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INTRODUCTION

The Centre for Development Economics (CDE) was set up with a generous grant from the Ministry of Finance, Government of India as a research adjunct at the Delhi School of Economics (Department of Economics) to provide better research facilities to the faculty and the students of the Department of Economics. It is a non-profit organization that supports research in all areas of Economics. It came into existence in August 1992 and began effectively functioning from early 1993, with the full range of activities picking up only in late 1993 after it received its grants from the Government of India and the Ford Foundation.

AIMS

- To promote and disseminate research;
- To sponsor economists from all over India and abroad to visit to Delhi School of Economics;
- To conduct regular conferences and workshops;
- To upgrade research infrastructure, including communication and computing facilities.
THE COUNCIL

- **K. SUNDARAM**
  *Executive Director*

- **Rohini SOMANATHAN**
  *Secretary*

- **Pulin B. NAYAK**
  *Member*

- **Santosh C. PANDA**
  *Member*

- **Mausumi DAS**
  *Member*

- **B. L. PANDIT**
  *Managing Director*

- **Sudhir A. SHAH**
  *Treasurer*

- **Partha SEN**
  *Member*

- **Pami DUA**
  *Member*

ADVISORS

- **Kaushik BASU**
  C. Marks Professor of International Studies, Professor of Economics and Director, Program on Comparative Economic Development, Cornell University

- **Mrinal Datta CHAUDHURI**
  Former Professor of Economics and Ex-Director, Delhi School of Economics

- **K. N. RAJ**
  National Professor of Economics

- **Joseph E. STIGLITZ**
  Professor of Economics Columbia University and Nobel Laureate in Economics

- **Kenneth J. ARROW**
  Professor of Economics (Emeritus) Stanford University and Nobel Laureate in Economics

- **Bimal JALAN**
  Ex-Governor, Reserve Bank of India and Member of Parliament (Rajya Sabha)

- **Amartya SEN**
  Lamont University Professor and Professor of Economics & Philosophy, Harvard University, Cambridge and Nobel Laureate in Economics

THE GOVERNING COUNCIL OF THE ENDOWMENT FUND

The Office Bearers of the CDE and the Head of the Department of Economics together with Chief Economic Advisor of the Ministry of Finance, Government of India constitute the Governing Council of the Endowment Fund.
COMPUTING FACILITIES

The Centre has well-equipped air-conditioned computer labs with software and hardware for meeting the research and training needs of M.A., M.Phil and Ph.D. programmes of the Department of Economics, Delhi School of Economics and has acquired several data sets. Currently the Centre has 100 Pentium III/IV Intel Processor based Computer Systems linked through network with IBM e-server X220. During the year the Centre has acquired twelve IBM LENOVO Intel Pentium-4 Computer Systems and two HP Laserjet Duplex Printers through the Department of Economics. The Centre also configured CISCO PIX Firewall and Anti Spam Filter for its in-house Web based e-mail system.

With the generous grant from the Ministry of Finance, Government of India, the Centre has 256 kbps 1:1 broadband internet connectivity from SIFY Limited. The Centre also provides web based e-mail facility to the faculty, visiting research scholars, M.Phil. and Ph.D. students of the Department of Economics.

The Centre has a wide range of statistical and econometric software packages and has access to various databases. These are listed below:

Statistical & Econometric Software:
- Stata 9.0
- Shazam 10.0
- RATS 6.0
- NLOGIT 3.0
- Mathematica 4.1
- E-Views 5.1
- Gauss 6.0
- LIMDEP 7.0
- MICROFIT 4.1

Online & Offline Databases:
- National Sample Survey (NSS) covering various rounds.
- National Accounts Statistics of India 1950-51 to 2002-03.
- Annual Survey of Industries (ASI), database on industry sector in India 1973-74 to 1997-98.
- Annual Survey of Industries (ASI) Tabulated data on State X Industry (3) digit level - India: 99-00 to 02-03.
- CENSUS OF INDIA 2001: Village Directory 584 Districts of India.
- Prowess online database of corporate financial statistics.
- **Econlit**, a biannual compilation of publications in Economics by researchers throughout the world.
- **Institute for Studies in Industrial Development (ISID) Research Reference CD**, index of articles and policy documents.
- **JSTOR**, the scholarly journal archive of economics and social sciences.
- **Indiastat.com**, a rich source of data pertaining to Indian Economy.
- **Sciencedirect.com**, a journal archive for a large number of Journals containing full text.
- **SCC Online** (Supreme Court Case Finder & Supreme Court Cases).

## SEMINARS & WORKSHOPS

One of the important features of the Centre since its inception has been to engage in continuous dialogue with economists all over the world through regular Seminars, Conferences and Workshops covering a wide range of economic issues.

## PUBLICATIONS

The Centre regularly publishes working and occasional papers of the faculty members of the department of economics and visiting fellows, honorary professors and research scholars who visit it. The publications of the Centre are currently being exchanged with about thirty research institutes in India and abroad.

Working papers by the faculty members are listed on the Centre’s website [http://www.cdedse.org](http://www.cdedse.org) from where recent papers can be downloaded.

## RESEARCH PROJECTS

The Centre also houses research projects. Currently five projects are housed in the Centre.

## LIBRARY

The Centre maintains a mini library, which consists of specialized research resource for a comprehensive collection of published material and data sources related to economic research.
VISITORS & FELLOWS

The Centre from time to time entertains visitors and appoints fellows. During the year 2005-06 Professor Bhaskar Dutta of University of Warwick, Coventry, UK was Senior Fellow at the Centre.

TRAINING

The Centre has organized a few short-term refresher courses and exposure programs on request from Government.

FINANCE & ACCOUNTS

Finance & Accounts : Jayaraman & Co.
Chartered Accountants
V. K. Krishna Menon Bhawan
9, Bhagwandass Road
New Delhi 110001

Auditors : Khanna & Annadhanam
Chartered Accountants
3/7B, Second Floor,
Asaf Ali Road,
New Delhi 110002
ACTIVITIES DURING 2005-06

EXPOSURE PROGRAMME FOR NABARD OFFICERS

The Centre organized a one-week exposure programme for officers of National Bank for Agriculture and Rural Development (NABARD) which was held at the Department of Economics, Delhi School of Economics during November 21 - 26, 2005. The programme covered various topics including Financial Sector Reforms, Credit Policies of RBI and their implications for Agriculture and Rural Development, Gender Perspectives in Land and Livelihood, IPR Issues in Indian Agriculture, Statistical Packages for Social Sciences, Macro-economic Scenario and Project Appraisal & Evaluation. Shri S. K. Mitra, Executive Director, NABARD, New Delhi delivered the Valedictory Address to the participants.

REFRESHER COURSE FOR IN-SERVICES ISS OFFICERS

The Centre also organized a one-week Refresher Course covering “Recent Development in Index Numbers” at the Department of Economics, Delhi School of Economics during 13 - 18 February, 2006 for in-service ISS Officers nominated by Ministry of Statistics & Programme Implementation, Government of India.

Professor Abhijit Sen, Member, Planning Commission, Government of India delivered the valedictory lecture to the participants.

NATIONAL WORKSHOP ON “HEALTH AND NUTRITION IN INDIA”

A one-day National Workshop on “Health and Nutrition in India” was organized at the Department of Economics, Delhi School of Economics on March 24, 2006. The programme consisted of paper presentations and a panel discussion by leading economists from academic and policy making institutions in India and abroad.

SUKHAMOY CHAKRAVARTI MEMORIAL LECTURE 2005

The Centre organized the Professor Sukhamoy Chakravarty Memorial Lecture on “Factor Endowments, Relative Commodity Prices, and Anything Goes”. This lecture was delivered by Professor Hugo F. Sonnenschein of University of Chicago, on December 17, 2005.
(1) **International Econometric (LINK) India Model.**

Core Team : K. Sundaram, Pami Dua, V. Pandit &
K. Krishnamurty

Activities during the year 2005-06 have resulted in the following:

(a) Experiments towards updation and reformulation of the model.

(b) Release of **ECONOMIC OUTLOOK, INDIA 2005-07** in India World Project LINK, Spring Meeting (held in May 2005, Mexico). This was presented by Professor Pami Dua. A paper on "International Transmission of Business Cycles: Spectral Analysis vs Economic Indicator Analysis" was also presented by Professor Dua.

(c) Release of **ECONOMIC OUTLOOK INDIA 2006-2012: FORECAST HIGHLIGHTS** in the Fall Meeting of World Project LINK (held in November 2005 at United Nations, Geneva, Switzerland). This was presented by Professor Pami Dua. A paper on "Prospects for Indian Growth: An Analysis of Domestic and External Sectors” was also presented by Professor Dua.


(2) **Economic Growth, Poverty, Income Distribution and Gender Disparities.**

Principal Investigator : Suresh D. Tendulkar (CDE)
Swapna Mukhopadhyay (Institute of Social Studies Trust, New Delhi)

Funded by : Institute of Social Studies Trust, New Delhi

Why are the Female Work Participation Rates Low In India?
The work participation rates (WPR) and labour force participation rates (LFPR) of women in India have been noted to be considerably lower than those for the Indian males. This project aimed at exploring the underlying factors attempting to separate the impact of economic, socio-cultural, household-specific and regional factors.

Focusing on the prime-age population (15-59 years), the first part presents the empirical evidence based on the 55th round of the National Sample Survey (NSS) on Employment and Unemployment carried out during July-June 1999-2000 period. We take the labour force and work participation status of males and females by the most comprehensive definition used in the survey, namely, usual principle-plus-subsidiary (UPSS) status. We examine the behaviour of WPR and unemployment rates for females and males separately for rural and urban prime-age workers cross-classified according to (a) decile groups according to the level of monthly per capita consumer expenditure (MPCE) of the household; (b) educational achievement of individual worker; and (c) formal or informal nature of the type of enterprise where worker works. Attempt has also been made to capture non-marketed but potentially expenditure-saving or income-earning activities of women by extending the definitions of WPRs and LFPRs of women by including codes 92 (those reporting domestic duties only) and 93 (those reporting domestic duties and also engaged in free collection of goods, sewing, weaving etc for household). The second part of the paper explores unit (household)-level data in an attempt to explain the female WPRs and earning functions (only of regular wage/salary earning and casual wage-earning workers) with logit and probit regressions. WPR regressions include a variety of worker-specific characteristics (age, education, marital status); household-specific characteristics (MPCE, social group of household, household size, dependency ratio, child-woman ratio, activity status of husband, presence of another female member with activity status code 93) and regional-cum-cultural dummies. Earning functions include the standard human capital variables like completed education and experience (captured by age and age-square) and has been used to estimate the extent of gender discrimination.

(3) **Groundwater Irrigation in North India: Institutions and Markets.**

Principal Investigators : Abhijit Banerji & J. V. Meenakshi
Funded by : South Asian Network for Development and Environmental Economics [SANDEE], Kathmandu, Nepal
Groundwater irrigation is intensively used in the cultivation of sugarcane and other major crops in North India. This project studies groundwater use in the sugarcane belt of Uttar Pradesh by focusing on a village which shares the typical features of this region, including a steadily depleting water table. The paper first investigates whether groundwater allocation in these areas maximizes yields, and finds that this is not the case. Efficient reallocation could increase average yield by more than 15%. Analyzing the causes of allocative inefficiency, the paper finds not much evidence in favour of traditional explanations like monopoly pricing of water. Instead, misallocation results from water rationing (caused by erratic and inadequate power supply), combined with the way that institutions govern water allocation. There is also evidence, however, that these institutions include a social contract that reduces the negative impact of water rationing. Simulations suggest that changing the power regime to one of reliable power supply and unit pricing would increase yields considerably, primarily by improving water allocation; the power provider’s revenue would increase as well. With traditional water rights and institutions of irrigation, however, a changed power regime by itself is incapable of solving the problem of sustainability of water use. We make a first attempt to quantify the externality related to groundwater use, in order to inform policies such as payments for water use.

(4) The Effect of Natural Resource Scarcity on Household’s and Women’s Time Allocation Decisions in Rural India.

Principal Investigators : Shreekant Gupta, Neetu Chopra & Supriya Singh
Funded by : South Asian Network for Development in Environmental Economics [SANDEE], Kathmandu, Nepal

This project examines the impact of variation in stocks of three resources, namely, water, forests and fodder biomass, on resource collection time of rural households in India, especially women. Using household level data from 543 households across 60 villages in Jhabua district of Madhya Pradesh, we estimate reduced form gender-specific time allocation equations derived from a household production model. Increase in the groundwater scarcity makes women and children spend more time in water collection. The increase in the total biomass
availability in the commons increases the time spent by men and women in grazing activity as well as make men and women more likely to go for fuelwood collection. The results taken together indicate significant time impacts of natural resource scarcity. Our analysis has important implications for natural resource management initiatives such as community forestry and watershed development programmes that can alleviate poverty by affecting the time allocation decisions of rural households, particularly women. This paper also tries to understand some of the trends emerging from the quantitative/econometric analysis so as to further inform the analysis using insights from social anthropology.

(5) Volume in Honour of Professor K. N. Raj.

Headed by : K. L. Krishna & A. Vaidyanathan

Professor K. L. Krishna, Ex-Director, Delhi School of Economics was requested by the organizing committee of the Conference in Honour of Professor K. N. Raj (held at the St. Thomas College, Thrissur during October 2 - 4, 2004) to edit the volume of essays presented in the conference. Professor A. Vaidyanathan, Chairman of the organizing committee also joined Professor Krishna in this task. Given the significant contribution of Professor Raj to the growth and glory of the Delhi School of Economics, it was decided to locate this project at the Centre for Development Economics, Delhi School of Economics with the active support of Professor Krishna. The editing work was completed in March 2006 and Oxford University Press, New Delhi has agreed to publish this volume with the title: INSTITUTIONS AND MARKETS IN THE DEVELOPMENT OF INDIA. The volume contains seventeen articles by some leading economists on a variety of themes in which Professor Raj took interest. The volume is expected to be released towards the end of 2006.
# SEMINARS

The Centre organized the following seminars during the course of the year which are as follows:

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<tr>
<td>August 25, 2005</td>
<td>Sumeet GULATI</td>
<td>Time Inconsistent Resource Conservation Contracts</td>
</tr>
<tr>
<td></td>
<td>University of British Columbia, Canada</td>
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<tr>
<td>September 30, 2005</td>
<td>Meghnad (Lord) DESAI</td>
<td>Hayek and Marx on Cycles and Crises</td>
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<td></td>
<td>London School of Economics</td>
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<tr>
<td>October 3, 2005</td>
<td>Michael BEENSTOCK</td>
<td>The Effects of Partners’ Education and Earnings upon the Education and Earnings of their Children</td>
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<td></td>
<td>Hebrew University of Jerusalem, Israel</td>
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<tr>
<td>October 6, 2005</td>
<td>Robert INNES</td>
<td>The Theory of Consumer Boycotts under Symmetric Information and Imperfect Competition</td>
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<td></td>
<td>University of Arizona</td>
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<tr>
<td>October 7, 2005</td>
<td>Manoranjan PAL</td>
<td>Measures on Segregation</td>
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<td>ISI, Kolkata</td>
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<td>October 10, 2005</td>
<td>Prasanta K. PATTANAIK</td>
<td>Minimal Relativism, Dominance, and Standard of Living Comparisons Based on Functionings</td>
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<td></td>
<td>University of California</td>
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<tr>
<td>December 7, 2005</td>
<td>Sonia BHALOTRA</td>
<td>The Impact of Economic Growth on Childhood Mortality in India</td>
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<td></td>
<td>University of Bristol</td>
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<tr>
<td>December 8, 2005</td>
<td>Mukesh ESWARAN</td>
<td>What Determines Female Autonomy? Evidence from Bangladesh</td>
</tr>
<tr>
<td></td>
<td>University of British Columbia Canada</td>
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<td></td>
<td>London School of Economics, Technical University of Denmark</td>
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</tr>
<tr>
<td>Date</td>
<td>Name</td>
<td>Affiliation</td>
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<tr>
<td>December 13, 2005</td>
<td>Alok BHARGAVA</td>
<td>University of Houston, USA</td>
</tr>
<tr>
<td>December 22, 2005</td>
<td>V. BHASKAR</td>
<td>University College London</td>
</tr>
<tr>
<td>January 17, 2006</td>
<td>Rodney SMITH</td>
<td>University of Minnesota</td>
</tr>
<tr>
<td>January 19, 2006</td>
<td>Eleanor FOX</td>
<td>New York University School of Law</td>
</tr>
<tr>
<td>February 8, 2006</td>
<td>William A. NISKANEN</td>
<td>CATO Institute, Washington D. C.</td>
</tr>
<tr>
<td>February 10, 2006</td>
<td>Amit BHADURI</td>
<td>University of Pavia, Italy &amp; Council for Social Development, New Delhi</td>
</tr>
<tr>
<td>February 17, 2006</td>
<td>Ronald McKINNON</td>
<td>Stanford University</td>
</tr>
<tr>
<td>February 21, 2006</td>
<td>Kaushik BASU</td>
<td>Cornell University</td>
</tr>
<tr>
<td>February 23, 2006</td>
<td>Steven SLUTSKY</td>
<td>University of Florida</td>
</tr>
<tr>
<td>March 2, 2006</td>
<td>Nzinga BROUSSARD</td>
<td>University of Michigan</td>
</tr>
<tr>
<td>March 16, 2006</td>
<td>Kanika KAPUR</td>
<td>University College, Dublin &amp; RAND, California</td>
</tr>
<tr>
<td>May 4, 2006</td>
<td>Rabindra BHANDARI</td>
<td>University of Western Ontario</td>
</tr>
</tbody>
</table>
RESEARCH OUTPUT OF THE MEMBERS 2005-06

T. C. A. ANANT


Aditya BHATTACHARJEA


Mausumi DAS


Ashwini DESHPANDE


Jean DREZE


Pami DUA


2. Long Memory Dynamics of Indian Macroeconomic Variables (with T. Mishra), edited volume, ed. V. Chitre, forthcoming.


Sunil KANWAR


K. L. KRISHNA


2. "What Do We Know About Sources of Economic Growth in India?” in K. L. Krishna and A. Vaidyanathan (eds), *Institutions and Markets in India’s Development*, Oxford University Press, New Delhi, forthcoming.

B. L. PANDIT

1. "Transmission Mechanism of Monetary Policy and the Bank Lending Channel – Analysis and Evidence for India” Project Director, DRG Study published by The Reserve Bank of India (January, 2006)

Om PRAKASH


7. Entry on “First European Interventions in India” in *The World and its People Encyclopedia*.


**Partha SEN**


**Sudhir A. SHAH**


**Ram SINGH**


**Rohini SOMANATHAN**


**K. SUNDARAM**


**Suresh D. TENDULKAR**


2. "Poverty Outcomes in India in the 1990s” (with K. Sundaram), Ch. 13, pp.249-305 in Angus Deaton and Valerie Kozel (eds.): *The Great Indian Poverty Debate*, Macmillan India Ltd., Delhi (2005).

Continuing from reports of previous years

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<th>PAPER NO.</th>
<th>AUTHOR</th>
<th>TITLE AND MONTH &amp; YEAR OF PUBLICATION</th>
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<tr>
<td>139</td>
<td>Ram SINGH</td>
<td>Comparative Causation: A Re-examination (August, 2005)</td>
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<tr>
<td>140</td>
<td>Arti GROVER</td>
<td>Outsourcing Versus Foreign Direct Investment: A Welfare Analysis (September, 2005)</td>
</tr>
<tr>
<td>142</td>
<td>Sunil KANWAR</td>
<td>Innovation and Intellectual Property Rights (August 2006)</td>
</tr>
<tr>
<td>143</td>
<td>Sudhir A. SHAH</td>
<td>A Non-Cooperative Theory of Quantity-Rationing International Transfrontier Pollution (August, 2006)</td>
</tr>
<tr>
<td>144</td>
<td>Pami DUA, Partha SEN</td>
<td>Capital Flow Volatility and Exchange Rates: The Case of India (August, 2006)</td>
</tr>
<tr>
<td>145</td>
<td>Uday Bhanu SINHA</td>
<td>On R&amp;D Information Sharing and Merger (August 2006)</td>
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</tbody>
</table>
146  Pami DUA  Anirvan BANERJI  Business Cycles in India  
(August 2006)

147  Sudhir A. SHAH  On the Optimal Coordination of Uniformed Agents by an Informed Principal  
(August 2006)

148  Siva ATHREYA  Rohini SOMANATHAN  Quantifying Spatial Misallocation in Centrally Provided Public Goods  
(August, 2006)

OFFICE STAFF - AUGUST 2006

Sanjeev SHARMA  VINAYAN K. P.
Sr. Systems Administrator  Sr. Systems Administrator

SURJEET Singh  Rajesh PAPNAI
Sr. Office Assistant  Sr. Office Assistant

Ravi SARWAN  Jai PRAKASH
Office Assistant  Jr. Office Assistant