

# The National Rural Employment Guarantee Scheme in Birbhum

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This study of the functioning of the National Rural Employment Guarantee Scheme between February 2006 and July 2009 in Birbhum district, West Bengal reveals that in order to serve as an effective “employer of last resort”, the programme should provide proportionately more job-days during the agricultural lean season and wages should be paid in a timely manner.

We thank the International Institute of Social Studies, Erasmus University, Rotterdam for a grant that supported data collection. We are grateful to Saumya Chakrabarti and the district administration of Birbhum for their support during fieldwork. Thanks are also due to the state and district officials of the Department of Panchayat and Rural Development, NREGA and SRD cell, and particularly, Dilip Ghosh and Debjani Dasgupta for facilitating the study.

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One of the four goals of the National Rural Employment Guarantee Act (NREGA) is the provision of a “strong social safety net for the vulnerable groups by providing a fall-back employment source, when other employment alternatives are scarce or inadequate” (MORD 2008: 1). Several papers have examined pertinent aspects of the functioning of the programme, such as targeting (Jha et al 2009), its impact on consumption (Ravi and Engler 2009), and its performance in terms of implementation (Bhatia and Dreze 2006; Ambasta et al 2008; IAMR 2008). This article is motivated by the goal stated above and is concerned with examining whether the employment guarantee scheme serves as a social safety net by providing a source of employment when other alternatives are limited. In particular, to serve as an effective “employer of last resort”, the programme should be providing (1) proportionately more job-days during the agricultural lean season, and (2) wages should be paid in a timely manner. Accordingly, this article focuses on whether these conditions are being met and at the same time comments on other aspects of the functioning of the NREGA in West Bengal’s Birbhum district.

While publicly available statistics<sup>1</sup> show the large gap between the number of employment days generated and the legally mandated threshold in West Bengal, this article goes beyond such comparisons by analysing the timing of job-creation over the year. Similarly, while several papers (Bhatia and Dreze 2006; Ambasta et al 2008) have commented on the delays in wage payments, we go beyond noting

such delays by explicitly identifying the time lag between commencement of work and payment of wages and pinpointing the source of delay in the wage payment chain.

Birbhum was amongst the 200 districts included in the first phase of the implementation of the employment guarantee scheme and for the most part, our analysis covers the period from February 2006 to July 2009. The empirical analysis reported here is based on the secondary data and on a district-level representative survey of 500 households and 2,249 individuals conducted in 13 gram panchayats (GPs) of the district during July-August 2009.<sup>2</sup> The survey is representative at the district level and a comparison of means of variables which are available in our sample and the latest census supports the idea that the sample yields information that may be used to draw district-wide inferences (Table 1).

Data from the survey is used to shed light on programme awareness, employment generated and the timing of employment generation. In addition to the survey, we draw on information gathered from 70 individual job schemes located in seven randomly selected GPs to analyse payment lags.

## Employment Generated: Access, Days and Timing

To begin with, the panchayati raj institutions (PRIs), in particular, the GPs appear to have been successful in raising programme awareness. In all the survey areas, hoardings or painted boulders announcing the programme and/or details of the resources expended on a particular work scheme executed through the NREGS were prominently visible. More formally, based on survey responses, in terms of a rudimentary but essential indicator of awareness, 99.4% of surveyed households were aware of the existence of the NREGS and it was by far the best known government programme in the district. For example, only about 55-60% of surveyed households were aware of other social

**Table 1: Comparison of Means**

Data Source	Proportion of Males (%)	Dependency Ratio	Average Family Size	Below Poverty Line	Kuccha Dwellings (%)
Census 2001	51.29	1.70	4.6	42.3	63.8
Sample (N=500)	50.69	1.75	4.5	43.5	63.8

# TISS-EPW Workshop on Exploratory Data Analysis

## Using R Software and Internet Resources for Development Research

(December 6 to 11, 2010 at the Tata Institute of Social Sciences, Mumbai)

*Economic & Political Weekly* and the Tata Institute of Social Sciences are jointly organising a week-long workshop on Exploratory Data Analysis for Development Research during the week 6 to 11 December 2010 at the TISS campus in Mumbai.

This workshop is part of a University Grants Commission project to promote the social sciences in India.

The objective of the workshop is to provide practical guidance to researchers on the basic techniques of data analysis, on how to use the open source statistical software, "R", for practising these techniques, and on how to utilise open resources available on the internet.

The workshop is a short and intensive training programme meant for economic and social researchers on the use of exploratory data analysis (EDA) as a research tool for the analysis of quantitative data using R and internet resources.

R is a powerful software that is specifically designed for data exploration and it is free (downloadable from the internet). It is being increasingly used by academicians as well as those in business/commerce.

The resource persons will be experienced faculty from the National Institute of Public Finance, New Delhi, and the Centre for Development Studies, Thiruvananthapuram.

### Who May Benefit

Researchers who need to make sense of quantitative data and those who work with primary survey data or published secondary data.

### Who Can Apply

The workshop will be open to teachers/researchers in universities and colleges under the age of 40 and any PhD scholar in a university/college working in the field of social sciences.

### Requirements

Participants should have done a course in basic/introductory statistics during their undergraduate/postgraduate degrees. They are expected to be familiar with elementary mathematics and with the basic statistical theory and applications as normally covered in a first level course in statistics for social scientists/economists.

In addition, the participants must be conversant with at least a spreadsheet software such as Microsoft Excel and the use of standard browsers for internet use.

***There will be a maximum of 20 participants in the workshop***

### Organization of the Workshop

The workshop will be six days of skill-intensive training. It will consist of short lectures, computer-based training in R, and, above all, extensive hands-on practice with data sets and internet resources.

Lectures will aim to explain the basic philosophy, theory and techniques of EDA. The emphasis will be on underlying principles and applicability. The main aim is to acquaint participants with a new paradigm of data analysis through some of its most effective techniques.

The computer training aims to familiarize participants with the use of R as well as use of the internet for research. Each computer session will begin with guided exercise, followed by a short assignment.

### Travel and Accommodation

Travel costs of participants selected for the course will be covered as per UGC-TISS regulations. Participants will also be provided boarding and lodging on TISS campus during the duration of the course.

### Application Process

Visit the EPW web site (<http://epw.in> or <http://beta.epw.in/home/>) for the application form.

**Please send completed application forms preferably by email to: [epw.tiss@gmail.com](mailto:epw.tiss@gmail.com)**

**Last Date for Submission of Forms: October 31**

**Selection of Participants: November 10**

**Postal Address:** Saritha C.T, Assistant Professor, Room No.1, Director's Office, Tata Institute of Social Sciences, Deonar, Mumbai-88, (Phone: 022-25525193).

(If sending application by post, please write "Application for TISS-EPW Workshop on Exploratory Data Analysis" on the envelope.)

***(Email and postal address are only for communication regarding the Workshop on Exploratory Data Analysis. Please do not send other correspondence to this address.)***

schemes such as the Indira Awas Yojana, a scheme for building houses for below poverty line (BPL) households, and the Swarnajayanti Gram Swarojgar Yojana, a scheme for assisting self-help groups, which have been in operation since 1985 and 1999, respectively. In terms of information source, the most common sources of information on the NREGS were the GPS (mentioned by 32% of the respondents) followed by individuals affiliated to a political party (25%).

While the basic programme awareness is universal, knowledge on the details of the programme such as employment on demand, minimum wages, the right to receive wage payments within a fortnight, the right to an unemployment allowance, and the right to information on all NREGA-related documents is not as widespread. For example, 60% of those who had received jobs through the NREGS were unaware of the details of the payment procedure, none of the respondents had received unemployment allowances, and only about 20% regularly attended Sansad and Gram Unnayan Samity (GUS) meetings which are considered to be important platforms for public participation in the PRI.<sup>3</sup>

Notwithstanding the limited awareness of programme details, in terms of its potential to reach wide swathes of the rural population, the programme appears to be well-positioned. All households who had applied for a job card were able to obtain it without payment and without substantial delays. About 85% of surveyed households

households regardless of their income status have job cards. In the bulk of cases (71%) the job cards were with the families and were shown to the survey team. For 14% the cards were with the job supervisors or with local officials such as the secretary of the GUS or the panchayat office, presumably for data entry purposes. We scrutinised 70 cards in detail and in 64 of these the data were complete. The name of the working scheme, the signature of the paymaster, the number of days worked, the time of the year when the work was carried out and payments made were all clearly noted and provided on the card.

In terms of employment issues, the bulk of the job applicants (68.4%) mentioned that they did not apply for a job themselves but they were asked to do so by the panchayat or by the GUS. While one may applaud the proactiveness of PRI in terms of promoting job access, the pattern also suggests that the notion of employment on demand has not taken root, despite three years of programme operation. This is a point to which we will return later on in the text.

Turning to employment generation, amongst the applicants, 96% of households had received jobs through the programme for at least one day since the programme inception. While this is impressive, the quantity of employment generated is not particularly overwhelming. As shown in Table 2, for the state as a whole, over the three-year period, the number of job-days created is very low as compared to the legally mandated number of days.

**Table 2: Average Person Days Worked Conditional on Applying for a Job**

	Annual Average Person Days of Work, West Bengal	Annual Average Person Days of Work, Birbhum	Annual Average Person Days of Work, Birbhum
2006-07	14.27	21.45	18.7
2007-08	25.21	30.53	21.5
2008-09	26.00	31.22	21.6
Number of projects			395

Sources: Data in columns 1 and 2 are from [www.nrega.nic.in](http://www.nrega.nic.in). Data in column 3 is from the authors' household survey.

had job cards and amongst cardholders 93.4% had applied for jobs. Unlike the case of Jharkhand, where Bhatia and Dreze (2006) report that government officials restricted job card access to BPL households and attempted to restrict the number of job cards issued in order to keep their workload under control, the opposite pattern prevails in Birbhum. Access to the job card is universal, and

Although the number of job-days created increases from 14 in 2006-07 to 26 in 2008-09, it remains well below the 100-day mark and also well below the national average of about 50 days. As far as Birbhum is concerned, a similar pattern emerges, that is, about 21 to 30 days have been created per year.

By itself the generation of a small number of job-days in the context of an

employment on demand programme may not be remarkable. The more pertinent question is whether jobs have not been generated despite demand or whether these jobs have not been created as PRIs have not been able to meet the demand for work. According to a recent article in the press, an official dealing with the NREGS in West Bengal points out that one of the major reasons for the lack of employment days generated is the lack of demand for jobs (Williams 2009). In contrast to this statement, our field experiences and responses to questions in the survey instrument clearly display that at the prevailing wage rate of about Rs 80 a day, there is a clear demand for NREGS work. While respondents may not apply for work, this should not be interpreted as a lack of demand, but as a sign of being discouraged due to the lack of responsiveness of the implementing agencies responsible for managing the scheme. Table 3 shows that the number of annual desired days of work through the NREGS is 204, while the days

**Table 3: Need for and Provision of Work in Various Panchayat Areas**

Gram Panchayat (Number of Households)	Annual Average Person Days of Work-Generated	Annual Average Person Days of Work-Desired
Khoyrasole (32)	30.95	177.78
Panrui (24)	28.25	157.22
Kundala (38)	27.66	197.13
Parulia (33)	27.14	213
Harisara (40)	26.92	201.13
Bahiri Panch Soya (48)	23.74	231.73
Rupuspur (29)	17.12	245.31
Gonpur (20)	15.26	168.65
Joydeb (27)	13.34	216.78
Barrah (25)	13.13	219.4
Mollarpur-II (27)	9.876	249.54
Ulkunda (27)	9.356	185.07
Bajitpur (25)	9.086	159.63
Total (395)	20.43	203.84

actually created are about 20 per year. There is substantial variation in job creation across GPS with the best performing ones creating about three times more jobs than the laggards. Clearly, the gap across GPS deserves attention, and further analysis to identify the reasons for the wide variation in employment generation.

The lean season in the district's agricultural and economic cycle is between mid-August and the end of November (*Bhaddro-Ashwin-Kartick*) (see Mukherjee 1995). This period is characterised by a scarcity

of livelihood opportunities due to the drying up of agricultural activities. Households cope with this situation through temporary migration and by selling durable possessions including livestock and utensils. Typically, the occasional work

The predominant work under the NREGS is related to digging of ponds and other earth works and during the lean period such opportunities are also scarce. As shown in Table 5, the bulk of the projects, close to 87%, are to do with excavating or

beginning to the end of the fiscal year (1 April to 31 March).

Expenditures and person-days generated increase sharply towards the end of each fiscal year, suggesting a pressure from higher tiers of government to spend money. In contrast, when there is a real need for creation of jobs, especially in the lean period, there is no discernible increase in spending or job creation patterns. While the district clearly lags behind in terms of employment generated, a noteworthy point is that consistent with the provisions of the NREGA, information pertaining to the operation of the scheme appeared to be well-maintained, was readily accessible and made available to the researchers without excuses and on demand.

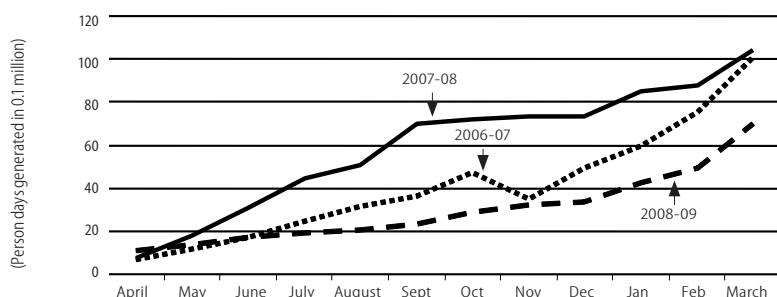
### Wages: Rates and Lags

As shown in Tables 4a and 4b, regardless of the season – lean or non-lean – in 2008-09 the average daily wage in the case of NREGS jobs was about Rs 83. In contrast, the average wage during the lean season in non-NREGS jobs was Rs 29, while during the non-lean season at Rs 158 a day, wages in non-NREGS jobs were substantially higher than in the NREGS jobs. Prima facie, these data suggest that during the non-lean season, given the level of the NREGS wage, the scheme is unlikely to crowd out private employment. Furthermore, even

**Table 5: Type of Work Performed since Inception of NREGS (%)**

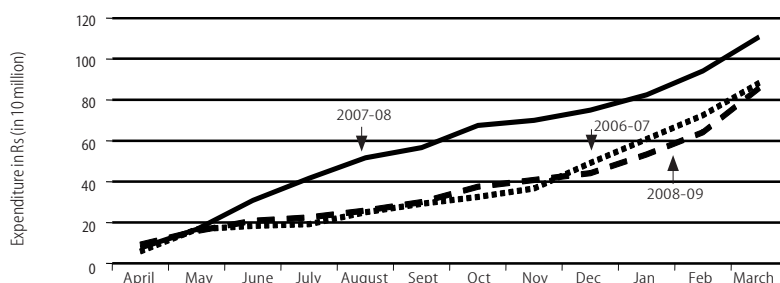
Work Type	
Re-excavation of pond	86.8
Digging irrigation channel	3.68
Village roads/rural connectivity	2.63
Social forestry	0.26
Nursery and sapling	0.79
Land shaping and land development	5.79
Flood control	0.00
Number of projects	395

**Figure 1: Month-wise Employment Generated under NREGS for Birbhum District**



Source: Office of the District Nodal Officer, NREGS, Birbhum District, Government of West Bengal.

**Figure 2: Month-wise Expenditure on NREGS for Birbhum District**



Source: Office of the District Nodal Officer, NREGS, Birbhum District, Government of West Bengal.

available during this period does not ensure a steady source of income. Based on data recorded in job cards as well as responses to survey questions, a clear picture of the pattern of work through the NREGS and non-NREGS sources may be constructed. Over the three-year period under scrutiny, we see that on average during the roughly 105-day lean period, sample households generated 46 days of work (across all household members). The bulk of this work, about 90% was generated from non-NREGS sources (see Tables 4a and 4b).

A clear signal of the lack of opportunities is the extremely low average daily wage earned from non-NREGS jobs during this period (about Rs 29 in 2008-09), while the average wage rate earned from NREGS jobs was substantially higher at Rs 83 in 2008-09. In 2008-09, about 3.4 days or roughly 15% of the NREGS employment days were generated during the lean period (about 28% of the year) displaying that not only does the programme generate very few job-days, but that it is by no means generating proportionately more opportunities when alternatives are scarce.

re-excavating ponds. Such work is hard to perform during the rainy season, mid-July to mid-October, and this period also covers the bulk of the lean season. While it may be possible to execute other types of work during this period, based on our investigation there seemed to be an absence of a proper shelf of schemes and a lack of ideas on what new schemes could be developed.

A similar picture emerges from an analysis of information on employment-days and expenditure obtained from the district office. As depicted in Figures 1 and 2, both person-days generated and expenditure increase gradually from the

**Table 4a: Employment and Wages during the 'Lean Season' – Mid-August to End-November**

Year	Non-NREGS			NREGS		
	Work Days	Total Wage (Rs)	Wage Per Working Day (Rs)	Work Days	Total Wage (Rs)	Wage Per Working Day (Rs)
2006-07	41.76	826.01	19.78	5.25	361.2	68.80
2007-08	42.71	984.89	23.06	3.55	264.83	74.60
2008-09	42.12	1,221.48	29	3.41	281.49	82.55

**Table 4b: Employment and Wages during the 'Non-Lean Season'\***

Year	Non-NREGS			NREGS		
	Work Days	Total Wage (Rs)	Wage Per Working Day (Rs)	Work Days	Total Wage (Rs)	Wage Per Working Day (Rs)
2006-07	—	—	—	13.45	976.79	72.62
2007-08	—	—	—	17.95	1,567.41	87.32
2008-09	142.07	22,486.32	158.27	18.19	1,507.26	82.86

\* Whole year (1 April to 31 March) except the period from mid-August to end-November.

during the lean season, given the small number of work-days generated through the NREGS, it is unlikely that it crowds out private employment.

Under the NREGA, workers are entitled to wage payments every week and in any case within a fortnight of the commencement of work. To identify payment lags and to pinpoint the source of the bottleneck, we gathered information on 70 randomly chosen individual work schemes located in seven randomly selected GPs. Before turning to a discussion of the findings, it should be pointed out that we were able to access NREGS-related information without any hindrance. The information gathered to follow the wage payment chain was culled from various records maintained by the GP and all seven GPs records were readily available and appeared to be updated and systematically maintained. Based on the 70 schemes that we studied, only in six cases (all from a single GP) was the required information not well-recorded. Computerisation of records started from the middle of 2008 and the information that the team gathered is based on the information contained in registers as well as electronic records.

To trace the overall lag between commencement of work to date of payment and to identify the source of the delay, the following dates were recorded for each of the 70 schemes:

**(1) Date of Start of Work:** The date on which the work commences with a minimum number of workers (source: scheme's register).

**(2) Date of First Measurement:** The date on which the technical personnel from the GP measures physical output of work done after the first round of work (source: measurement book/sheet).

**(3) Date of Muster Roll Preparation:** The date on which the clerical work is undertaken to convert the physical output of work into monetary equivalent on the basis of the schedule of rates. The muster roll lists names of workers with corresponding physical output of work and the monetary equivalent that needs to be paid out to each worker (source: muster roll files).

**(4) Date of Advance Payment/Payment Advice Sent to Bank/Post Office for Payment:** After preparation of muster roll, the amount of money to be paid as wages is drawn as an advance (before the introduction of the institutional payment system) by the gram panchayat officials from the gram panchayat's bank account or the officials send a payment advice for each worker to the disbursing bank or post office (after the introduction of the institutional payments system) (source: gram panchayat advance register).

**(5) Date of Payment:** The exact date on which payments have been made or received in accounts. This date can be traced from the job cards or bank/post office account pass books of workers.

After tracing these dates from various registers, we defined the measurement lag as the time gap between date of start of work and the date of first measurement, the muster roll lag as the time gap between date of first measurement and date of muster roll preparation, and finally, the disbursement lag as the time gap between the date of muster roll preparation and date of payment. The total lag is the lag between date of start of work and date of payment.

As displayed in Table 6, in 2006-07, on average, the time gap between work inception and payments was about 42 days. Over time, the delays have declined in 2007-08 to 24 days, and in 2008-09, they fell to 20 days. Thus, while delays still persist, they are not as egregious as they were during the first year of the programme. The main delay in the process

**Table 6: Payment Lags in Days**

Year	Measurement Lag	Muster Roll Lag	Disbursement Lag	Total Lag
2006-07	9.87	29.00	2.80	41.67
2007-08	6.95	3.32	13.86	24.14
2008-09	8.61	10.67	0.94	20.22

occurs between measurement and the preparation of the muster roll. The reasons for the delay at this stage of the wage payment chain call for an additional scrutiny, as potentially, at least in the case of the system of cash payments, this stage may be most susceptible to diversion of funds through the creation of inflated or fake muster roll entries. Similar concerns are raised by Adhikari and Bhatia (2010)

in the context of their study in Allahabad and Ranchi districts.

## Concluding Remarks

This article scrutinises selected aspects of the functioning of the NREGS in Birbhum district of West Bengal. The analysis shows that, in Birbhum, there is universal awareness about the NREGS, job cards have been made available to all those who have applied and NREGS-related information is well-maintained and relatively accessible. While there were long delays in wage payments during the first year of the programme, since then, the payment lag has declined and it is now in the range of 20 days. While this delay is not consistent with the provisions of the Act, it is a clear improvement from the 42-day lag observed in the first year.

Notwithstanding these positive aspects, with respect to one of the main goals of the Act, that is, the provision of work when alternative employment opportunities are scarce, the NREGS is not fulfilling its role. The total number of employment days generated is about 20% of the legally mandated minimum and the days that are created are not more likely to be generated during the agricultural lean season. Indeed, the main concern in the case of Birbhum as in the case of the state is the limited capacity to generate employment. There is a need for an innovative thinking on how to use the available resources to create jobs and construct useful rural infrastructure. Focusing, as in the case of Birbhum, only on excavation and re-excavation of ponds is unlikely to lead to the development of useful rural infrastructure or sustain job creation.

## NOTES

- 1 [www.nrega.nic.in](http://www.nrega.nic.in)
- 2 The household survey was conducted by a team of 13 students enrolled in a MA/MPhil programmes in Economics and Rural Development Department at Visva-Bharati University, Santiniketan and was led by the first author. The survey was designed to be representative at the district level and in the first stage the gram panchayats were stratified into three strata according to their degree of development. Subsequently, households were randomly drawn from each of these three strata. The proportion of surveyed households from each strata matches their share in the population. Additional details on the survey design are available in Dey (2010).
- 3 The aim of a Gram Unnayan Samity or a village development committee, which consists of elected local officials and members of NGOs and self-help groups amongst others, is to ensure active participation of village residents in the implementation and distribution of benefits of social programmes.





## **Call for Research Pre-Proposals – Economics of Environmental Changes**

### **Deadline: December 15th 2010**

The South Asian Network for Development and Environmental Economics (SANDEE) is a regional network that brings together and strengthens South Asian researchers and institutions interested in the inter-connections between development and the environment. SANDEE invites you to submit research pre-proposals on the economics of climate change, urban environmental management and other relevant environmental issues in South Asia. *Multi-disciplinary and multi-country research projects with appropriate methodological innovations are highly encouraged.* Pre-proposals, if accepted, will lead to an invitation to submit a full research proposal.

#### **1. Economics of Climate Change**

South Asian economies need to develop a variety of strategies to adapt to climate change and reduce their own green house gas emissions. Thus, SANDEE is soliciting proposals in two areas: a) Policy reforms and market instruments for low carbon growth. What market and policy instruments can be used to reduce green house gas emissions? What are the co-benefits of local pollution and green house gas reduction strategies? What are the costs of shifting to new energy technologies? What are the bottlenecks to using global instruments such as REDD and carbon markets? b) The benefits, costs and distributional impacts of specific adaptation strategies. What is the economic viability of 'adaptation instruments' such as insurance, improved natural barriers or institutional responses? What are some benefits and costs of adaptation?

#### **2. Economics of Environmental Management**

Dirty water, solid waste, toxic chemicals, and indoor and outdoor air pollution have serious implications for human health and productivity. Most South Asian countries have laws to regulate pollution but these are not well implemented. How do we design appropriate policies and strategies to improve municipal solid waste management? How effective are current waste management and recycling regulations? What policy instruments (taxes, subsidies, bans, user-fees, campaigns etc.) are successful in reducing congestion, strengthening safe disposal of toxic waste, and improving air and water quality? What are the distributional outcomes associated with environmental policy instruments? How do we account for environmental costs in designing economic policies?

In addition to the above two priority areas, SANDEE will accept proposals related to natural resource use and management. Research proposals can be in the form of case studies, analytical work based on secondary or primary data or theoretical examinations. Primary investigators should have prior training in economics at the Masters or PhD level and pre-proposals that do not have a strong economics component will not be considered. Institutional affiliation is required for receiving support. Pre-proposals will be evaluated on their academic merit and policy significance.

SANDEE will collect proposals throughout the next 12 months. However, in order to be considered for the summer 2011 round of research competition, please send concept notes by **December 15th 2010**. Grants size is on average 20,000 USD for a one to two year period. Larger budgets are considered if a multidisciplinary research team of natural and social scientists are involved with a clear definition of roles and tasks. Detailed guidelines are provided on SANDEE's website. Concept notes must be uploaded on SANDEE's website at [www.sandeeonline.com](http://www.sandeeonline.com). Please contact us at [info@sandeeonline.org](mailto:info@sandeeonline.org), if you have additional queries.

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