

Abstracts of

Articles

published in refereed journals



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Challenges in Adopting Market Mechanisms for Spectrum: Lessons from India and the Philippines

In *Journal of Telecommunications Management*, 3(1), 2010, 78-99.

Rekha Jain

Technological developments in wireless and the decreasing costs have created opportunities for faster deployment of telecommunications services. This speed is critical for developing countries, especially in rural areas, as the role of telecommunications in development is more significant for them. The uptake of wireless technologies has been rapid in most developing countries. For the most part, these have been cellular networks that operate in the licensed bands. The Asian region has been one of the fastest growing segments of the wireless market. Yet, a closer look at the policy and regulatory regime points to a need for a review of existing processes, institutions and instruments for more market-oriented outcomes. This paper examines the process of allocation and pricing of spectrum especially in the context of new service introduction in India and the Philippines. The paper is based on case studies of first-hand data collected from the regulatory agencies. It highlights the perspective that each regulatory agency adopted to manage this scarce natural resource and examines the role of other institutions and their interactions with the regulatory agencies in influencing outcomes. It brings forth the need for a well-organized process and a forward-looking flexible regime in tune with the rapid technological changes.

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Gender and Workplace Experience

In *Vikalpa: The Journal for Decision Makers*, 34(4), 2009, 79-83.

Asha Kaul et al.

In this colloquium, questions concerning what comprises gender inclusive workplace have been explored alike by researchers and corporate houses. Increasing number of women in the work scenario calls attention to the fact that gender diversity in the work environment should transgress beyond “masculine” in the stereotypical sense, to being more inclusive, focussing on questions of “equality” and “equity”. Gathering data from research findings and best practices within organisations, this colloquium, encapsulates views of academics (Richa Saxena, Deepti Bhatnagar, Neharika Vohra, Dileep Mavalankar and Vipin Gupta) and corporates (Geetha Kannan, Aditya Narayan Singh Deo, Rahul Dev, Ian Gore, Chandrani Chakraborty, Sehati Sircar, Srimathi Shivashankar, Vibha Gupta, Reema Nanavaty and Ashok Bhatia) on three issues: why embark on a study of gender, can an understanding of gender enhance workplace experience and how is the concept of gender embedded in the workplace environment. While the documentation of researchers, based on empirical evidence, sets the ground for an understanding of gender diversity, the best practices posited by corporate members presents a practical viewpoint on application and results.

Beginning with what constitutes gender diversity, the colloquium explores role of organizations and top management in addressing workplace issues, empowerment, enabling career development for women by nurturing talent and experience. Authors address the issues from the position of gender congruity, biological clock and how systems and procedures within organisations can be institutionalised to create a meaning for the working women. While diversity is unique and a blessing, the process of embedding it within the organisational culture is slow as attitudes and mindsets need to be changed. If diversity is to be used as a tool for organic growth, procedural implementation should result from laboured, researched, structured, and strategic thinking which deliberates on best practices within organisations.

Impact of Initial-Trust-Image on Shopper Trust and Patronage Intentions: A Study of Young, Male Apparel Shoppers in India

In *International Journal of Retail & Distribution Management*, 38(4), 2010, 275-296.

Subhashini Kaul, Arvind Sahay and Abraham Koshy

Purpose: The purpose of this paper is to examine the role of “initial” store image in a new store. Existing research affords limited explanation of how shopper trust in store is formed prior to store visits and regarding the impact of “initial” store image on shopper trust and patronage intentions.

Design/methodology/approach: Specifically, this paper operationalizes “trust-image” of a new store as an antecedent to shopper trust; uses a multidimensional conceptualization for “trust-image” which is similar to the existing tripartite view of “trustworthiness”; and examines the effect of store visit on perceived salience of trust-image. The laboratory experiment has four scenarios that manipulate store image as positive/negative, and store visit by a “close friend” who is the source of trust-image as none/one.

Findings: This is possibly the first empirical evidence supporting the significance of trust-image in influencing shopper trust and patronage intentions of a new store. Contrary to existing theory, store “dependability” is not really significant for Indian apparel retail consumers at initial stages of store visits.

Research limitations/implications: Further research is needed to examine which image dimensions contribute to formation of trust-image across different products, age groups, and gender.

Practical implications: Retailers planning a foray into India need to understand that store “trust-image” needs significant attention for a new store and also that Indian shoppers evaluate stores differently.

Originality/value: While the association between store image and patronage is well known,

there is limited knowledge of trust-image formation in a new store. This paper explores the existing belief that store dependability is the first stage evaluation by shoppers bringing to light that Indian shoppers are unique in their experience of trust.

Learning, Learning Organizations and the Global Enterprise

In *International Journal of Learning and Change*, 3(4), 2009, 329-337.

S. Manikutty

The steadily increasing degree of globalisation of enterprises implies development of many skills, among which the skills to learn are among the most important. Learning takes place at the individual level, but collective learning and organisational learning are also important. Learning styles of individuals are different and learning styles are affected by the cultural backgrounds of the learners. Organisations need to create conditions for effective learning at the individual, collective and organisational levels. This special issue presents articles dealing with different aspects of learning at each of the above levels.

Outcomes of Intention to Quit of Indian IT Professionals

In *Human Resource Management*, 4(3), 2010, 421-437.

S. K. Krishnan and Manjari Singh

Intention to quit has been getting attention in the context of employee attrition, with focus on its antecedents. A related aspect that needs attention is the outcome of intention to quit, where little research has occurred, especially in the Indian context. The present study explores performance orientation, organizational deviance, and organizational citizenship behavior as outcomes of intention to quit of Indian IT professionals. These factors become critical in the context of human resource management because employees who want to quit may become less productive or even dysfunctional for the organization. Interviews and a questionnaire-based survey were used in this research. The survey was conducted using software professionals with work experience of less than four years, with the results based on 533 responses. The initial results show that as hypothesized, intention to quit does lead to less performance orientation, higher organizational deviance, and less organizational citizenship behaviour. Further, exploration using structural equation modeling shows that performance orientation mediates the relationships between intention to quit and organizational citizenship behaviour, as well as between intention to quit and organizational deviance. This study's findings imply that organizations need to understand that employees with a high intention to quit can prove costly from multiple dimensions.

Price and Volatility Spillovers across North American, European and Asian Stock Markets

In *International Review of Financial Analysis*, 19(1), 2010, 55-64.

Priyanka Singh, Brajesh Kumar and Ajay Pandey

This paper examines price and volatility spillovers across North American, European and Asian stock markets. The return spillover is modeled through VAR (15) in which 15 world indices, representative of their stock market are considered. The effect of same day return in explaining the return spillover is also analyzed using VAR and AR with exogenous variables. Volatility spillover is modeled through AR-GARCH incorporating the same day effect. In both return and volatility spillover, it is found that a particular index is mostly affected by the indices which open/close just before it. It is also found that there is a greater regional influence among Asian and European stock markets. Our paper contributes to the literature by including markets that span the whole time line and also modeling the same day effect with simultaneity preserved where required. Given the evidence, the results can be generalized for the other markets that were not included.



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Regional Cooperation towards Trans-Country Natural Gas Market: An Economic Assessment for India

In *International Journal of Energy Sector Management*, 3(3), 2009, 251-274.

Subash Dhar and P. R. Shukla

Purpose: India began gas imports since 2004 through liquefied natural gas (LNG) route. Imports through trans-country gas pipelines could help in bringing gas directly into the densely populated northern parts of India, which are far from domestic gas resources as well as coastal LNG terminals. The purpose of this paper is to report scenarios, which quantify the impacts for India of regional cooperation to materialize trans-country pipelines. The analysis covers the time period from 2005 to 2030.

Design/methodology/approach: The long-term energy system model ANSWER-MARKAL is used for the analysis.

Findings: Trans-country pipelines could deliver direct economic benefit of US\$310 billion for the period 2010-2030. Besides these, there are positive externalities in terms of lower greenhouse gas emissions and improved local environment, and enhanced energy security. However, the benefits are sensitive to global gas prices as higher gas prices would reduce the demand for gas and also the positive externalities from using gas.

Practical implications: Trans-country pipelines are of great importance to India as they add 0.4 per cent to gross domestic product over the period besides yielding positive environmental externalities and improved energy security.

Originality/value: Quantification of benefits from trans-country pipeline proposals till 2030.

Right to Education Act and Public-Private Partnership

In *Economic and Political Weekly*, 45(8), 2010, 78-80.

Pankaj S. Jain and Ravindra H. Dholakia

This paper is in response to the arguments made against 'feasibility of implementation of Right to Education Act'. In their arguments, the critiques do not contest the basic validity of the original conclusion that even an allocation of 6% of GDP as education budget would not be able to provide universal school education through government schools. If the suggestions made in the critiques were to be followed, the data and method given calculates the proportion of GDP as 22-23%. During 2006-07, the total budget as a percentage of GDP on all sectors together for combined budgets of central and state governments was 27%. Thus, if their recommendations were to be accepted and keeping the percentage allocation of GDP on all other sectors constant, it would require a budget allocation of 44 to 45% of GDP. The critiques have a disagreement on the involvement of non-governmental schools with teachers being paid low salaries. In proposing feasible solutions, the paper illustrates the example of Gyan Shala whose credibility has been assessed by several agencies to show that children perform far better on math and language competencies as compared to their counterparts in government schools. The paper argues that there exists evidence to show that private schools are capable of providing education of better quality than that given by most government schools. The study also argues on the question of low salaries being paid to teachers and draws a comparison with countries like US, UK, and China among others. The paper concludes making an argument for the involvement of privately managed schools through the PPP mode wherein they are held accountable for the results as per socially approved criterion.

Abstracts of

Cases

registered with the Case Unit



Hasmukhbhai K. Nakum: Cold Storage Entrepreneur

Case Registration No. And Date: CMA0812, 20-11-2009.

G. Raghuram, Vijaya N. Baskar and Santosh Kumar Mishra

Mr. Hasmukhbhai K. Nakum, a cold storage entrepreneur, was thinking about expanding his cold storage business beyond Ahmedabad. While some of the cold storages in Ahmedabad were closing down due to high running costs and poor capacity utilization, he was contemplating on expansion. He already had four cold storages and each one of them was running profitably. With the continuous increase in agricultural production, this business had become an opportunity for Hasmukhbhai. He wanted to expand beyond Ahmedabad to other cities where the demand was high. He thought he could improve his operating margins and reduce risks by geographical diversification. He was considering one among three cities in western India that could be attractive for cold storage business, namely Pune, Mumbai or Surat.

RUDI Rural Distribution Network of SEWA: Creating the Fortune for the Bottom of the Pyramid

Case Registration No. And Date: MAR0409, 07-08-2009

Anand K. Jaiswal, Atanu Ghosh, and Harit Palan

Promoted by Self Employed Women's Association (SEWA), Rudi Multi Trading Company Limited was established in 2004 with the prime objectives of facilitating a linkage between poor rural farmers and rural consumers, and promoting internal generation of funds in villages. The company works to unite two parties, small and medium farmers who are scattered and whose produce do not fetch them the deserved market price and secondly, the rural consumers, who are deprived of better quality products owing to the intermediaries who charged hefty margins, making products costlier for them. The top management of the company wants to increase the sales volumes and expand its presence across different markets. The case discusses the business model of the company and the challenges and opportunities before it.

Tangy: Launching a Non-Vegetarian Snack Food

Case Registration No. And Date: CFR0004, 27-07-2009

Piyush Kumar Sinha and Amit Sehgal

The case looks at the decision options present before a new entrepreneur with regard to the new concept of a non-vegetarian snack food. Opportunities exist in the market for B2B, retail, franchising, and licensing. However, the perishable nature of the product makes distribution and production difficult. The entrepreneur must also decide on the cities to enter and the scale of operation.



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Mizuho Securities and other Trading Errors

Case Registration No. And Date: F&A0483, 26-03-2010

Jayanth R. Varma

This Case describes a large trading error at Mizuho Securities that cost the firm \$335 million. It also explains the response of the exchange to this error. The deficiencies at the trading firm and at the exchange that led to this mishap are the focus of the case. Two other similar episodes in India and US are also described.

Abstracts of Book Chapters

authored by IIMA Faculty



Sukhpal Singh is currently Faculty at the Centre for Management in Agriculture. His research interests include Food/Fibre Value Chains and their Coordination and Governance from a Small Primary Producer and Farm Worker Perspective.



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High Value Crops and Gujarat's Agricultural Growth: Cases of Castor and Psyllium (Isabgol)

in *High Trajectory of Growth and Structural Change in Gujarat Agriculture*, edited by R. H. Dholakia and S. K. Datta, Indian Institute of Management Ahmedabad, March 2010, 63-88.

Sukhpal Singh

The performance of Gujarat in agricultural growth in the last decade or so has been a matter of intense discussion and debate in the recent period. There is no doubt that Gujarat has one of the most diversified cropping patterns in India and has varied agro climatic conditions. In this context, it is important to examine the sources of agricultural growth and factors which sustain agricultural growth in the state. Gujarat is also known for high commercialisation of agriculture with large area under non-food crops, many of which are high value crops. This paper examines the value chains of two such high value crops—castor and Psyllium (isabgol)—to understand how value chains of such crops are organized and have contributed to the growth performance of the sector not only by raising growth rates but also sustaining such high growth at farmer and processor levels. It further goes on to examine the differences in profile and costs of different categories of growers of castor and psyllium and examines the factors in farmer interest in these high value crops besides examining aspects of value addition and risk in these crops and their value chains. The paper suggests mechanisms to further strengthen the value addition and market linkages in these crops.

The Impact of Information Technology in Indian Business: Annual Report 2005-06

In *The Business and Information Technology Practice Global Research Network: A Global Study of Business Practice*, edited by Uday Karmarkar and V. Mangal. USA: World Scientific Publishing Co., 2009.

Atanu Ghosh, Gargi Banerjee and Ashish Hattangdi

Over the last decade the Indian economy has transitioned from an agrarian economy to a predominantly services based economy with IT-ITES being a major component of the services sector. The IT-ITES sector's share of the GDP continues to grow steadily reaching 4.8% in 2005-2006 (Nasscom Strategic Review, 2006). The survey indicates that the Indian businesses are changing, requiring more effective solutions to deliver better value to the customers and maintain their position in a fiercely competitive scenario. Indian businesses during 2005-06 were definitely at an inflection point in terms of deployment of information and communication technologies. Technology is increasingly being linked with organization strategy to improve performance of firms.

Innovations and Challenges in Reducing Maternal Mortality in Tamil Nadu, India

In *Midwifery and Maternal Health in India: Situation Analysis and Lessons from the Field* edited by Leela Visaria. Ahmedabad: Indian Institute of Management, 2010, 437-463.

P. Padmanaban, Parvathy Sankara Raman, Dileep V. Mavalankar

Although India has made slow progress in reducing maternal mortality, progress in Tamil Nadu has been rapid. This case study documents how Tamil Nadu has taken initiatives to improve maternal health services leading to reduction in maternal mortality from 380 in 1993 to 90 in 2007. Various initiatives include establishment of maternal death registration and audit, establishment and certification of comprehensive emergency obstetric and newborn-care centres, 24x7 delivery services through posting of three staff nurses at the primary health centre level, and attracting medical officers to rural areas through incentives in terms of reserved seats in postgraduate studies and others. This is supported by the better management capacity at the state and district levels through dedicated public health officers. Despite substantial progress, there is some scope for further improvement of quality of infrastructure and services. The paper draws out lessons for other states and countries in the region.

Integrated Regional Assessment for South Asia: A Case Study

P. R. Shukla, Amit Garg, and Subash Dhar

The South Asian (SA) region, comprising Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka, is one of the most densely populated regions in the world. Comprising 3.5% of the total world area, the region holds about a quarter of the world's population. The region is characterized by diversity in geography, political and economic structures, and energy resource endowment. South Asia's commercial energy mix comprised of around 46% coal, 32% petroleum, 13% natural gas, 8% hydroelectricity, and 1% nuclear. One of the major issues facing South Asian nations today is the rising energy demand essential to facilitate economic growth in the region. Dependence on fossil fuels to meet energy needs has led to rising emission of greenhouse gases



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(GHGs). Also the exploitation of natural resources associated with rapid urbanization, industrialization, and economic development has led to increasing pollution, declining water quality, land degradation, and other environmental stresses. Climate change is projected to exacerbate these stresses.

This paper uses an integrated energy-economy-environment modeling framework to project benefits of regional energy cooperation. Due regional cooperation, the total energy consumption in the region decreases and becomes cleaner due to sharing of energy resources and efficiency improvements in supply and demand-side technologies. Also with greater availability of gas in the region there are shifts from coal-based technologies to more efficient gas-based technologies on the supply side. As regional cooperation grows, better technologies become available to less developed countries in the region, improving energy efficiencies of GDP and reducing the CO₂ efficiency of energy use in South Asia. However, these improvements in technology efficiencies on both the demand and supply sides do not take place immediately. The benefits of cooperation are realized only beyond 2-3 years of serious implementation. Regional energy cooperation provides multiple dividends in the form of reduced primary energy requirements for the region (59 exajoules over 2010–2030), reduced CO₂ emissions (over 5.1 Bt-CO₂ over 2010–2030), and reduced SO₂ emissions due to lower coal consumption (50 Mt-SO₂ over 2010–2030). There are other spill-over benefits such as increased competitiveness of industry due to lower energy prices; 16GW additional hydropower capacity resulting in flood control, marine production; lower health impacts on populations due to less coal combustion; and a number of social impacts. All of these provide direct and/or indirect economic benefits. The cumulative economic value of these benefits over a 20 year period from 2010 to 2030 would be around US\$390 billion, i.e., nearly 1% of the region's GDP for the entire period. The regional energy and electricity cooperation would add 1% economic growth each year to the region sustained over a 20 year period. The benefits would be larger in smaller countries and these savings, if invested properly into the respective economies for social sector improvements, would deliver multiple benefits in South Asia where the largest numbers of the world's poor reside.

Abstracts of doctoral

Theses

awarded in March 2010



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Evolution of Global Carbon Market: Implications for India

Vaibhav Chaturvedi

Emissions mitigation efforts for limiting atmospheric temperature rise have led to the evolution of a global carbon market. Future carbon price expectations will play an increasingly important role in long term investment decisions as well as environmental policy. The overall aim of the present research is 'to understand the evolution of global carbon market and its implications for India'. The specific research questions being addressed are: (i) what will be the cumulative demand for global emission reductions vis-à-vis reference scenario under various stabilization levels?; (ii) what will be the carbon prices and emission reductions under various stabilization levels?; (iii) what are the policy implications for India from the analysis of carbon market dynamics under different scenarios?; and (iv) what are the implications for India of different emission allocation rules?

A carbon market analysis framework has been presented and employed for understanding the long term scenarios of global carbon market evolution. Global Climate Change

Assessment Model (GCAM) has been used for analyzing the effect of different levels of emission caps (stabilization levels) and technology approaches on the long term demand and supply of emission reductions. GCAM is an energy sector focused, partial equilibrium based, integrated assessment model. The model includes 14 regions (with India as a separate region) and runs from 1990 to 2095, in time steps of 15 years.

The total absolute reduction required globally by century end, range between 386 GtC (Giga Ton Carbon) (29%) for a 4.2° C target and 1096 GtC (81%) for a 2.2° C target compared to reference scenario emissions depending on the stringency of emission cap. Carbon price can be as high as 255 US\$/tC in 2020 and range between 150 US\$/tC and 600 US\$/tC in 2095. The marginal abatement cost curves exhibit that abatement cost is much higher in the short term and it decreases along with time till the end of century. This is because the possibilities for technology substitutions are higher in the long run as compared to the short term. Also, abatement costs would be lower for India than the average world marginal abatement cost as currently Indian economy is highly inefficient (power plants with low efficiency, inefficient private vehicles and public transportation, etc), implying low cost efficiency enhancement opportunities. Also significant potential exists for low cost renewable energy deployment in India. GDP loss is higher when the stabilization targets are more severe, and this loss starts happening in the initial part of the century itself. Under a sustainable technology approach, the carbon prices as well as GDP losses are always lower compared to the conventional approach. The present research highlights the importance of carbon capture and storage, nuclear, biomass, wind and solar technologies for meeting Indian emission reductions in the short as well as long run. The choice of emission allocation rule can have significantly different implications for emission allocation and financial transfer.

The research contributes by bringing out the carbon price trajectory under various scenarios, emission mitigation required to be undertaken in India in the long term under various scenarios, marginal abatement cost curves for India, quantitative estimates of the role of various energy technologies in the future, and implications of two most discussed and debated emission cap allocation rules on India with the resulting expected financial transfers. The methodological contribution are separating Indian region from among the 14 world regions for an India centric analysis, and modeling a sustainable scenario for meeting global emission reduction demand.

Brief notes on

Books

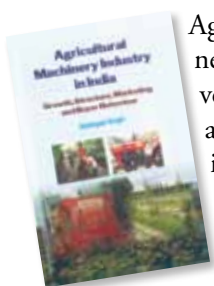
authored/edited by IIMA Faculty



Agricultural Machinery Industry in India: Growth, Structure, Marketing, and Buyer Behaviour

New Delhi: Allied Publishers, 2010

Sukhpal Singh



Agricultural machinery industry is an important segment of the agribusiness sector in India and plays a crucial role in furthering agricultural development. Agricultural machinery and equipment industry comprises of a large number of segments even in the organised sector. Though tractor industry is well established and there have been studies of tractor purchase and use behaviour in the past, there have been no recent studies on the growth, structure, and competition dynamics and the firm behaviour



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and strategies in the light of the changing nature of the tractor market in terms of its locational shift and saturation in the traditional pockets of it symbolized by the emergence of second hand tractor markets and entry of many new home grown players in the market. On the other hand, not much is known about the structure and organisation of the combine harvester and micro irrigation industry. There is little documented evidence on these industries in India. Also, many of the combine harvester makers have diversified into tractor manufacturing and marketing more recently. There are some of the homegrown tractor producers in India producing either both tractors and combine harvesters or only tractors. They have carved a significant niche for themselves in the recent past. Further, there are no studies on micro irrigation equipment industry which is growing in importance due to changing cropping pattern and need for and focus on water saving technologies.

In the light of the above context, the book examines the nature of growth, and market structure in the tractor, combine harvester and micro irrigation equipment industries, explores the changing nature of demand in these industries especially tractor and harvesting industry, analyses the marketing and business strategies of various types of players in this market like bundling of inputs, diversification, consolidation, etc., with focus on the buying aspects.

These three industries have been studied with focus on major locations and users in Punjab, Gujarat and Maharashtra. The study begins with secondary data based analysis and goes on to case studies of firms with a view to understand their marketing and business strategies. It also analyses dealer and farmer level data to understand distribution level issues and strategies. There was no practice of dealership in combine harvester industry. Farmer level analysis is carried out to understand purchase and use practices in all the three industries. The book makes recommendations for speeding up the process of mechanisation of Indian agriculture through action by various stakeholders in the industry.

HR Best Practices: Manufacturing Sector in India

SAIL, 2009.

N. Nair, N. Vohra, T. V. Rao and A. Srivastava



HR practices of an organization reflect the care and concern the organization has for its people. It is based on the belief system of the organization as to whether people will or will not perform given the appropriate support and rewards. Setting up systems for attracting, retaining, motivating, and developing people is a challenge for any organization. To address this challenge, in addition to learning from experience it also helps to learn from the efforts of other organizations that function within the same context. This book presents the best practices in human resource management and development exclusively in 49 manufacturing organizations in India.

The practices covered in this book include: (a) practices for functioning effectively such as performance management practices and competency mapping; (b) practices oriented towards women and other inclusive practices; (c) practices for motivating and encouraging employees such as reward and recognition, and welfare practices; (d) practices like induction and integration, that help the employee imbibe the culture and settle down in the organization; and (e) future oriented practices such as succession planning and leadership development, assessment for potential, and training and development. The practices documented in this book are based on self report in the context of applying for a national level competition for excellence in HR practices by SAIL in 2009.

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Improving Access and Efficiency in Public Health Services: Mid-Term Evaluation of India's National Rural Health Mission

New Delhi: Sage Publications Ltd., 2010

Nirupam Bajpai, Jeffrey Sachs and Ravindra H. Dholakia



This book presents a systematic mid-term evaluation of the processes of the National Rural Health Mission (NRHM), India's biggest rural health program. Data from District Level Health Surveys (DLHS), National Family Health Surveys (NFHS) and Sample Registration System (SRS) as well as primary data collected from field surveys and interviews with health functionaries have been utilized for undertaking empirical analysis in the study. The book draws from data collected in field visits in the three states of Madhya Pradesh, Uttar Pradesh, and Rajasthan. After assessing the NRHM processes and progress achieved so far, it discusses important ground realities, identifies the gaps and bottlenecks in the implementation of the Mission, and recommends corrective actions.

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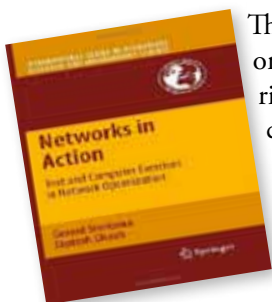
Cost-Benefit Analysis, Analysis of Macroeconomic Environment and Policy, Analysis of Economic Growth and Productivity, International Trade Related Issues and Fiscal Policy and Public Debt.

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Networks in Action: Text and Computer Exercises in Network Optimization

USA: Springer, 2010

Gerard Sierksma and Diptesh Ghosh



The authors' original motivation for the book was a one-semester course on network optimization for senior 'masters level' classes of econometrics and operations research. The textbook is suitable for a 'middle level' course for a student of econometrics or operations research interested not only in reading about network optimization theory, but also in providing first-hand experience in solving and analyzing reasonably sized programs with computer software. The book's distinctive feature is the set of problems included with each chapter.

The text book should spark students' interest in modeling problems as networks, to sensitize them to the fact that elegant and effective solution methods are available once a problem gets modeled as a network, and to guide them to use computer based software tools to solve these problems.

Each chapter ends with a brief description of additional problems that are related to problems described in the chapter. These additional problems are left unsolved in order to show students that the problems appearing in each of the chapters are not the only problems with which network optimization deals. These additional problems should spur the students' interest to extensions to the problems that are also described in the chapters.

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Spotlight

on research conducted by
Centre for Innovation, Incubation and Entrepreneurship



Each issue of the R & P Newsletter will highlight research conducted at one of the centres, groups, or areas at IIMA.

CIIE—Centre for Innovation, Incubation and Entrepreneurship—was set up in 2001 in collaboration with the Gujarat Government and Department of Science and Technology (GoI) at IIMA as a centre for research in the area of innovation. Over time, its focus expanded to incubation and handholding of startups. Over the last 3 years, CIIE has supported more than 35 startups in a variety of fields like clean technologies, internet and mobile domain, healthcare, etc.

CIIE has run various programs to help upcoming entrepreneurs. iAccelerator is a quick startup camp for companies in the internet and mobile domain. RE-Search, on the other hand, is an innovative program designed to help new entrepreneurs kickstart in the clean technologies space. CIIE has joined hands with the Department of Science and Technology (GoI), and The Economic Times for The Power of Ideas initiative in 2010 — the largest of its kind across the globe in terms of scales—towards the growth of the entrepreneurial ecosystem in the nation.

Mentor Edge, another initiative of CIIE, has been instrumental in connecting industry experts to startups. The Stay Hungry Stay Foolish book published by CIIE has played a huge role in motivating the Indian youth towards entrepreneurship, and has ruled the bestseller charts for long.

Faculty members of IIMA are actively involved in the mentoring teams that help the incubatee projects associated with CIIE. Needs that require managerial inputs are converted into student projects supervised by IIMA faculty. Incubatees are free to interact with any faculty of the Institute to take his inputs and explore networking support.

Research Projects

Nokia Project:

CIIE in association with Nokia Research Center and National Institute of Design has completed a research project towards increasing the penetration of mobile phones in India especially into the rural market and low-income category. The project broadly aimed at the following:

- Market research to identify key features, price points and penetration strategy for rural market;
- Identification of unique applications for the product to target the underserved market; and
- Product designing to develop prototypes for various applications.

Mobile Innovation Lab:

As an extension of the Nokia project, CIIE is setting up a mobile innovation lab in association with Nokia. This will facilitate research work in the field of IT and mobile domain.

- Study for ‘Technology Development Board’ suggesting possible approaches for structuring repayments (royalty, etc.) for organizations getting funds from Department of Science and Technology.

www.ciieindia.org