order of priority in the shelf of works. Therefore, the priority accorded to a particular work is an important determinant of the probability that it may be approved by the district authorities.

The *Mukhiya* of the Panchayat, as the signing authority of the list of works proposed by the Gram Sabha (GS), can tinker with the ordering of proposed works, thereby influencing the possibility of their approval. Fur-

ther, even when the assets have been approved by the district administration, they need to be followed up with a detailed application including a technical estimate, which when approved, requires the drawing up of an agreement between the Gram Panchayat (GP) and the beneficiary. Again, the *Mukhiya*, along with the Panchayat Secretary and the GRS, holds the power to inform the beneficiary or not about the approval of the asset, and also to sign the agreement between the beneficiary and the GP.

In other words, the Mukhiya certainly has the power to influence decisions regarding the selection of NREGA beneficiaries. However, does he exercise this power? We tried to find out whether the *Mukhiyas* exercise this power, through a detailed study in the Karar panchayat of Panki block in Palamu district.

We obtained a list of all the 89 wells approved by the GS, of which 43 wells had been approved in 2010 and 46 in 2011. Out of these 89 wells, only 22 (9 in 2010 and 13 in 2011) had been finally sanctioned. We tried to find out why the other works did not get sanctioned. The *Mukhiya* and the Panchayat Secretary responded that it was because the beneficiaries themselves backed out at the last minute. They explained that most of the approved beneficiaries were SCs with small landholdings and hence required only wells with a small diameter so that it did not take up a lot of their already limited land area. However, the wells constructed under NREGA in a district are of standard specifications (depth, diameter, etc.) as prescribed in the 'Model Estimate', prepared by the Executive Engineer of a district. In Palamu, the irrigation wells were specified to be 15 feet in diameter and 35 feet in depth. When the beneficiaries learnt of this, they gave up their demand for the well since a well that is 15 feet in diameter would occupy a large area of land, which they could not afford to give up.

We went to 26 households whose wells had been approved by the GS but whose names were dropped later on. We asked each of them whether they knew that their names had been approved for a NREGA well and why they did not construct the wells. We found that though caste (relative to the *Mukhiya*) did not play any role in obtaining the well, the relationship with the *Mukhiya* certainly did.

For instance, the political rivals of the *Mukhiya,* that is, those who had stood against him in the elections, were not informed about their wells being approved. Those who found out were warned by the block authorities not to pursue the wells since they would have to approach the *Mukhiya* for payment each time. Given their political rivalry, the *Mukhiya* may trouble them each time and not sign their cheques. The rivals thus gave up the idea of constructing the wells.

The explanation given by the *Mukhiya* and GRS that SCs with small landholdings gave up the idea of constructing NREGA wells was true, but only to a small extent. There were barely five such cases. Finally, several people whose wells had been approved stated that they were either unable to, or refused to pay a bribe to the *Mukhiya*, which is why they had to drop the idea of constructing the well.

6.2 Finally, Who Gets the NREGA Well?

In general, anyone can get a NREGA well sanctioned, provided they pay the bribe demanded by the local functionaries (generally the *Mukhiya*, GRS and Panchayat Secretary). These could (and generally do) include poor (but not very poor) households.

Often, personal equations with the *Mukhiya* may also play a decisive role in sanctioning of the well, particularly when several people are willing to pay the bribe but only a limited number of wells can be sanctioned.

In most cases, therefore, the payment of bribes is essential to obtain a NREGA well. However, there are three conditions whereby one may be able to get a NREGA well constructed without payment of bribes:

1. If the entire process is handed over to a contractor or middleman;
2. If there is a strict policy stance of allocating wells only to SCs and STs; and
3. If, in the odd case, there are honest functionaries (*Mukhiya*, GRS, Panchayat Secretary) who do not demand bribes (out of the 24 Panchayats that we surveyed, we came across 3 such panchayats).

Figure 10: Naresh Oraon and his brother, Arvind Oraon, managed to meet all their out-of-pocket expenses on the NREGA well through the wages earned by them and their family members for working on the well.

However, even if the NREGA well is sanctioned, there is no guarantee that it would be constructed. As we have seen, constructing a NREGA well requires a fair amount of investment of time and money from the beneficiary as well. Some of the financial burden accruing from the construction of the well is eased by the fact that well construction work also generates a lot of wage income for the beneficiaries and their family members which beneficiaries often use to cover the costs of well construction. For instance, Arvind Oraon of Bihra village, Ratanpur panchayat in Panki block of Palamu claimed that he could actually meet all his expenses for construction of the well through the wage payments received by him and his family members who worked on the well. However, as he himself was a contractor and a material supplier, he knew how to get payments released in a more timely manner than other, less resourceful beneficiaries.

In most cases, delays in wage payments often force the beneficiaries to resort to measures such as borrowing of money, and mortgaging or selling of assets to finance the cost of well construction. The delayed wage incomes are then used to pay off the debts or to release mortgaged assets.

7

Conclusion

7. Conclusion

We found that NREGA assets, specifically wells, can lay the foundation stone for improvements in agricultural production, higher incomes and better livelihoods. On the whole, after including the costs incurred on failed wells and missing wells, the NREGA wells programme of the Government of Jharkhand can be said to have a minimum Rate of Return (RoR) of 5.7 per cent. If we consider only public investment, however, then the RoR increases to 6.7 per cent. Finally, the RoR on completed wells alone is around 6.5 per cent. It is worth noting that the estimate of RoR obtained through our survey is significantly larger (nearly double) the estimate obtained by Aggarwal, *et al.* (2012) through their pilot study undertaken in the Ratu block of Ranchi district.

It is also worth noting that this estimate of RoR is much more reliable than others since it takes into account the fact that a number of wells do not eventually get completed and that the expenditure on them is thus wasted. The RoR estimated here is thus a comprehensive estimate of the average annual return from an investment (private and public combined) on the well. It shows that an investment of Rs. 100 on a NREGA well, on average, reaps a return of Rs. 5.7 per annum for the well owners. In other words, an investment on NREGA wells pays for itself in about 18 years.

It is, however, important to note that these measures of RoR are largely under-estimates of the actual RoR. This is because we have only measured the change in income experienced by the owner of the well and have ignored the change in income experienced by others with neighbouring fields who may be using the well's water. We found that, on an average, a NREGA well is used by five households. In many cases, we found that the wells led to massive changes in the incomes and fortunes of neighbouring households but not in those of the well owners. However, we have only obtained information regarding the impact upon the well-owning household. If the change in income experienced by all households making use of the NREGA wells is included, the average RoR is likely to be significantly higher.

The well owners are happy with their completed wells, as they are able to earn more, eat better and more diverse food, and live better due to easier and greater access to water.

Most sanctioned NREGA wells do get completed. Nearly 70 per cent of the sanctioned wells do get completed (with or without a parapet) and nearly 60 per cent of the wells are complete with a parapet.

As far as the quality of Government data is concerned, it was found to be mostly accurate for the completed NREGA wells. While 75 per cent of the 'officially' completed wells (according the NREGA MIS) were actually complete (with parapet), 82 per cent of the officially complete NREGA wells were complete (include those without parapets).

We found that nearly 10 per cent of the wells did not have a parapet. This is a serious issue and shows that the functionaries and beneficiaries alike are unaware of the risks associated with it. The lack of a parapet is also likely to reduce the life of the well since mud would slide

into the well, slowly filling it up.

Although the NREGA wells are supposed to be financed by the Government, it has been found that in nearly all the cases, the well owners are required to incur huge out-of-pocket expenses. These expenses are required to ensure that work does not stop in the face of delays in payments or non-payment on the part of the Government. Out-of-pocket expenses are also required to meet expenses such as bribes and the cost of digging equipment. On an average, those whose wells were completed reported that they had to spend around Rs. 30,939 out of their own pockets for well construction. Meanwhile, those whose wells remained incomplete also spent an average of Rs. 14,242 upon their wells.

Nearly 12 per cent of all wells remain incomplete. This is a huge drain on the economy and more so on the financial situation of the well owner, who invests a great deal of time, energy and resources into construction of the well. In 76 per cent of the cases, however, payment delays or non-payment of money for the necessary expenses leads to the non- completion of wells. Technical reasons account for only around 20 per cent of the cases of non-completion. On an average, an abandoned well entails a cost of Rs. 89110when private and public costs are added.

NREGA wells have transformed the lives of innumerable well owners. As our data shows, there are farmers who have witnessed an increase of 11 times in their net incomes from agriculture in the command area of the well. The performance of NREGA, however, varies across districts and even within districts across panchayats. The wide diversity in performance across panchayats indicates how implementation of the quality of NREGA is largely dependent upon the quality of local governance.

An aware and active local population, or responsive panchayat representatives can achieve tremendous success in utilising NREGA to put the village on the path of rapid and yet sustainable development.

References

Abreu, Dilip, Narayanan, Pulin Nayak, Nalini Nayak, Bharat Ramaswami, Debraj Ray and Atul Sarma (2014), "Do Not Dilute NREGA", *Economic and Political Weekly*, Vol. XLIX, No. 42, p. 5.

Aggarwal, Ankita (2013), *Status Report: NREGA in Jharkhand*, Committee constituted by the Ministry of Rural Development to look into the implementation of NREGA in Jharkhand, Ranchi.

Aggarwal, Ankita, Aashish Gupta and Ankit Kumar (2012), "Evaluation of NREGA Wells in Jharkhand", *Economic and Political Weekly*, Vol. XLVII, No. 35, pp. 24-27.

Barua, Abheek (2014), "The Right Questions", *Business Standard*, 29 October, Also available at: http://www.business-standard.com/article/opinion/abheek-barua-the-right-questions- 114102901456_1.html, Accessed on 2 January 2015.

Bhagwati, Jagdish and Arvind Panagariya (2014), "Rural Inefficiency Act: Despite Protests about Diluting NREGA, the PM Is Right to Confine It to 200 Poorest Districts", *The Times of India*, 23 October, Also available at: Edit Page, http://blogs.timesofindia.indiatimes.com/ toi-edit-page/rural-inefficiency-act-despite-protests-about-diluting-nrega-the-pm-is-right-to- confine-it-to-200-poorest-districts/, Accessed on 2 January 2015.

Mahapatra, Richard, M. Suchitra and Moyna (2011), "A Million Opportunities Lost", *Down to Earth*, December, Also available at: http://www.downtoearth.org.in/content/million- opportunities-lost., Accessed on 2 January 2015.

Ministry of Rural Development, Government of India (2012), *MGNREGA Sameeksha, An Anthology of Research Studies on the Mahatma Gandhi National Rural Employment Guarantee Act, 2005, 2006–2012*, Edited and compiled by Mihir Shah, Neelakshi Mann and Varad Pande, Orient BlackSwan, New Delhi.

——— (2013), "MGNREGA: Operational Guidelines, 2013—4th Edition", Ministry of Rural Development, Government of India, New Delhi.

Planning Commission (Undated), *Scheduled Communities: A Social Development Profile of SCs/STs (Bihar, Jharkhand and West Bengal)*, Government of India, New Delhi. Also available at: http://planningcommission.nic.in/reports/sereport/ser/stdy_scmnty.pdf., Accessed on 2 January 2015.

——— (2014), *Report of the Expert Group to Review the Methodology for Measurement of Poverty*. Government of India, New Delhi, Also available at: http://planningcommission. nic.in/reports/genrep/pov_rep0707.pdf., Accessed on 2 January 2015.

www.pmindia.gov.in. (2015), "Text of PM's Reply to the Debate on Motion of Thanks to President's Address in the Lok Sabha", Available at: http://pmindia.gov.in/en/news_updates/text-of- pms-reply-to-the-debate-on-motion-of-thanks-to-presidents-address/, Accessed on 22 May 2015.

United Nations Development Programme (UNDP) and Ministry of Human Resource Development (MoRD) (2012), *MGNREGA Works Field Manual, UNDP*, New Delhi, Also available at: http://nrega.nic.in/mgnrega_works_draft_manual12.pdf,. Accessed on 14 December 2014.

Appendix 1

Summary Sheet

Appendix Table 1 summarises some of the critical findings of the study.

Findings of the NREGA Wells Study Summarised	Answer	Describe the base (in case of percentages, averages, no. of respondents (xx) out of number of respondents (yy) etc.)	Any other assumptions, necessary to understand the data
Sampling			
No. of wells verified	926		
No. of completed wells surveyed	103		Data for expenditure on the wells is available for only 102 completed wells
No. of abandoned wells surveyed	46		
Completed Wells			
What is the average change in net income due to wells	12,635 (190 per cent)	92	
Which district shows the highest change in net income due to wells	Jamtara	347 per cent	
Average private cost per well	Rs. 31,868	92	

Findings of the NREGA Wells Study Summarised	Answer	Describe the base (in case of percentages, averages, no. of respondents (xx) out of number of respondents (yy) etc.)	Any other assumptions, necessary to understand the data
Completion Rate			
Percentage of completed wells out of total approved	69.44 per cent	926	Of both completed with and without parapet. These include all official approved, completed, new, ongoing and suspended wells, except for 4 wells not listed on the website.
Percentage of abandoned wells out of total approved	12 per cent	926	
Official (According to Government of Jharkhand) Rate of Abandonment	6.50 per cent	1,15,063	
Official (According to MIS) Rate of Suspension	1.50 per cent	926	
Percentage of 'officially' completed wells which were found to be 'actually' complete	82.60 per cent	621	
Out of total 'officially' completed wells, how many are actually abandoned	11 per cent	621	If wells without parapet are considered 'incomplete' then this figure would be 15%
Percentage of abandoned wells (no likelihood of completion) amongst those 'officially' ongoing	14.5 per cent	241	If wells without parapet are considered 'incomplete' then this figure would be 17.4%

Findings of the NREGA Wells Study Summarised	Answer	Describe the base (in case of percentages, averages, no. of respondents (xx) out of number of respondents (yy) etc.)	Any other assumptions, necessary to understand the data
Percentage of suspended wells (no work done in last one year, likelihood of completion can be anything) amongst those that are officially 'ongoing'	9.5 per cent	241	If wells without parapet are considered 'incomplete' then this figure would be 12.9%
Among the wells that are officially 'ongoing' or 'complete, what percentage can be said to be actually suspended (on which no work was done during the last one year, likelihood of completion can be anything)	4.1 per cent	862	If wells without parapet are considered 'incomplete' then this figure would be 6.8 per cent
Which are the districts with the highest and second highest actual completion rate? Name of district and completion rate (in brackets)	Ramgarh (83 per cent) and Hazaribagh (73 per cent)	Out of a total of 246 and 145 wells, respectively	
Which are the districts with the lowest and second lowest actual completion rate? Name of district and completion rate (in brackets)	Dumka (51 per cent) and Palamu (59 per cent)	Out of a total of 178 and 107 wells, respectively	
Which is the district with the widest gap between the official (MIS) completion rate and actual completion rate? Name of district and completion rate (in brackets)	Palamu (Official—23 per cent and Actual— 59 per cent)	Out of a total of 109 and 107, respectively	
Which are the districts with the highest and second highest rate of abandonment of wells? Name of district and rate of abandonment (in brackets)	West Singhbhum (24 per cent) and Dumka (23 per cent)	Out of a total of 96 and 178, respectively	Of officially completed wells

Findings of the NREGA Wells Study Summarised	Answer	Describe the base (in case of percentages, averages, no. of respondents (xx) out of number of respondents (yy) etc.)	Any other assumptions, necessary to understand the data
Which is the district with the lowest and second lowest actual abandonment rate? Name of district and rate of abandonment (in brackets)	Ramgarh (4.5 per cent) and Jamtara (5.2 per cent)	Out of a total of 246 and 154, respectively	Of officially completed wells
Abandoned Wells			
Average private cost on an abandoned well	Rs. 14,242	46	
Average public cost on an abandoned well	Rs. 74,868	46	The higher of the two between the MIS expenditure and respondent-claimed NREGA public expenditure
Average total cost on an abandoned well	Rs. 89,110	46	
Percentage of people saying the well got abandoned due to payment issues	71 per cent	46	
Percentage people saying the well got abandoned due to technical issues	15 per cent	46	
All Wells			
Formula for calculating average Rate of Return (RoR)	Change in NICA/total expenditure		NICA—Net Income from Command Area

Findings of the NREGA Wells Study Summarised	Answer	Describe the base (in case of percentages, averages, no. of respondents (xx) out of number of respondents (yy) etc.)	Any other assumptions, necessary to understand the data
Actual RoR on total cost (for all wells completed and incomplete)	5.7per cent	138 completed and abandoned wells and 72 missing wells	
Actual RoR on public cost (for all wells, completed and incomplete)	6.7 per cent		
Which are the districts with the highest and second highest RoR? Name of district and RoR (in brackets)	Ramgarh (10.3 per cent) and Hazaribagh (7.5per cent)		
Which are the districts with the lowest and second lowest RoR? Name of district and RoR (in brackets)	West Singhbhum (3.7 per cent) Palamu (4.2 per cent)		
Percentage of well owners who used contractors to get their work done.	23 per cent	149	

Appendix Table 2

District	Completion Rate (%)	Abandonment Rate (%)	Missing Rate (%)	ROR on Total Expenditure (Including Complete + Abandoned + Missing)
Ramgarh	83	4	9	10.3
Hazaribagh	79	10	7	7.5
Dumka	51	23	7	5.6
Jamtara	73	5	9	4.4
Palamu	59	11	12	4.2
West Singhbhum	61	24	1	3.7