

# **Annual Report 2003 - 2004**



INDIAN COUNCIL FOR RESEARCH ON INTERNATIONAL ECONOMIC RELATIONS

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## Foreword

ICRIER has completed yet another successful year. Several research projects in a number of thematic and important policy areas were completed and a few are underway.

I am especially happy to note that ICRIER has substantially expanded its work in the area of macroeconomic research by proactively undertaking studies on issues relating to growth, policy and reforms.



Over the years ICRIER has emerged as a kind of "service expert" in the area of WTO related research. ICRIER's work in this area gathered further momentum during the year as it continued to make headway in strengthening its co-operation with the Government of India on WTO issues. ICRIER's research in WTO-related areas received significant boost with the support from Sir Ratan Tata Trust.

Of equal significance is ICRIER's ongoing work on impact of tariff reforms on Indian industry & agricultural production, role and impact of FDI on Indian economy, and regional & bilateral trade and cooperation issues etc. Many of these issues remain central to India's domestic policy reform agenda.

Of the major events mention may be made of the Fourth India-Korea Dialogue, which was successfully held by ICRIER in October. No less significant are the two book release events which took place during the year, one authored by Dr. Shankar Acharya 'India's Economy: Some Issues and Answers' which was released by Dr. Manmohan Singh, now Prime Minister of India, and the other by Dr. Arvind Virmani 'Accelerating Growth and Poverty Reduction: A Policy Framework for India's Development' released by Dr. Y. V. Reddy, Governor RBI.

As part of its chief goal to generate high quality research output on policy oriented issues, ICRIER continued to make consistent efforts to reach out to a wider circle of opinion makers, academicians, policy makers and others interested both in the international community and within the country. We propose to carry this initiative forward.

This year also witnessed ICRIER's completion of its over five-year long tenure as SANEI Coordinator and its transition to the Pakistan Institute of Development Economics (PIDE), Islamabad. ICRIER's solid contributions and progressive efforts in building up SANEI as a vibrant research network in South Asia have been generally appreciated.

Lastly, we express our deep sense of sorrow at the passing away of Dr. K. B. Lall, Founder Chairman of ICRIER, on January 8, 2004. A special condolence meeting was arranged at ICRIER on February 27, 2004.

*I G Patel*

I G Patel  
Chairman



## Board of Governors of ICRIER

As on June 30, 2004

### Chairman

Dr. I. G. Patel  
12, AMEE Cooperative Society  
Diwali Pura, Old Padra Road  
Vadodara-390 015

### Elected Members

Dr. Shankar N. Acharya  
RBI Chair Professor  
ICRIER  
Core 6-A, 4<sup>th</sup> Floor  
India Habitat Centre  
Lodi Road  
New Delhi 110 003

Mr. Uday S. Kotak  
Vice Chairman & Managing Director  
Kotak Mahindra Bank Ltd.  
Bakhtawar Building, 2<sup>nd</sup> Floor  
Opp. New Oberoi  
Nariman Point  
Mumbai 400 021

Dr. R. A. Mashelkar  
Director General  
Council of Scientific and Industrial  
Research  
Anusandhan Bhawan  
2, Rafi Marg  
New Delhi 110 001

Mr. N. R. Narayana Murthy  
Chairman & Chief Mentor  
INFOSYS Technologies Ltd.  
Hosur Road, 3<sup>rd</sup> Cross, Electronic City  
Bangalore 561 229

Dr. Deepak Nayyar  
Vice Chancellor  
Delhi University  
Delhi 110 007

Dr. Kirit S. Parikh  
Member  
Planning Commission  
Yojana Bhawan  
New Delhi-110 001

Dr. Swati A. Piramal  
Chief Scientific Officer  
Piramal Enterprises Healthcare Group  
100, Centre Point  
Dr. B R Ambedkar Road  
Parel  
Mumbai 400 012

Mr. N. K. Singh  
Former Member,  
Planning Commission  
11 Teen Murty Lane  
New Delhi 110 011

Mr. Amar Nath Varma  
Former Principal Secretary to the  
Prime Minister of India  
Prime Minister's Office  
C-23, Greater Kailash Enclave I  
New Delhi 110 048

## Co-opted Members

Mr. Muchkund Dubey  
President  
Council for Social Development  
53, Lodi Estate  
New Delhi 110 003

Ms. Lalita D. Gupte  
Joint Managing Director  
ICICI Bank Ltd.  
ICICI Bank Towers  
Bandra-Kurla Complex  
Mumbai 400 051

Ms. Janaki Kathpalia  
Former Additional Secretary  
Ministry of Finance  
D-935, New Friends Colony  
New Delhi 110 065

Dr. Vijay Kelkar  
Adviser to Finance Minister  
Ministry of Finance  
North Block, New Delhi 110 001

Dr. Rakesh Mohan  
Deputy Governor  
Reserve Bank of India  
Central Office  
Shaheed Bhagat Singh Road  
Mumbai 400 001

Mr. N. Ravi  
Editor, The Hindu  
Kasturi Building  
859 & 860, Anna Salai  
Chennai 600 002

## Overseas Members

Dr. Deena Khatkhate  
Former Adviser  
International Monetary Fund  
4550 North Park Ave  
# 604, Chevy Chase  
MD 20815  
USA

Mr. Lalit Mansingh  
Former Ambassador to USA  
N-38, Panchsheel Park  
New Delhi - 110 017

Professor T. N. Srinivasan  
Samuel C Park Jr. Professor of Economics  
Yale University  
27 Hillhouse Avenue  
New Haven, CT 06520-8269  
USA

## Member Secretary

Dr. Arvind Virmani  
Director & Chief Executive  
ICRIER  
Core 6-A, 4<sup>th</sup> Floor  
India Habitat Centre  
Lodi Road  
New Delhi 110 003



**Founder & Life Members of ICRIER****As of June 30, 2004****Founder Members**

1. Late A. M. Khusro
2. Late Anand Prakash
3. Mrs. Anna R. Malhotra
4. Mr. Ashok V. Desai
5. Mr. B. D. Jayal
6. Late B. K. Chatterjee
7. Late B. K. Nehru
8. Mr. B. S. Das
9. Dr. Bharat Ram
10. Late Brij Bhushan
11. Dr. C. Rangarajan
12. Dr. Charan D. Wadhwa
13. Dr. Deepak Nayyar
14. Mr. Freddie A. Mehta
15. Mr. Govind Narain
16. Mr. H. N. Ray
17. Mr. Harbans Singh
18. Dr. I. G. Patel
19. Mr. I. S. Chadha
20. Late J. Rameshwar Rao
21. Dr. Jagdish Bhagwati
22. Late K. B. Lall
23. Mr. K. K. Bhargava
24. Mr. K. L. Dalal
25. Late Khub Chand
26. Late L. K. Jha
27. Late Lovraj Kumar
28. Late M. C. Bhatt
29. Mr. M. Dubey
30. Dr. M. S. Swaminathan
31. Late Malcolm S. Adiseshiah
32. Dr. Manmohan Singh
33. Prof. Manu R. Shroff
34. Late Mohd. Yunus
35. Mr. Montek Singh Ahluwalia
36. Dr. N. C. B. Nath
37. Mr. N. K. Sengupta
38. Dr. Nitin Desai

39. Mr. P. C. Nayak
40. Late P. Chenstal Rao
41. Mr. P. K. Dave
42. Mr. P. K. Kaul
43. Mr. P. K. Nanda
44. Prof. P. N. Dhar
45. Mr. Prakash Tandon
46. Mr. R. D. Pradhan
47. Dr. R. J. Chelliah
48. Mr. R. M. Honovar
49. Late R. N. Malhotra
50. Mr. R. S. Gae
51. Mr. R. V. Subrahmanian
52. Late Raj Krishna
53. Dr. Rajni Kothari
54. Dr. S. P. Gupta
55. Mr. S. R. Sen
56. Mr. S. S. Marathe
57. Mr. S. S. Ramphal
58. Mr. S. S. Rao
59. Mr. S. V. S. Juneja
60. Dr. Sanjaya Lall
61. Late Sukhamoy Chakravorty
62. Mr. Suman K. Modwel
63. Late Suresh Kumar
64. Mr. T. K. N. Unnithan
65. Dr. V. R. Panchamukhi
66. Mr. Vijay G. Pande
67. Mr. Vinay Bharat Ram
68. Late Y. T. Shah

**Life Members**

1. Mr. A. N. Varma
2. Mr. J. S. Baijal
3. Late J. S. Bali
4. Dr. K. Venkatasubramanian
5. Mr. Prakash Shah
6. Mr. Raghunandan D. Maluste
7. Mr. Shiv S. Kapoor



## Director's Report

In the last year's annual report we had indicated that ICRIER would lay greater stress on policy oriented research in order to fill the gaps in economic policy making. We have had considerable success in moving in this direction. The volume and the quality of our research output has increased. Observers across the world have taken note of this. We have also been able to inculcate in our researchers that ICRIER research must shed light on policy issues and make it easier for decision makers and policy advisors to resolve contentious issues. The second focus of our effort in which we have also had some success is to increase the synergies among researchers working on different projects. This is illustrated by the multi sector model of the manufacturing sector that we have built and the inter linkages it has with other research on FDI and exports. The third area which we had emphasised last year was to expand and refocus our work on macro-economics into the determinants of economic growth, poverty and employment, We have made a good start in this area, though we still need to broaden and deepen our work to issues of poverty and employment.



A number of research projects that were initiated last year reached successful completion. Additionally new studies on specific sectors of importance to the Indian economy were started and are well on their way.

In the backdrop of the ongoing WTO negotiations with members striving to reach some sort of a framework agreement, India has emerged as a prominent player. ICRIER on its part has worked hand in hand with the Ministry of Commerce & Industry and played an active role in providing greater insight on WTO issues. ICRIER's WTO work, led by Professor Anwarul Hoda, witnessed unparalleled expansion during the last five years. Sadly for us but fortunately for the country he now moves on as Member, Planning Commission. A significant piece of work being undertaken at ICRIER in this area is the development of an overall framework on WTO to identify the inter linkages between different policy initiatives in order to develop consistent policies and provide a strategic perspective. ICRIER has also undertaken a study on the impact of the TRIPS agreement to evaluate the Indian intellectual property laws as the agreement is one of the three major substantive agreements constituting the WTO. We would hope that ICRIER's expertise and quality of research output should contribute towards a deeper understanding and help India's current position at the WTO debate. The support from the Sri Ratan Tata Trust for our WTO-related research activities has been invaluable.

Our services work continues to grow and widen. It now covers sectoral issues in the domestic economy in which we have done a few pioneering studies such as on productivity growth. At the same time our services work in world trade has expanded due to a growing integration of the world economy and its relevance to bilateral and regional negotiations. ICRIER's recent work on international trade has covered sectoral issues such as telecommunications, healthcare and energy sector.

One of the growing areas of ICRIER's research work is macroeconomics, growth, poverty and employment. In our endeavour to systemise and deepen this policy research, ICRIER initiated a series of work on the Indian economic growth performance. Two papers in the

series are already complete. The first seeks to clear up the misperception about Indian economic growth history, not only among foreigners, but even among Indians and analyses the causes of changes in growth trends and variations in performance. The second paper explores the sources of growth that underlay the growth performance since independence, its primary focus being estimation of trends in total factor productivity (TFPG) for the economy. Another contribution in this area is ICRIER's paper on institutional reform presented at the GDN conference in Delhi, organised by ICRIER in Jan 2004. It utilises ICRIER's experience and expertise in policy formulation in government and advice on Indian economic policy reforms. We have also increased our work on agriculture, which is timely given the heightened concerns about the sector. We hope to provide inputs for policy making in Indian agriculture as it strives to become globally competitive.

ICRIER also widened its research activity through project funding by the World Bank to examine the efficiency of manufacturing industries across the states and analyse causes with a view to achieving faster GDP growth, and a policy paper for the Asian Development Bank (ADB) on critical issues in services led growth, which is currently underway. We have also received endowment grant from the WP Carey Foundation and the Petroleum Federation of India.

Our understanding of the issues related to trade and competitiveness in the Indian economy was deepened through several studies. One accomplishment of our research program in this area during the last year has been a study on the implications of further tariff reductions on Indian industry. The findings surprisingly suggest that even a substantial decline in tariff rates from an average of about 30% to about 10% (along with associated currency depreciation and increased market access) would have only a marginal impact on net exports, value of production and employment in the organised manufacturing sector. This was presented and discussed at a focussed seminar held recently at ICRIER. This study was a follow up of an earlier study assessing the NAMA proposals on industrial tariffs funded by the Department of Industrial Promotion and Policy. We are most grateful to them for providing the seed money for the development of a 41 sector model which has since been refined further by ICRIER.

India has emerged as one of the most attractive investment destinations among emerging markets for foreign portfolio inflows. ICRIER's research work on the dynamics of foreign portfolio through FIIs and equity returns and stock return volatility patterns in India during 1979-2003, will help to develop an understanding of the investment decisions, trading strategies and behaviour of the FIIs in the Indian equity market.

One of the most debated issues in development economics today is the role played by FDI in developing countries. Various studies have been undertaken at ICRIER to examine the impact of FDI on factors including productivity, wages and employment in developing countries. One significant study is on the impact of Japanese and U.S. FDIs on productivity growth and exports of Indian manufacturing. Furthermore, inspite of considerable growth in retailing and gradual development of India as a sourcing hub, retailing is one of the few sectors where FDI is not allowed. We are doing a survey based project to examine the possibilities and impact of opening up the retailing sector to FDI.

Bilateral trade relations between India and China have witnessed a transformation in the

last decade. However, China's trade with India accounts for only 0.8 per cent of its total external trade. India and China are exploring the possibilities of expanding trade for which a Joint Study Group with representatives from India and China has been set up. ICRIER is conducting a study on India-China trade in goods and services, the findings of which are expected to provide the Joint Study Group critical inputs for drawing up the framework. Also, ICRIER and NASSCOM have jointly undertaken a study to identify the areas of mutual trade interest between India and US in the IT and Communication sector. This could subsequently provide inputs for a possible India-US FTA.

This year ICRIER bade farewell to its coordinating role in SANEI after more than five years! ICRIER was chosen as an anchor for the network in 1998-99 and ever since it has played a lead role in establishing the foundations, coordinating its activities and administering it. Over the course of this period, there has been a remarkable expansion in SANEI's reach and activities as it funded around 65 research projects on diverse areas of economic development in South Asia. On behalf of ICRIER I would like to thank whole-heartedly the researchers who have actively contributed towards making SANEI a success, the Research Advisory Panel and the Steering Committee members for their unstinting cooperation. I must also place on record our thanks to the Global Development Network and the Ford Foundation for their invaluable support. I am confident that SANEI will continue to play a crucial role towards capacity building for policy oriented research in the region in the years to come.

Over the last six years ICRIER has strongly emerged as a creditable economic thinktank providing an active forum for debate and discussion on critical issues of national and international importance. In line with this, ICRIER continued to invite eminent scholars from India and abroad for lectures and seminars as part of its public policy programme, while at the same time networking and collaborating with key institutions of national and international fame on important policy related matters.

Several research projects were published as working papers and major publications brought out or are underway including the 'India Health Report' published by Oxford University Press, 'WTO, Agricultural Negotiations and Developing Countries: Lessons from the Indian Experience' and 'Essays in Macroeconomic Policy and Growth' to be published by Oxford University Press. Other significant publications by ICRIER professionals included 'An Encounter with Higher Education: My Years at LSE', published by Oxford University Press and 'Accelerating Growth and Poverty Reduction', published by Academic Foundation.

In order to strengthen the link between policy and research, we have continued to reach out to a wider circle of opinion makers, policy makers and others through relevant and consistent platforms and dissemination of our research findings. All in all 2003-04 proved to be a year of marked vigour and expansion at ICRIER and in this spirit, the quest for quality of work and professional strengthening of ICRIER continues.



Arvind Virmani

**Director & Chief Executive, ICRIER**

# **Activites**

An account of ICRIER's activities can be classified under four broad heads:

Research Projects

Conference & Seminars

Public Policy Programme

South Asia Network of Economic Research  
Institutes (SANEI)



# **Research Projects**

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## **I**

### **International Economics and International Economic Relations**

- IA Trade, Openness, Restructuring, and Competitiveness
- IB Financial Liberalisation and Impact of Capital Flows
- IC Multilateral Issues: World Trade Organisation
- ID Regional and Bilateral Issues

## **II**

### **Macroeconomics, Growth, and Poverty**

- IIA Macroeconomic Management and Growth
- IIB Financial Development and Reforms
- IIC Reform Issues

## Research Projects

Projects  
Completed

### I. International Economics and International Economics Relations

#### IA Trade, Openness, Restructuring and Competitiveness

##### Projects completed

#### IA.1. Ownership & Efficiency in Engineering Firms in India

In this study an analysis of the effect of ownership on efficiency of engineering firms in India is carried out using data for the 1990s. Technical efficiency of firms, estimated with the help of a stochastic frontier production function is considered for the analysis. A comparison of technical efficiency is made among three groups of firms in Indian engineering: (1) firms with foreign ownership, (2) domestically owned private sector firms, and (3) public sector firms. The results clearly indicate that foreign firms in Indian engineering industry have higher technical efficiency than domestically owned firms. No significant difference in technical efficiency is found between private sector and public sector firms among the domestically owned firms. There are indications of a process of efficiency convergence – the domestically owned firms tending to catch up with foreign owned firms in terms of technical efficiency. The results show a positive relationship between international trade orientation of a firm and its level of technical efficiency. The effect of import intensity is found to be particularly strong, which signifies the efficiency raising effects of import liberalisation.

This study was conducted by Dr. B. N. Goldar, IDBI-IFCI Professor, ICRIER, Dr. V. S. Renganathan, former Economist, National Institute of Public Finance & Policy (NIPFP) and Ms. Rashmi Banga, Consultant, ICRIER. The findings of the study have been published as ICRIER Working Paper No. 115.

#### IA.2. Trade Liberalisation & Price-cost Margin in Indian Industries

In this study the effect of trade liberalisation on price-cost margins in Indian industries is examined using panel data for 137 three-digit industries for the period 1980–81 to 1997–98. An econometric model is estimated to explain variations in price-cost margins, in which the tariff and non-tariff barriers are included among the explanatory variables. Thus, inter-industrial and inter-temporal variations in tariff and non-tariff barriers on manufactured imports are employed to assess the effect of trade liberalisation on price-cost margins in domestic industries. The results of the analysis clearly indicate that the lowering of tariff and removal of quantitative restrictions on imports of manufactures in the 1990s had a significant pro-competitive effect on Indian industries, tending to reduce the mark-ups or price-cost margins. However, in spite of the pro-competitive effects of trade liberalisation reinforced by domestic industrial deregulation, the price-cost margins in manufacturing did not fall in the post-reform period. Rather, there was an increase in the margin in most industry groups as well as at the aggregate manufacturing level.



## IA Trade, Openness, Restructuring and Competitiveness

### Projects Completed

An analysis of trends in labour income in industries brings out that in the post-reform period there has been a marked fall in the growth rate of real wages and a significant reduction in labour's income share in value added, reflecting perhaps a weakening of industrial labour's bargaining power. This seems to have neutralised to a large extent the depressing effect of trade liberalisation on the price-cost margins in Indian industries.

This study was conducted by Dr. B. N. Goldar, IDBI-IFCI Professor, ICRIER and Dr. S. C. Aggarwal, External Consultant, ICRIER and Reader, Delhi University. The findings of the study have been published as ICRIER Working Paper No. 130. Financial support from the Sir Ratan Tata Trust is acknowledged.

### IA.3. Contribution of Services to Industrial Growth & Productivity

As an input to the production process, services are playing an increasingly important role in manufacturing industries, world over. Yet, this fact has received very little attention in the empirical economic literature on producer behavior and productivity. The production function and productivity studies for manufacturing industries have commonly applied the value-added function or the KLEM (capital-labour-energy-materials) production function as the basic framework of analysis in which the contribution of services to production and productivity does not get an explicit recognition.

The present paper aims at filling this gap in the literature. An analysis of the contribution of services to output growth and productivity enhancement in Indian manufacturing is carried out using the KLEMS production function framework, explicitly recognising services as an input to the production process. Panel data for 148 three-digit level industry groups for 18 years, 1980-81 to 1997-98, are used for estimating the production function, using which an analysis of sources of growth is undertaken. The results of the analysis bring out clearly that the growing use of services had a significant favorable effect on growth of output (especially in the 1990s when major trade and industrial reforms were carried out). The contribution of services input to output growth in manufacturing (organized) was about one per cent in the 1980s, and it increased to about 25 per cent in the 1990s. A multilateral total factor productivity index is constructed with and without services, which show that productivity estimates are overstated if services are excluded. Multiple regression analysis undertaken to explain inter-industrial and inter-temporal variations in the intensity of use of services in Indian industries using a more aggregated data-set, i.e., 41 major industry groups, for the period 1980-81 to 1999-00, indicates that trade reforms were responsible in a significant measure for the rapid growth in use of services in manufacturing in the 1990s. The process appears to have been aided by other reforms undertaken in this decade.

This study was conducted by Dr. B. N. Goldar, IDBI-IFCI Professor, ICRIER and Ms. Rashmi Banga, Consultant, ICRIER. The results of the study were presented at a seminar organised by ICRIER, and will be published shortly as an ICRIER Working Paper.



## IA Trade, Openness, Restructuring and Competitiveness

Projects  
Completed

### IA.4. Trade Liberalisation, Multinational Involvement & Intra-Industry Trade

Since 1991, India has been undertaking significant liberalisation measures, which include dismantling of quantitative restrictions on imports, reduction of import tariff rates, industrial de-licensing, and opening up of a number of industries for direct foreign investment. Studies indicate that trade liberalisation generally gives to greater intra-industry trade (IIT) – that is the simultaneous occurrence of exports and imports within the same industry. This is because of greater specialisation opportunities at the level of finer product varieties within the narrowly defined industries. If the intensity of IIT is indeed found to be growing after liberalisation in a large number of industries, an important implication is that the apprehension of domestic industries going out of business, because of greater import competition, is untenable. The positive link between liberalisation and IIT, however, has not so far been established rigorously in a panel regression framework employing the measures of tariff and quantitative restrictions (QRs) in the industries. The intensity of IIT is also likely to be influenced by the extent of multinational involvement in the industry.

The present paper analyses the effects of trade liberalisation, multinational involvement and other industry-specific factors on IIT in a panel of 81 manufacturing industries in India for the period 1988–99. The standard Grubel-Lloyd index is used to estimate the intensity of IIT in the industries. The regression analysis provides strong support for the hypothesis that trade liberalisation causes greater IIT in India. Despite the year dummies being included in the estimation, the variables representing the extent of trade barrier in the industry (QRs on imports and average nominal tariff rate) attain negative sign with statistical significance. The results indicate a lower likelihood of IIT when the spectrum of production activities in an industry is confined to few locales because of plant level scale economies.

The study was conducted by Dr. C. Veeramani, Fellow, ICRIER (till June 2004). The findings of this study will be published shortly as an ICRIER Working Paper. Financial support from the Sir Ratan Tata Trust is acknowledged.

### IA.5. Outsourcing & Job Loss: A Protectionist Fallacy

This paper presents various arguments on how outsourcing affects job loss in the developed countries. A two firm Cournot model is used to analyse this issue demonstrating that outsourcing does not always lead to job loss, and in particular, derives the condition under which outsourcing would lead to job loss.

The study was conducted by Dr. Rajeev Ahuja, Senior Fellow, ICRIER, and has been published as ICRIER Working Paper No. 136.

### IA.6. Quantitative Impact of US Tariff Reduction on Indian Exports

This paper quantitatively assesses the likely changes in market access opportunities for Indian exports owing to tariff reductions by the US. The study identifies particular products for India at the ISIC 4-digit level of disaggregation, which could be considered tariff sensitive. Regression analysis of the relationship between MFN tariff rates and India's exports to the

## IA Trade, Openness, Restructuring and Competitiveness

### Projects Completed

US has been used to assess in quantitative terms the likely impact of tariff reduction that may be agreed in the Doha Round. This analysis suggests that tariff cuts are not expected to benefit India's exports to the US in a major way.

With the full implementation of the Chairman's formula for tariff cuts, India's exports to the US would increase by 1.2% or 0.6% depending on the value of the B coefficient in the Chairman's formula. These findings are in all likelihood substantially due to the tariff diversion effect of NAFTA preferences in favour of suppliers in Mexico, which is a competing country in many traditional items. It is expected that reduction of MFN tariff would alleviate the trade diversion effect of the NAFTA. The study has also attempted to decompose changes in India's total exports due to tariff reductions in the US into the competitive and market effects. The analysis suggests that the increase in India's exports would be mainly due to the competitive effect, which leads us to the conclusion that it is crucial for India to improve its competitiveness vis-à-vis its competitors in different markets.

The study was an input into the research project on 'Impact on Indian industry and restructuring required to adjust to tariff proposals being considered by the Negotiating Group on Market Access (NGMA) at the WTO. The study was conducted by Dr. Aradhna Aggarwal, Consultant, ICRIER and has been published as ICRIER Working Paper No. 120.

### IA.7. Quantitative Assessment of NAMA Proposals on Industrial Tariffs

At the Doha Development Round of the WTO, ministers agreed to launch tariff-cutting negotiations on all non-agricultural products. India is likely to come under severe pressure during market access negotiations as her present tariff levels are among the highest in the world. Therefore, it is of crucial importance to understand the economic implications of tariff policy changes on non-agricultural sectors in India.

The study quantified the impact of tariff policy changes on Indian industrial sector in the context of the tariff proposals being considered by the Negotiating Group on Market Access at the WTO. To this end, a multiple/simultaneous equations disaggregated econometric model was formulated for understanding the behaviour India's organised manufacturing during the last two decades and for simulating the effects of alternative tariff policy scenarios. It is a model of industrial production, international trade (exports and imports), labour demand, capital formation, and price determination, with inter-sectoral linkages. For a given change in tariff rates, the counterfactual simulation of the model provided industry level estimates of resulting changes in (i) imports and exports, (ii) investment, production and employment, (iii) domestic prices, and (iv) customs revenue. The model helped in identifying the industries that would need restructuring in the face of heightened import competition as well as to take advantage of emerging export opportunities.

This study was conducted by Dr. Arvind Virmani, Director & Professor, ICRIER, Dr. B. N. Goldar, IDBI-IFCI Professor, ICRIER and Dr. C. Veeramani, Fellow, ICRIER (till June 2004). The study was funded by the Department of Industrial Promotion and Policy, Ministry of Commerce & Industry, Government of India.

## IA Trade, Openness, Restructuring and Competitiveness

Projects  
Completed

### IA.8. Impact of Trade Liberalisation on Indian Manufacturing

The objective of this study was four-fold: a) to document changes in India's trade policy using coverage ratios of non-tariff barriers and nominal and effective rates of protection during the 1980s and 1990s, b) to examine the structure of protection in Indian industry, c) to document the performance of registered manufacturing sector, and d) to explore the relationship between changes in trade policy and industry performance. The results show that protection to Indian industry declined during the period studied. The registered manufacturing sector showed impressive annual growth for both output and gross value added, especially for the consumer goods industries and the export promoting industries, confirming the finding of earlier studies for the 1980s. Employment growth, virtually stagnant during 1988–89 to 1996–97, picked up in the subsequent period. Labour productivity, and average wage, showed an increase during the first period, followed by a slowdown in its growth rate in the second sub-period. Both exports and imports grew slowly during 1980–81 to 1996–97, picking up in the subsequent period. Export intensity, stagnant in the first sub-period, increased in the second sub-period for most industry groups, possibly because of the decrease in the inherent bias against exports that was a result of the earlier protective regime. Import penetration, on the other hand, showed first a decrease and then an increase, although there were differences among the industry groups. Evidence on price-cost margin was mixed, showing that producers were not in general adopting competitive pricing.

The examination of trade and industry data for the two-digit and three-digit classification finds a weak though insignificant link between trade policy and industry performance. This is attributed to the effect of non-economic factors over the flow of investment in India during that period. The growth experience in the 1980s and 1990s was also conditioned by different factors, and therefore the link with trade policy is weak.

The study was conducted by Dr. Mihir Pandey, External Consultant, ICRIER and Reader, Ramjas College, New Delhi. The findings of this study will be published shortly as an ICRIER Working Paper.

### IA.9 Role of Information Technology in Trade in Health Services

This paper provides an indepth study of the nature and scope of the expanding role of information and communication technologies in the design and development of healthcare products and services, delivery systems and healthcare administration, due to its costs, efficiency and equity. It emphasises on Information Technology as the major driving force that can enable the unprivileged to access healthcare product and services in new and innovative forms. However there needs to be appropriate policy choices to facilitate its diffusion in developing countries. The study demonstrates that the allocation of healthcare resources can be improved together with trade promotion. The role of IT in healthcare and its impact through services trade depend on three inter-related aspects, viz, reach of telematic connectivity, legitimacy of service providers seeking returns on investments and structure of responsibilities for healthcare which are part of the governance frame in local and national jurisdiction. Telematic connectivity is however inhibited by structural

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impediments in less developed countries, like India. The study states that policy conflicts between health, trade and development goals over rights and interests require international regime for distributed enterprising, particularly with regard to how biological resources are shared. A stable and dependable system of healthcare calls for the creation and resourcing of new international institutions. The study was aimed at contributing to policy research on the impact of IT on design and development of trade in healthcare products and services.

This study was conducted by Dr. Ajeet Mathur, Professor, ICRIER (till Jan 2004), and its findings published as ICRIER Working Paper No. 111 Financial support from the Sir Ratan Tata Trust is acknowledged.

### Ongoing projects

#### IA.10. Impact of Tariff Reforms on Indian Industry

The Indian government may have to make substantial cuts in industrial tariff in the coming years. The agreement reached at the culmination of the tariff-reduction negotiations on non-agricultural products in the Doha Development Round of the WTO may require India to make such tariff cuts. Also, India is already committed to bring her tariff rates in line with the ASEAN levels in the near future. Since the level of tariff adjustment may be large and the impact on domestic industry due to such policy change could be significant, it is imperative to quantify the impact of tariff policy changes on India's industrial sector.

An assessment of the impact of reductions in tariff on the Indian manufacturing sector is carried out in the study using a multi-sector econometric model. An 838-equations model is estimated and solved to carry out simulations (under alternative tariff reduction scenarios) encapsulating the impact of tariff reduction on key economic variables like output, employment, invested capital stock, exports and imports. The analysis, based on counterfactual simulations of the model for 1997-98 to 1999-2000, indicates that a substantial reduction in tariff on industrial products by 70 percent on an average would lead to an increase in imports by 10 to 13 percent, and an increase in exports by 8 to 12 percent. The lowering of tariff (along with associated currency depreciation and increased market access) would have only a marginal impact on net exports, value of production and employment in the organized manufacturing sector. It seems no significant adverse impact would be there on the domestic industrial sector from the tariff cuts. While industrial investment would be affected only marginally, there would be a small increase in industrial employment. A detailed sector-wise analysis indicates that the impact of tariff reforms would be differentiated across products i.e. opening up of new opportunities and potential threats, with firms in some industries gaining and firms in some other industries losing in terms of net exports, value of production and employment.

The study is being conducted by Dr. Arvind Virmani, Director & Professor, ICRIER, Dr. B. N. Golder, IDBI-IFCI Professor, ICRIER, Dr. C. Veeramani, Fellow, ICRIER (till June 2004)

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and Mr. Vipul Bhatt, consultant, ICRIER (till May 2004). The study will be completed by August 2004.

### IA.11. Cost & Productivity in Indian Textiles: Post MFA Implications

The textile & clothing industry, which plays a significant role in India in terms of value added, foreign exchange earnings and employment, has witnessed different policy regimes after independence. From controlled policy regime up to 1980, it experienced deregulation during 1980s and further doses of liberalization in 1991 onwards. Though these policy changes have provided the industry a good momentum, they are still not sufficient, particularly in view of the imminent phasing out of the Multi Fibre Agreement (MFA) from January 1, 2005, and the resulting competition thereafter.

One of the main concerns of the domestic textile and clothing industries in post MFA regime would be to keep their unit cost level as low as possible, which in turn is determined by the factor prices on the one hand and the total factor productivity (TFP) level on the other. The ongoing study attempts to investigate these two factors in detail for three main textile industries - cotton yarn, man-made textile, and clothing - by using a panel data for selected States over 1989-97 period. To begin with, an attempt is made to ascertain the main determinants of TFP growth in terms of internal and external policy variables. To throw some more lights on the scope of improvement in productivity, main production characteristics of the industries, namely capacity utilization, scale economies, and price elasticities of factors' demand have also been examined with the help of variable cost functions. Finally, in order to analyze the relative roles of factor prices and TFP (along with their respective individual components) in the growth of unit cost, a decomposition analysis of the unit cost growth has also been undertaken by utilizing the estimated cost functions.

This study is being conducted by Dr. Danish A. Hashim, Consultant, ICRIER and will be complete by July 2004. Financial support from the Sir Ratan Tata Trust is acknowledged.

### IA.12. Non-Tariff Barriers in Sri Lanka & ASEAN

The objective of the study is to identify non-tariff barriers in Sri Lanka and the ASEAN which constitute major impediments to India's exports. As a first step a survey would be conducted among exporters to the above destinations to draw up a list of NTBs which are having a serious impact on India's exports. The next step would be to examine the ways in which the NTBs could be addressed in the FTA framework. If they do not conform with the existing multilateral rules, bilateral dialogue should aim at getting the measures withdrawn. Even if they are imposed in conformity with the rules the matter could be addressed in the FTA framework. For instance, there could be agreement to minimize the impact by action either at the importing or exporting end. The same course could be followed if the measure is in the grey area. The study will not only identify the NTBs which have a serious impact on our exports but also propose the manner in which they could be dealt with within the FTA framework.



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The study is being conducted by Ms. Nisha Taneja, Senior Fellow, ICRIER and Mr. Mohammad Saqib, External Consultant, ICRIER and Fellow, Rajiv Gandhi Foundation. The study will be completed by September 2004. The study is being funded by the Tariff Commission, Ministry of Commerce & Industry, Government of India.

### **IA.13. Effects of Trade Liberalisation on Agricultural Production & Rural Incomes in India**

The Uruguay round initiated the agricultural reform process, starting with a shift of the forms of support away from the most distorting practices. However, neither the level of protection of developed country markets nor the amount of subsidies for developed country producers, has diminished as yet. With this background the study intends to take a fresh look at the impact of (a) US and EU subsidy changes and (b) changes in Indian tariff, on domestic agricultural production, farmers' income and employment. A model will be used to carry out the simulations over short and long term under two alternative scenarios. First, if there is no reduction in subsidies by the developed countries, and the subsidies given by them to the agricultural sector continues as in the past. The alternative scenario will be that if the developed countries remove all their subsidies and trade distortions.

An econometric analysis will be undertaken to estimate the demand and supply elasticities, using the data for past twenty years, and this will help in the estimation of demand and supply for major crops. Inter-linkages between various crops in terms of area allocation and consumption will be studied at regional level, which will further help in tracing down the consequent employment-income effects for the populations, engaged in agriculture. To assess the impacts, the likely supply and demand for major crops in the domestic economy will be estimated under alternative realisations of international and domestic prices, which will be affected by changes in subsidies and tariffs.

The study is being conducted by Dr. Surabhi Mittal, Fellow, ICRIER.

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##### **IB.1. Dynamics of Foreign Portfolio Inflows & Equity Returns in India**

With India having emerged as one of the most attractive investment destinations in Asia, foreign portfolio inflows through FIIs are very important from the policy perspective. In this study an effort has been made to develop an understanding of the investment decisions, trading strategies and behavior of the FIIs in the Indian equity market.

Our analysis reveals aggregate evidence of FIIs chasing trends and adopting positive feedback trading on a daily basis even though no such behavior is evident over horizons of a month or so. This evidence seems to support the hypothesis that resident investors have better information on a daily basis, thus making it essential for FIIs to use price signals to discern underlying information that may have triggered them. Once the information is in public domain basic analysis of the implications for stock returns becomes more important. Thus, while FIIs do tend to herd together in the stock market, their trading behavior does not appear to be destabilizing for the Indian equity market.

The study was conducted by Dr. Amita Batra, Senior Fellow, ICRIER and is now available as ICRIER Working Paper No. 109. Financial support from the Unit Trust of India is acknowledged.

##### **IB.2. Stock Return Volatility Patterns in India**

In this study time variation in volatility in the Indian stock market during 1979–2003 has been analyzed. The shifts in stock price volatility and the nature of events that apparently cause the shifts in volatility have been examined. An attempt has also been made to characterize the evolution of the stock market cycles over time in India and examine if in recent times the stock market cycles have exhibited greater amplitude and volatility.

Monthly stock returns have been used for analysis. Asymmetric GARCH model has been used to estimate the element of time variation in volatility. The model is further augmented with dummy variables, an outcome of the structural change analysis, to examine volatility persistence.

The analysis reveals that the period around the 1991 BOP crisis and the initiation of economic reforms in India is the most volatile period in the stock market. Structural shifts in stock return volatility in India are more likely to be a consequence of announcement effect of major policy changes and any further incremental policy changes may have only a benign influence on stock return volatility. Stock return volatility in India seems to be influenced more by the domestic political and economic events rather than global events. In particular there appears to be no coincidence between volatility of foreign portfolio capital flows in and out of the stock market and the volatility shifts in stock returns in India. Our analysis





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also shows that stock market cycles in India have not intensified after financial liberalization and a generalized reduction in stock return instability in the post reform period in India is observed.

The study was conducted by Dr. Amita Batra, Senior Fellow, ICRIER and is now available as ICRIER Working Paper No. 124. Financial support from the Unit Trust of India is acknowledged.

### **IB.3. Public Finance in Globalising World: Innovations in Theory & Practice**

This study assesses the national level public policy measures and the related decision making processes that facilitate international co-operation and more significantly the financial implications of national-level policies. This study outlines the fiscal structure and fiscal adjustment in India in the light of the second generation reforms, which have a bearing on the financing of international co-operation. The study places special emphasis in exploring the features of fiscal federalism in India and recent fiscal reforms as part of the wider range of economic reforms. The study also touches the fringes of decision making process and deals with the major policies of the Indian government, such as political and economic initiatives, international treaties and agreements, etc, for the development and strengthening of international economic, social and political co-operation.

The study categorises the national level initiatives that have a bearing on the financing of international co-operation, without losing focus on institutional and political dimensions, challenges, problems and constraints. It provides an insight in questions dealing with political consensus, decision making procedure and rules governing allocation and sources of revenue. The paper assessing the policy options for the future based on adequacy, consequences, stability and sustainability of policies.

The study was conducted by Dr. Tarun Das, Honorary Consultant, ICRIER. The study was funded by the UNOPS.

### **IB.4. Differential Impact of Japanese and U.S. FDIs on Productivity Growth**

Studies have found the impact of FDI on productivity growth to be firm, industry and host economy specific. However, the impact of FDI on productivity growth of the firm may also differ with respect to the source of FDI. The paper examines the impact of Japanese and U.S. foreign direct investments (FDI) on total factor productivity growth of the firms in Indian Automobile, Electrical and Chemical industries in the post reforms period. A parametric approach ("Time-Variant Firm Specific" Technical Efficiency Approach) as well as a non-parametric approach (Data Envelopment Analysis) is undertaken to estimate and compare total factor productivity growth (TFPG), efficiency growth and technological progress in Japanese-affiliated firms, U.S.-affiliated firms and domestic firms. The results show that Japanese affiliation has a significant positive impact on productivity growth in a firm while the impact of U.S. affiliation is not significant. Most of the TFPG in Japanese-affiliated firms



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is explained by the efficiency growth while most of the TFPG in U.S.-affiliated firms is explained by technological progress. The results also show that the domestic firms have witnessed both efficiency growth as well as technological progress in Electrical and Chemical industries in the post reforms period. This indicates “catching up” with the higher productivity levels of the foreign firms in the same industry.

The study was conducted by Ms. Rashmi Banga, Consultant, ICRIER and its findings published as ICRIER Working Paper No. 112. Financial support from the Sir Ratan Tata Trust and the W. P. Carey Foundation is acknowledged.

### IB.5. Impact of Japanese and U.S. FDI on Indian Manufacturing Exports

One of the most debated issues in the literature of development economics is the role played by the inward foreign direct investment on export performance of developing countries. Since the beginning of the decade of 1990s, the Indian government has adopted various reform measures to attract foreign direct investment (FDI) in the export sector of India. However, in spite of this, studies have found that FDI has not played any significant role in export-promotion of Indian industries.

This study aims to find whether FDI has led to diversification of export in Indian manufacturing sector in the post reforms period. It also examines whether the “nationality” of Foreign Direct Investment (FDI) matters with regard to its impact on the exports of the host country. The impact of FDI on export intensity is examined separately in the traditional export sectors and non-traditional export sectors of Indian industries. Both industry level and firm level analyses have been undertaken. An analysis of export-spillovers to domestic firms from Japanese and U.S. firms is also undertaken. Panel data estimation techniques are applied for the industry-level analysis and Tobit model is estimated for the firm-level analysis. The results show that FDI has a positive and significant impact on the export-intensity of non-traditional export sector leading to export diversification. However, the impact differs with respect to the source of FDI. U.S. FDI is found to have a positive and significant impact on the export-intensities of the industries in the non-traditional export sector, while the impact of Japanese FDI is not significant. The study analyses the reasons for this and concludes that an important impact of foreign direct investment in India is that it has led to export diversification in the post reforms period.

The study was conducted by Ms. Rashmi Banga, Consultant, ICRIER and its findings published as ICRIER Working Paper No. 106. Financial support from the Sir Ratan Tata Trust and the W.P. Carey Foundation is acknowledged.

### IB.7. Determinants of FDI in Asian Countries: Role of Policies

FDI flows into India have grown rapidly since the liberalisation in the nineties, but remain relatively small. This study identifies the possible reasons. The paper demonstrates the important role of labour costs, labour productivity and educational attainment in attracting FDI into Asian countries. Infrastructure has often been mentioned as a factor in FDI. The

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paper finds that the availability of electricity is indeed an important factor in FDI flows. It also confirms that FDI restrictions reduce FDI. The tariff-jumping hypothesis so popular among some economist is conclusively disproved for Asian economies, in that higher tariffs are found to have a negative (not positive) effect on FDI flows. The implications of these results for India are that with labour laws (such as those in India) that remove the incentive for work (or equivalently the dis-incentive to shirk) have a negative effect on labour productivity. Thus export linked FDI can be boosted if Special Export Zones are allowed to introduce and implement a more flexible labour regime.

Fiscal incentives do not have any significant impact on aggregate FDI, but removal of restrictions attracts aggregate FDI. Interestingly, BITs, which emphasize non-discriminatory treatment of FDI, are found to have a significant impact on aggregate FDI.

The paper shows that FDI intentions as manifested in FDI approvals are not always influenced by the same factors that influence actual FDI inflows. Transport and communication infrastructure turns out to be a significant factor (not electricity) perhaps because the first contact with a new country is through these two modes. Loan costs also seem to be important in FDI approvals while having no effect on actual FDI. Labour costs lose their significance as signals while the importance of labour productivity and education is also lower in contracted than in actual FDI.

The study was conducted by Ms. Rashmi Banga, Consultant, ICRIER and the results of the study published as ICRIER Working paper 116. The findings of the study were presented in the Fifth GDN conference held in New Delhi, January 28–30, 2004. Financial support from the Sir Ratan Tata Trust and the W.P. Carey Foundation is acknowledged.

### Ongoing projects

#### IB.8. Global Integration of India's Money Market & Impact on Interest Rate

The free and unrestricted flow of capital in and out of countries and the ever-increasing integration of world capital markets can be attributed to the process of Globalization. One of the key criteria for international financial integration is based on movement/ co-movement of interest rates in countries over time and their comparison in terms of convergence or having a common trend. One of the most cited theoretical relation in international finance is the interest rate parity. The interest rate theory proposes that given perfect capital mobility, perfect capital market and fixed exchange rates the interest on identical assets (identical in terms of maturity etc) would be equal across countries. However, in the real world with capital controls, flexible exchange rates and imperfect capital markets divergence between interest rate is frequently observed and persists over long periods. Given the reality of non-frictionless capital markets and flexible exchange rates the recent versions of the interest parity theorem attribute this divergence to the expectation about exchange rate movements.

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Empirically, there is little evidence for uncovered interest parity (UIP) which states that interest rates differentials should be exactly matched by expected variations of exchange rates. Most studies have rejected this relation not only in terms of a forward bias but also with regard to the a priori paradoxical negative sign of the interest differentials coefficients in standard regressions of expected exchange rates changes on interest differentials. However, there is evidence validating the covered interest parity (CIP) which says that interest rates denominated in different currencies are equal once you cover yourself against foreign exchange risk. The present study tests both for UIP and CIP using monthly data on 3-month TB auction rate for U.S. and India.

This study is being conducted by Dr. Arvind Virmani, Director & Professor, ICRIER and Mr. Vipul Bhatt, Consultant, ICRIER (till May 2004). Financial support from UTI is acknowledged.

### IB.9. Impact of FDI, Trade & Technology on Labour Markets in Indian Manufacturing

FDI, Trade and Technology are three important mutually inter-related components of liberalization that may impact on productivity, wages and employment in labour markets in the developing countries. Many studies have estimated the impact of either of the three on any one labour market issue, e.g., wages or employment. However, since the technology-trade and FDI –effects are likely to go hand in hand to impact on inter-related labour market issues, this paper attempts to investigate the impact of all the three components on Indian labour markets in the post reforms period, i.e., 1991–92 to 1997–98. Four issues of labour markets have been identified, i.e., impact on labour productivity; employment; wages; and wage disparities between skilled and unskilled workers. The analysis is undertaken for 78 three-digit level industries using data from Annual Survey of Industries and Prowess (C.M.I.E). Dynamic panel data estimations are carried out using GMM-IV in order to take account of rigidities in the Indian labour markets, especially downward rigidities in wage rates and lack of hire and fire labour policies.

The results using GLS and Random-effects models show that FDI, trade and technology have all improved labour productivity in Indian industries in the period 1991–92 to 1997–98. Further, dynamic panel data (DPD) estimations show that FDI has not increased employment levels but has had a significant impact in raising wages in the industries. Exports and technology have improved employment though have had little effect on wages in Indian industries. Wage gap has been found to be higher in industries with high levels of FDI but lower in industries with high export intensity. Technological progress in industries has been found to increase this wage gap indicating skill-bias in the technology used. The results arrived at control for industry-specific effects along with capital-labour ratios where ever appropriate. They are also found to be robust in the sense that though different methodologies were tried qualitatively the results remain more or less the same.

This study was conducted by Ms. Rashmi Banga, Consultant, ICRIER, and will be published shortly as an ICRIER Working Paper.



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### Ongoing Projects

#### IB.10. Foreign Investment in Retailing Sector

This project examines the possibilities and impact of opening up the retailing sector to foreign direct investment. In spite of significant growth of retailing and gradual development of India as a sourcing hub, retailing is one of the few sectors where foreign direct investment is not allowed. This is a survey-based study, which evaluates the challenges and threats to small as well as large domestic players and small-scale industries from entry of global players. It also covers the perception of foreign players about the Indian market; segments in which they would like to enter and segments that can be opened for FDI; barriers faced by retailing and in particular organised retailing; and reform requirements. The study is aimed at providing inputs for recommending India's negotiating strategies at the WTO.

The survey has covered various retail formats (supermarkets, cash and carry, speciality stores, etc) across different product categories (such as food and grocery, apparel and accessories, gems and jewellery, etc) in various locations (Chennai, Mumbai, Delhi, Kolkata, Bangalore, etc). The survey participants include owners of large and small retail outlets, prospective entrants (both domestic and foreign), shopping mall owners and investors, trading associations, policy makers, consumers, retail experts, etc.

The study is being conducted by Dr. Arpita Mukherjee, Senior Fellow, ICRIER and Ms. Nitisha Patel, Research Assistant, ICRIER. It will be completed by September 2004. The study is being funded by the Ministry of Consumer Affairs, Government of India.

## IC Multilateral Issues: World Trade Organisation (WTO)

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#### IC.1. Dispute Settlement Mechanism in the WTO: Recommendation for improvement

The unique Dispute Settlement System (DSU) of the World Trade Organisation (WTO) makes it a very powerful organisation. This system combines various elements like speed, automaticity, binding nature of the decisions and rulings, fairly effective mechanism for ensuring compliance with the decisions and rulings, etc. While the WTO membership appears to be generally satisfied with the working of the system there are certain aspects of the system, which the membership would like to be reviewed and improved upon in the light of experienced gained. It was in this context, that the Doha Ministerial Declaration provided for negotiations on improvements and clarifications to the Dispute Settlement Understanding, outside the scope of the single undertaking, with the dead line of May 2003. This dead line has since been extended to May 2004. In the ongoing negotiations relating to the DSU a number of proposals have been submitted by different WTO Members.

This study evaluates twelve major proposals made so far by different WTO Members. Some of these proposals relate to permanent body of panelists, treatment of Amicus Curiae Briefs, enhancement of third party rights, determination of compliance, sequencing between articles 21.5 and 22 of the DSU, "carousel" and "improving flexibility and Member control in WTO Dispute Settlement". The study examines the various proposals both from the systemic point of view and also from the Indian point of view. The study makes specific suggestions with regard to the position India might take on these twelve proposals and aims to increase awareness about the nuances of various proposals relating to the DSU, which are under consideration by the Membership of the WTO.

The study was conducted by Dr. S. Narayanan, External Consultant, ICRIER and Former Ambassador and Permanent Representative of India to WTO and is now available as ICRIER Working Paper No. 117. Financial support from the Sir Ratan Tata Trust is acknowledged.

#### IC.2. Trade Facilitation in the WTO: Implications for India

Focussing on the content of the significant proposals on Article X (Publication and Administration of Trade Regulations), Article VIII (Fees and Formalities connected with Importation and Exportation) and Article V (Freedom of Transit), this study examines the current status in India corresponding to each of these proposals and suggests the level of obligation that India should take if such proposals are eventually accepted at the multilateral level.

A close examination of the proposals made reveals that India is autonomously pursuing most of the recommendations made as part of its reform agenda. For instance, India already

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has a fairly transparent system of publication of trade regulations and adopting the suggested measures will not pose any burden on India. Regarding streamlining of export and import procedures, India is already in the process of implementing measures suggested by member countries in the proposals, but meeting international standards would require enormous resources and an adequate time span to implement such measures. India could accept the proposals on a 'best endeavour basis'. On the issue of transit, the proposals recommend that the solution of transit can be found through regional co-operation. India already has a transit treaty with Nepal but not much headway has been made on this issue with Bangladesh.

The study suggests that the inclusion of trade facilitation at the multilateral level, would enhance the pace of reforms in India, however, India would have to be careful in the level of obligation that it is willing to undertake given the financial and time requirement that trade facilitation measures are likely to entail.

The study has been conducted by Ms. Nisha Taneja, Senior Fellow, ICRIER. It is available on the ICRIER website as Working Paper No. 128. Financial support from the Sir Ratan Tata Trust is acknowledged.

### IC.3. Transparency in Government Procurement

The study examines the implications for India of a possible WTO agreement on transparency in government procurement. At the same time, it explores the specific elements for inclusion in the agreement from India's perspective taking into account the proposals that have been made in the last six years of deliberations in the Working Group. In order to help in the understanding of the issues involved the study also provides an outline of the negotiation, evolution and operation of the plurilateral Agreement on Government Procurement.

The study finds that there are serious problems regarding the relationship between trade and an agreement on transparency in government procurement, which exclude market access from its purview. A transparency agreement on government procurement without any provisions on market access would be connected more with the socio-economic objective of improving governance and less with the expansion of trade in goods and services.

The study suggests that transparency in government procurement could bring efficiency and value for money benefits, but these aspects have little to do with the WTO Agreement. However, it does not suggest that for that reason India must necessarily oppose negotiations in the area. Since an agreement in the area would serve to remove a major malaise in governance, the study recommends that India might as well agree to the negotiations. But it should ask by way of quid pro quo for appropriate concessions in other major areas of negotiations in the Doha Round.

This study has been completed by Prof. Anwarul Hoda, Consultant Professor, ICRIER (till June 2004), and Ms. Suchi Bansal, Research Assistant, ICRIER (till March 2004). The findings of this study have been published as ICRIER Working Paper No. 129. Financial support from the Sir Ratan Tata Trust is acknowledged. OR Funded??

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### IC.4. Market Access Negotiations on Non-Agricultural Products: India's Choice of Modalities

Non-Agricultural Market Access is one of the important items on the agenda of the ongoing Doha Round of Multilateral Trade Negotiations in the WTO. A great deal of discussion has already taken place and a number of proposals made in the current round on the modalities for the reduction of tariffs.

The study seeks to facilitate the process of development of the position that would be in the best interest of India to take in future discussion on the modalities for tariff negotiations. The study finds that there are good reasons for India to be ambitious in its outlook and proactive in approaching the negotiations. As for modalities the study recommends that a nonlinear formula which attaches weight to the tariff average of the country concerned would be in India's best interest.

The paper recommends that if participation in sectorial liberalization is to be mandatory, India must ask for the possibility for developing countries to retain the flexibility to set the tariff at five per cent. The study does not favour placing great reliance on the concept of special and differential treatment. Although this concept served the developing countries well in the past when the main motivation was to fend off pressures for tariff reduction by them, it is a poor instrument for extracting concessions from the developed country partners, which must be India's main objective now.

The study has been completed by Prof. Anwarul Hoda, Consultant Professor, ICRIER (till June 2004), and Ms. Monika Verma, Research Assistant, ICRIER. The findings of this study have been published as ICRIER Working Paper No. 132. Financial support from the Sir Ratan Tata Trust is acknowledged. OR Funded??

### IC.5. WTO Rules & Trade Obligations in Multilateral Environmental Agreements

The study examines a critical negotiation issue in the Doha Ministerial Declaration on the relationship between existing WTO rules and specific trade obligation pursuant to multilateral environmental agreements (MEAs). The study analyzes each of the questions associated with the issue, and also shows how the environment has permeated into the multilateral trading system over the last two decades through the incorporation of environmental provisions under new WTO agreements, and a wider interpretation of justifiable restrictive trade measures on environmental grounds under the GATT Article XX exceptions in trade-environment disputes. The analysis considers six important MEAs in detail, including the objectives, the ratification status among key WTO Members, and the compatibility of the trade provisions contained in these MEAs with the existing GATT/WTO rules. It then critically examines the current state of negotiations and positions of the different WTO Members, to provide a negotiating strategy for India in light of her trade interests.

The study was conducted by Dr. Aparna Sawhney, Consultant, ICRIER and Assistant Professor, Indian Institute of Management, Bangalore and the findings of this study published

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as ICRIER Working Paper No. 133. Financial support from the Sir Ratan Tata Trust is acknowledged.

### IC.6. An Assessment of Trade in Services: A Case Study for India

This paper highlights that except for areas of travel and worker remittances most developing countries have significant deficits in trade in services, due to major supply constraints that do not satisfy the pre conditions for building a competitive service sector. The Indian scene shows that software exports have emerged as an important source of foreign exchange earnings contributing substantially to invisible receipts.

The purpose of this study is to suggest a possible framework for the assessment of trade in services. It also envisages to draw solutions to questions pertaining to market access to Indian suppliers, employment, basic infrastructure, privatization of services, access to telecommunication and internet services etc. It assesses the GATS in terms of direct impact, indirect impact and non-economic considerations. It emphasises that since India has comparative advantage in the areas of healthcare, entertainment, software, construction and engineering and accountancy it would be advisable to negotiate greater market access for its professionals in these sectors. The study is expected to make a significant contribution to the process of GATS negotiations for all the developing countries in general and for India in particular.

This study has been conducted by Dr. Tarun Das, Economic Advisor, Ministry of Finance and Honorary Consultant, ICRIER. The study was funded by the Ministry of Commerce & Industry, Government of India.

### IC.7. Traditional Knowledge

The significance of the trade potential that "sui generis" protection of traditional knowledge holds in developing countries cannot be ignored. The "sui generis" protection mechanism is rather difficult to implement due to the lack of benefit-sharing regimes. This study analyses the problem dimensions from an inter-disciplinary prospects by initially constructing a taxonomy, taking into consideration the special features and characteristics of how different forms of traditional knowledge are held and transmitted and the modes of transfer of knowledge. It then goes on to examine why the world's intellectual property rights system, in its protection of traditional knowledge, is incomplete in scope, inefficient in application, inequitable in outcome and incompatible with other international regimes. The traditional knowledge does not fall in line with the economics of innovation and exhaustible natural resources.

The study refers to it as "a case of missing markets". It also notes the limitations of desirable defensive measures, such as digitalization of traditional knowledge and evaluates policy choices at national and international level, with reference to prevailing international treaties. The paper adequately highlights that the valuation of intangible assets holds the key to structuring and benefit-sharing for local communities. Valuation of assets should aim at optimum utilization.



## IC Multilateral Issues: World Trade Organisation (WTO)

Projects  
Completed

This study was conducted by Dr. Ajeet Mathur, Professor, ICRIER (till January 2004). . Financial support from the Sir Ratan Tata Trust is acknowledged.

### IC.8. Special & Differential Treatment of developing countries

The WTO Agreement contains a number of provisions, which accord special and differential (S&D) treatment to developing countries. Some of them envisage favourable action by the developed country partners, while others grant flexibility to the developing countries in the use of trade policy instruments on which the WTO Agreement imposes obligations on Members. A number of developing countries, including India, have been making the point that these provisions are not effective and operational and, therefore, need to be improved, including by making them mandatory. In the work programme approved by the Ministers at Doha, it was envisaged that the decision to improve the WTO provisions on S&D treatment would be made by the end of July 2002.

This deadline passed without any Agreement on the subject. At the 5<sup>th</sup> Ministerial Declaration meeting held at Cancun in September 2003, the draft Ministerial Declaration contained proposals for agreement in 27 out of about 90 areas in which developing countries have made proposals. The points on which an agreed language was proposed to be adopted at Cancun were the less significant one and in the subsequent discussions the developing countries have stressed that they want agreement on all or most of the 90 proposals. In the post-Cancun negotiations this subject continues to be of importance for the developing countries. Against the given background, the study has been undertaken to examine the usefulness of the S&D provisions and the scope for making them mandatory or improving them in other ways.

This study was conducted by Prof. Anwarul Hoda, Consultant Professor, ICRIER (till June 2004). Financial support from the Sir Ratan Tata Trust is acknowledged. OR Funded??

### IC.9. International Agricultural Commodity Price Database Project

The study aims to build comparative price data series on agricultural commodities across various countries. ICRIER has completed the task of building the price database for Indian markets. The task of building the database for international prices, is being undertaken by ERS-USDA. The idea behind this would be to mount the data on the worldwide web for online access by researchers.

This study was a collaborative research initiative between ICRIER, International Food Policy Research Institute (IFPRI) and Economic Research Service-United States Department of Agriculture (ERS-USDA). The study was conducted by Dr. C. S. C. Sekhar, Fellow, ICRIER (till December 2003).



## IC Multilateral Issues: World Trade Organisation (WTO)

### Ongoing Projects

### Ongoing projects

#### IC.10. Subsidy Disciplines under GATS

This study evaluates subsidies in services and investigates whether it is in India's interest to push for a separate discipline to govern subsidies in services under the WTO's General Agreement on Trade in Services.

The study examines the existing subsidy practices in selected countries and in selected service sectors that are of trade interest to India, and the impact of these subsidies on trade in general and specifically on India's trade in services with these markets. Based on the assessment of subsidy practices in other countries and in India, the study will determine how subsidies in services should be dealt with under the GATS and the associated domestic policy and reform issues for India in the service sector. It is expected that this study would assist the Government of India in formulating its position during the negotiations on subsidies.

The study is being conducted by Dr. Arpita Mukherjee, Senior Fellow, ICRIER and Dr. Rupa Chanda, External Consultant, ICRIER and Associate Professor, Indian Institute of Management, Bangalore. The study will be completed by December 2004. The study is being funded by the Ministry of Commerce and Industry, Government of India.

#### IC.11. Indian Intellectual Property Law & Impact of the TRIPS Agreement

The Agreement on Trade Related Aspects of Intellectual property Rights (TRIPS, 1995) is one of the three major substantive agreements that constitute the WTO Agreement. It lays down the minimum norms and standards in respect of Copyrights and Related Rights (Rights of Performers, Producers of Phonograms and Broadcasting Organizations), Trademarks, Geographical Indications, Industrial Designs, Patents, Lay Out Designs of Integrated Circuits, and Protection of Undisclosed Information, and also sets out the enforcement mechanisms that the WTO Members must provide in their domestic laws. The TRIPS agreement is the most wide-ranging and far-reaching multilateral treaty on the subject of intellectual property rights to date, not only incorporating by reference the provisions of existing intellectual property Conventions (such as the Paris Convention and the Berne Convention) but also establishing additional rights and obligations. All members of the WTO were given a transition period of one year from the date of entry into force of the WTO Agreement to apply the provisions of the TRIPS Agreement. Developing countries benefited from additional transitional periods. The obligations of the TRIPS Agreement would become fully applicable to India on December 31, 2004, when the transitional period for developing comes to an end in respect of the provisions on patents for chemical and pharmaceutical products. Since ratifying the WTO Agreement India has been enacting laws to bring them into conformity with its international obligations.

This study aims to evaluate the Indian intellectual property laws, including the legislation enacted since 1995, from the point of view of their compatibility with the requirements of

## IC Multilateral Issues: World Trade Organisation (WTO)

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the TRIPS Agreement. The study is being conducted by Ms. Mahima Puri, Consultant, ICRIER, and will be completed by September 2004.

### IC.12. Barriers to Movement of Natural Persons

The aim of this paper is to compile and present information on entry and operational barriers faced by Indian service providers in selected developed country markets at various regional and governmental levels, and in key service sectors that are of export interest to India. The study examines border level and domestic market regulations, which affect the scope and conditions for operation for Indian service providers in various host country markets, at the national level and at the subnational level in selected states/provinces within the chosen host countries. The study also examines restrictions on other modes of supplying services, which may indirectly affect provision of services through the temporary movement of service suppliers. Following compilation of this information, the study aims to qualitatively assess the nature of these market access barriers and how they affect India's comparative advantage in exporting services, while also highlighting the commonalities and differences in the nature and impact of these barriers across the selected countries and sectors. The ultimate objective is to provide the necessary background information to help formulate India's negotiating strategy on movement of natural persons under GATS 2000.

The geographic coverage of this study will be undertaken in three phases. The first phase of the study will focus on the US and Canadian markets. The second phase will focus on other English speaking markets such as Australia, UK, and Singapore. The third and final phase will focus on non-English speaking markets such as Japan, France, and Germany.

This study is being conducted by Dr. Rupa Chanda, External Consultant, ICRIER and Associate Professor, Indian Institute of Management, Bangalore and Dr. Debjani Ganguly, External Consultant, ICRIER.

### IC.13. Overall Framework on WTO

While Agreement-wise study remains the staple of research agenda on WTO, the wider context of globalization and integration of world economy is also being kept in view. ICRIER has undertaken to carry out an overall framework study to identify the inter linkages between different policy initiatives and thus develop consistent policies and provide a strategic overview. The study would keep in mind the extended subject coverage under the WTO as well as the complementary domestic policies. Such subjects as labour issues, environment policies, investment policies, food safety, consumer protection, regional integration arrangements and competition policies would be covered. Quantitative estimate of the economy-wide and sector-wide impact of the WTO Agreement on India would also be reviewed. The study would also address broader strategic issues including those relating to the political economy of WTO negotiations, coalition building, leveraging domestic reforms and taking advantage of the notion of single undertaking.



## IC Multilateral Issues: World Trade Organisation (WTO)

### Ongoing Projects

This study is being conducted by Dr. Harsha Vardhana Singh, External Consultant, ICRIER and Secretary cum Principal Advisor, TRAI and will be completed by

### IC.14. Implementation Issues

The issue of implementation first appeared in the WTO discussions as a routine matter in the context of preparations for its First Ministerial Session held at Singapore in December 1996. However, by the time of the Third Session at Seattle it had evolved into a large list of issues representing, in the eyes of several developing country Members, 'asymmetries and imbalances' in the WTO Agreement from their perspective. The issue of implementation as a whole also became a rallying point for these Members against the proposal for launching a new comprehensive round of multilateral trade negotiations, which envisaged inter alia the expansion of the scope of WTO disciplines. At the time of the launching of the Doha Round in November 2001 it received serious attention from the Ministers and was the subject matter of a separate Ministerial Decision. The Ministers separately agreed (in the main Ministerial Declaration) that negotiations on outstanding issues would be an integral part of the Work Programme, which they established at the Session.

This study aims to present an overview of the deliberations in the WTO on Implementation Issues, giving an account of the debate that has taken place and describe the current status of negotiations. It would provide an evaluation of the results obtained so far and an assessment of the outstanding issues and in the light of this it make recommendations on the future course of action for India.

The study is being conducted by Prof. Anwarul Hoda, Consultant Professor, ICRIER (till June 2004)

### IC.15. Enhanced Protection for Geographical Indications: The Case of Indian Tea

Protection of geographical indications in the WTO Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) is one of the subjects on which negotiations are taking place in the Doha Round. These negotiations encompass two important aspects: the extension of higher level of protection under Article 23 of the TRIPS Agreement to products other than wines and spirits and the establishment of a multilateral system of notification and registration of geographical indications for wines eligible for protection.

An earlier paper brought out on the subject is being revised in order to study it in greater details. The study is being supervised by Prof. Anwarul Hoda, Consultant Professor, ICRIER (till June 2004) and is expected to be completed by

### IC.16. WTO Agreement and India: The first 10 years

On December 31, 2004, India will complete its first 10 years as a Member of the WTO. At the beginning of next year, therefore, it would be time to review how India has coped with the obligations that the WTO Agreement has entailed and benefited from the rights granted.

## IC Multilateral Issues: World Trade Organisation (WTO)

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This project by ICRIER would comprise a compilation of contributions from experts in various fields on India's implementation of the WTO Agreement. The project will be coordinated by Prof. B. K. Zutshi, External Consultant, ICRIER and Former Indian Ambassador to GATT and will be completed by

### IC.17. Market Access Negotiations in Services: Options for India

This study is an overview of negotiations in services in the ongoing Doha Round. The focus of the study is market access negotiations in the services sector. With similar studies in the areas of agriculture and non-agricultural products, it forms a part of the ICRIER series on market access negotiations in the Round. As a backdrop to the subsequent analysis and assessment of the present state of play in market access negotiations, the paper starts with an analysis of the GATS framework agreement. It then makes a critical assessment of liberalization under the GATS during the Uruguay round and thereafter, coming to the conclusion that, other than in the case of telecommunication services, and to a lesser extent in that of financial services, there has been limited liberalization under the GATS, thus far. In terms of modes of supply, while mode 3 (establishment) commitments are relatively the best in their scope and coverage, mode 4 (movement of natural persons) are the most modest, largely confined to business visitors and intra-corporate transferees. In this context the paper looks at India's existing commitments and contrasts this with the autonomous policy reform and liberalization already accomplished and under way in the services sector in the country.

The paper then turns to services negotiating agenda in market access and also covers the area of rules to the extent it is directly relevant to market access negotiations, and makes an assessment of the present state of play in both. Looking at changes in India's service sector since the last round, and bringing out India's export interest in several sectors and modes of supply like the knowledge-based information-intensive sectors and mode 1 (cross-border supply) and mode 4, the paper proposes a strategy of pro-active engagement for India in the negotiations using the leverage of its domestic reform agenda to secure effective market access commitments from its partners in identified areas and modes of export interest to it.

This study is being conducted by Mr. B. K. Zutshi, External Consultant, ICRIER and Former Indian Ambassador to GATT. The study will be completed by

### IC.18. Telecommunication Services: India & GATS

The paper brings together the issues that are relevant to the WTO negotiations specific to telecommunication services from an Indian perspective. It focuses on the opportunities and challenges in the multilateral trade for telecom services in light of the changing domestic and international telecom scene. The last two years have witnessed vast change in telecommunications policy and regulation in India. These changes are naturally compared with those taking place elsewhere in Asia-Pacific, the fastest growing region in the world.



## IC Multilateral Issues: World Trade Organisation (WTO)

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While describing the key changes in India, the paper examines the commitments made by India in GATS and proposes a strategy for further liberalisation. Constraints likely to be faced in this process are also addressed.

The study is being conducted by Dr. Rajat Kathuria, External Consultant, ICRIER, and Professor & Registrar, International Management Institute, New Delhi. It will be completed by

### IC.19. Trade in Energy Services under GATS

The purpose of this study is to analyse India's trade possibilities in energy services within the WTO framework. The study found that India has export potential in certain energy services such as energy consultancy and retailing of fuel. On the other hand, the country is also importing certain consultancy services. There is significant need for investment in the power sector and increase in privatisation has enhanced the scope for foreign investment. The study suggests various reform measures which would enable the country to attain its export and import potentials. The study also suggests that India should actively negotiate in the WTO to remove entry barriers in markets of export interest.

As part of the project, ICRIER is providing consultancy services (Prof. Anwarul Hoda, Consultant Professor, ICRIER in Goods and Dr. Arpita Mukherjee, Senior Fellow, ICRIER in Services) to Petrofed (Petroleum Federation of India), the nodal agency for India's negotiating strategies at the WTO in the petroleum, Oil and Natural Gas sector.

The study is part of an ongoing project being conducted for the Ministry of Commerce. The research work is being conducted by Dr. Arpita Mukherjee, Senior Fellow, ICRIER, Mr. R. Vasudevan, Consultant, ICRIER and Former Secretary, Ministry of Power, Government of India, and Ms. Aditi Mody, Consultant, ICRIER (till September 2003). The study will be completed by December 2004.

## ID Regional and Bilateral Issues

Projects  
Completed

### ID Regional and Bilateral Issues

#### Projects completed

#### **ID.1. Performance of Export Processing Zones in India**

There has been an intense debate on the contribution of export processing zones to national economic development for some four decades. The debate touches on every possible aspect of EPZs: the rationale of EPZs, budgetary impact, employment impact, foreign exchange impact, labour rights, women rights, environmental protection, the cultural impact of foreign investment, and so on.

This paper focuses on the export and foreign exchange impact of the EPZs. It provides a comprehensive analysis of the export performance of Indian EPZs since their inception. The study begins with a brief review of the evolution of the EPZ policy through different phases of growth. It then examines the trends and patterns of total EPZ exports from an aggregate perspective. While doing so, it uses various indicators of EPZs' export performance including, gross exports, exports per unit of employment, value addition and so on. It also documents the trends and patterns of EPZs exports by sector and destination country. It then investigates the performance of the individual zones in a comparative analytical framework.

The study finds that aggregate EPZ exports registered an impressive growth rate over the period 1966 to 2002. The share of EPZs in total exports and manufactured exports also showed upward trends during 1973–2002. However, growth in the share of EPZs in total/manufacturing exports slowed down considerably after mid 1980s. EPZ and total export growth rates seem to have been converging since 1980s. This was due a continuous decline in the EPZ export growth rates since mid 1980s. Maximising foreign exchange earnings is one of the most important benefits expected from EPZs in India. The study shows that the Indian EPZs have not been able to achieve this goal either. It finds that three fourths of the total exports are accounted for by only two sectors, namely, electronics and gems and jewellery. Indian zones thus do not seem to have succeeded in promoting non-traditional exports. The study highlights the need to look at export strategies for the EPZs more closely and provides some policy suggestions.

The study has been conducted by Dr. Aradhna Aggarwal, Consultant, ICRIER.

#### **ID.2. Indo-Sri Lanka Trade in Services: FTA II and Beyond**

The study identifies sectors of bilateral trade interest, identify and quantify the domestic and external barriers to such trade and recommend regulatory, institutional and other reform measures for removal/reduction of such barriers, which would enable the two countries to gain from a possible CECA.

The study shows that there are trade complementarities in trade in services between the



## ID Regional and Bilateral Issues

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two countries. The study estimates revealed comparative advantage indices (RCA) for India and Sri Lanka to identify potential service areas for trade. Using primary information, the study shows that at a more dis-aggregated level, the two countries can trade with each other in areas such as transportation, tourism, construction, health, education, telecommunications and software, energy, retailing, banking, and through movement of professionals. Further, based on an extensive survey carried out in Chennai, Delhi, Bangalore, and Mumbai in India and Colombo in Sri Lanka, the study identifies barriers that are faced in each services sector through each mode of supply namely cross-border supply, consumption abroad, commercial presence and movement of natural persons. The study suggests a framework for removal of these barriers.

The study was conducted by Ms. Nisha Taneja, Senior Fellow, ICRIER, Dr. Arpita Mukherjee, Senior Fellow, ICRIER, Dr. Sanath Jayanetti, Senior Fellow, Institute of Policy Studies of Sri Lanka, Colombo in collaboration with Dr. Tilani Jayawardane from the Institute of Policy Studies, Sri Lanka. The findings of the study will be presented at the SANEI Conference scheduled in August 2004. The study has been funded under the South Asia network of Economic research Institutes (SANEI).

### Ongoing projects

#### ID.3. India-China Trade in Goods

ICRIER has undertaken a study to explore the possibility of expansion of trade in goods between India and China. The objective of the study is to develop an understanding of the current status of export and import structures of India and China and analyze the strengths, weaknesses and potential opportunities and threats in trade expansion between the two economies.

In the backdrop of a complete transformation in bilateral trade relations between India and China in the last decade, India has emerged among the top 20 trading partners of China. In 2002, bilateral trade between India and China increased by 29 percent (DGCI&S). However, China's trade with India accounts for only 0.8 per cent of its total external trade while the share of China in India's external trade in 2001-02 was 3 per cent. Trade between India and China though growing, is modest taking into consideration the fact that the two countries are members of the largest Preferential Trading Arrangement (PTA) in terms of market potential i.e. the Bangkok Agreement, and given their size and proximity.

China and India are the largest markets in terms of the number of consumers. China has emerged as a leading economic power and a leading trading nation in the world. In the last decade, the two neighbours have outperformed other countries in terms of economic growth. China experienced an average 7.8 percent GDP increase over the past ten years followed by India with an average of more than 5 per cent growth. In contrast, the global average was about 3 per cent. There are therefore opportunities for India and China to significantly expand and strengthen their bilateral economic relations given the accelerated pace of economic globalization in both India and China against the backdrop of fundamental changes



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taking place in the world towards regional trading arrangements.

Dr. Arvind Virmani, Director & Professor, ICRIER is a member of the Joint Study Group. Research work is being conducted by Dr. Amita Batra, Senior Fellow, ICRIER. The interim report is scheduled to be submitted in July 2004. The study is being funded by the Ministry of Commerce and Industry, and will provide input into the Joint Study Group with representatives from India and China to draw up the framework of the Agreement.

#### **ID.4. India-China Trade in Services**

India and China are exploring bilateral measures for enhancing trade in services. ICRIER is conducting a study with the objective of identifying the service sectors (and modes within those sectors) of bilateral trade interest and mutual cooperation. The study will also identify areas of future trade potential and collaboration. Other objectives of the study are to identify existing barriers to trade and suggest reform measures for the reduction/removal of such barriers. The study is being funded by the Ministry of Commerce and Industry. The research work is expected to provide inputs into the Joint Study Group with representatives from India and China.

Dr. Arvind Virmani, Director & Professor, ICRIER is a member of the Joint Study Group. Research work is being conducted by Dr. Arpita Mukherjee, Senior Fellow, ICRIER, Ms. Sanchita Chatterjee, Consultant, ICRIER and Ms. Gurnain Pasricha, Research Assistant, ICRIER.

#### **ID.5. Indo-US Trade in Services: Prospect of the ICT Sector**

The ICT sector includes software services, IT training, IT-enabled/BPO services, Internet and e-commerce, audiovisual services and telecommunication services. This will identify the areas of mutual trade interest between India and US in the ICT sector in the context of a possible India-US Free Trade Agreement (FTA). The study will present a comparative picture of the recent trends and developments in the ICT sector in India and the US with particular reference to trade complementarities between the two countries. It will highlight areas of future trade potential and also analyse the regulatory regimes in the ICT sector of the two countries at both Central and Federal levels.

The study aims to identify barriers to trade in US market and suggest various measures for removal of the same, while analysing other Bilateral/Regional Agreements which India and US have entered or are in the process of entering to understand how the ICT sector has been addressed under those agreements.

Dr. Arpita Mukherjee, Senior Fellow, ICRIER, is the coordinator of the project. An interim report will be submitted to NASSCOM in December 2004 and the final report will be submitted in March 2005. Ms Mahima Puri is providing advice on legal issues. The study is being funded by NASSCOM.



**ID Regional and Bilateral Issues****Ongoing  
Projects****ID.6.Trade Potential for India in a Gravity Model**

This study undertakes an analysis of the pattern of bilateral trade in the world using the gravity model. Employing the gravity equation, the study will first analyse the international trade flows for a sample of over 150 countries and then examine the potential for India's trade with these countries. While the basic gravity model predicts that the volume of trade between two economies should increase with their size (proxied by GDP) and decrease with transaction costs (as measured by bilateral distance), this study will use an augmented specification of the gravity model to predict potential bilateral trade for India.

The study is being conducted by Dr. Amita Batra, Senior Fellow, ICRIER and is expected to be completed by July 2004.

**ID.7. Performance of Export Processing Zones of India,  
Sri Lanka and Bangladesh: A Comparative Analysis**

This study would attempt to analyse using econometric analyses, the factors affecting EPZ performance in attracting foreign direct investment and enhancing export performance in South Asian countries. The three South Asian countries selected are India, Sri Lanka and Bangladesh. Bhutan, Nepal and Maldives have not established export-processing zones. Objectives of the study are three-fold. First, it will examine domestic and foreign investment trends in these zones. Two, it will then quantify the extent of foreign presence in these zones and analyse the factors affecting FDI in these zones. Three, it will analyse export performance of these zones using various indicators and examine the determinants of export performance. Foreign direct investors are expected to have an edge over domestic producers in export markets. Therefore, while analysing the determinants of export performance, the study will focus on the role of FDI in export promotion in these regions. The econometric analysis proposed to be undertaken aims at identifying the key policy parameters and other economic factors that contributed to the success of EPZs.

The study is being conducted by Dr. Aradhna Aggarwal, Consultant, ICRIER, and financially supported by the South Asian Network of Economic Institutes (SANEI). It is expected to be completed by March 2004.

## **IIA** Macroeconomics Management and Growth

Projects  
Completed

## **II Macroeconomics, Growth and Poverty**

### **IIA Macroeconomics Management and Growth**

#### **Projects completed**

#### **IIA.1. Growth Performance of the Indian Economy**

The study revisits the issue of growth phases in Indian economic development. One of the innovations in this paper is to take explicit account of rainfall variations that play a very important role in the Indian economy. This allows us to determine whether the Indian economy has become less dependent on the monsoons ('drought proof'). It also allows a statistically more accurate determination of the different phases of Indian economic growth. Since 1950–1, it is able to statistically distinguish only two phases of growth. The first phase characterised as the 'Indian-socialist' rate of growth (ISRG) starts after independence and lasts to the end of the seventies. This period of 30 years from 1950–51 to 1979–80 was the phase of socialist experimentation, in which an average rate of growth of GDP of 3.5% per annum and a growth rate of government consumption (5.8% p.a.) that exceeded this GDP growth as well as the growth rate of private consumption (3.2% per annum).

The paper also confirms that there was a new phase of growth, starting in 1980–81 that the author calls the 'Bharatiya rate of growth (BRG).' This was the phase of market experimentation. There was a sharp and statistically significant acceleration in the growth rate during the BRG phase, over the previous period. Growth accelerated to an average of 5.7% per annum during the BRG phase with per capita income growing at an average rate of 3.6% per annum. While exploring the causes of changes in growth trends and variations in performance, the paper fills out the sector details of the various phases of development and the role that government and government monopoly has played in different sectors. The paper explores some of the growth puzzles in our economic history, viz. how the limited reforms in the eighties could produce such dramatic changes in the growth rate, and why the more broad-based reforms that began in 1991 led only to a modest increase in the growth rate over that observed in 1980's.

This study was conducted by Dr. Arvind Virmani, Director & Professor, ICRIER, and its findings published as ICRIER Working Paper No. 122.

#### **IIA.2. Labour Quality in Indian Manufacturing: A State Level Analysis**

Skilled manpower, its optimum utilisation and effective management, is the modern mantra that attracts both foreign and domestic investors. This paper has quantitatively analysed the influence of the quality of labour and its composition, on the productivity (in 18 selected states of India), with an intention to facilitate inter temporal and inter-firm comparison of input \ output and productivity in, future. Dr. Aggarwal has effectively used the Jorgenson-Gallop-Fraumeni(JGF) methodology and Tornquist Translog Index to construct the Labour

## IIA Macroeconomics Management and Growth

quality index to bring out the temporal and spatial differences in the labour quality for rural and urban manufacturing sectors using the Usual Principal and Subsidiary Status (UPSS) of employment.

The study also focuses on the inter-temporal and inter-sectoral changes in labour based on the educational profile of the workers, which suggests that the decline in the proportion of uneducated and not-literate workers across the sectors (highest in the primary sector, moderate in the manufacturing, trade and transport and least in the tertiary sector) can be best explained by the fact that the nature of labour demanded by a particular sector is what attracts labour towards it. It brings out significant variations among states with regards to the educational profile and the sectoral changes and establishes that Kerala is the only state in which the proportion of employment in the manufacturing sector in urban area has increased whereas in Assam the proportion of casual workers has increased. Moreover, the study effectively demonstrates a strong linkage between Urban Labour Quality Indices and urban poverty, no. of ITI's and intensity of industrialisation whereas the Rural Labour Quality Indices do not exhibit any such linkage.

This study was conducted by Dr. Suresh Chand Aggarwal, External Consultant, ICRIER and Reader, Delhi University, Delhi and its findings published as ICRIER Working Paper No. 126.

### IIA.3. Sources of India's Economic Growth: Trends in Total Factor Productivity

Macroeconomic growth and the factors playing a vital role in it is of vital concern to the policy makers, advisors, markets and industry. The research project "Sources of India's Economic Growth – Trends in Total Factor Productivity" reviews India's productivity performance that underlines the growth performance of the Indian economy since Independence.

The trends in the total factor productivity (TFP) for the economy are used to derive the average TFPG for two distinct periods (1950–51 to 1979–80 and 1980–81 to present) in the Indian economic history and a positive link is found between changes in TFPG growth and changes in economic growth. The study estimates TFPG for all the sectors of the economy viz, Industry, services, Agriculture etc and derives their relative contributions to overall productivity growth of the economy. The paper affirms that the collapse of growth during 1965–66 to 1979–80 was due substantially to a sharp fall in TFPG and the recovery during 1980–81 to 1991–92 was due to an increase in the same. Econometric analysis shows that investment in machinery and changes in protection (QR's and tariffs) played an important role in the changing rate of growth of TFP.

The study was conducted by Dr. Arvind Virmani, Director & Professor, ICRIER, and its findings published as ICRIER Working Paper Nos. 122 and 131.

### IIA.4. Investment Climate & Productivity Growth: Analysis of Indian States

India has been undertaking significant liberalisation initiatives since 1991 with a view to

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improving the efficiency of manufacturing industries and achieving faster GDP growth. The effects of national level policies can differ considerably across the Indian states, depending upon the nature of various institutional factors and policies in the states, which can be classified under the broad heading 'investment climate' (IC). This study investigates the influence of IC on the levels of total factor productivity (TFP) in the organised manufacturing sector across the major Indian states.

Using data from the Annual Survey of Industries (ASI), the study estimates multilateral TFP indices for the total registered manufacturing sector in all the major states for the period 1980–2000. For a comparison of the states with significantly different IC, the study also presents detailed estimates of TFP (at the 2-digit industry level) for three states – Maharashtra, Punjab, and Uttar Pradesh. The ranking is based on the *Firm Analysis and Competitiveness Survey (FACS)* conducted jointly by the *Confederation of Indian Industries (CII)* and the *World Bank* in 2000 and 2003 in the Indian states. For the purpose of this study, the *World Bank* provided the tabulated figures from FACS 2003 pertaining to certain quantitative indicators of IC in various industries across 12 Indian states.

The study concludes that in essence, a market friendly IC is essential for achieving higher level of TFP. This conclusion is robust, unaffected by the choice of IC indicator. The analysis also shows that there are scopes for initiating policy measures to improve the overall or particular dimensions of IC in almost all the states. States that foster a market friendly IC would attract greater investment and grow faster while others lag behind. Thus, it is not surprising that India's overall economic progress since 1991 is leaving some of the states behind. Evidently, the most effective way to eliminate regional growth inequality is to ensure that the lagging states initiate reforms to make their IC more market friendly.

This study was conducted by Dr. C. Veeramani, Fellow, ICRIER (till June 2004) and Dr. B. N. Goldar, IDBI-IFCI Professor, ICRIER and its findings have been published as ICRIER Working Paper No. 127. The study was funded by the World Bank.

### IIA.5. India's Currency Regime

Empirical literature on currency regimes suggests that from August 1991 to June 1995 India's currency regime is best described as a de facto peg to the US dollar, while from then to end 2001 it was a de facto crawling peg.

The analysis of the paper is focussed on the period since the Asian crisis. It argues that a clear and well articulated official position on India's currency regime is not available. It examines the various potential reasons for reserve accumulation emerging from the statements of officials and official committees to show that reserve accumulation is the outcome of a currency regime whose main objective is to deliver low volatility of the nominal exchange rate. . Excessive currency accumulation is seen to be an outcome of this regime. The paper shows that during the past few years the rupee appears to be a de facto peg to the US dollar. Thus the situation seems to have reverted, at least since 2002, to that prevailing between 1992 to 1995.



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Completed

The paper makes a contribution to the current debate on India's currency regime and reserve policy, issues that have greater significance with the opening of the capital account and the new challenges it poses for interest rate policy in India.

The study was conducted by Dr. Ila Patnaik, Senior Fellow, ICRIER (till November 2003), and has been published as ICRIER Working Paper No. 108. **Funding RBI ??**

### IIA.6. India's Experience with Currency Intervention

Since the BOP crisis of 1991 there have been two views of the macro-economics of the Indian economy. One is the standard model of the open economy (widely applied and accepted in the advanced economies) that shows strong trade-offs between a stable exchange rate and monetary independence in the presence of global capital mobility. This is summarised in the "impossible trinity" namely that a country cannot simultaneously have an open capital account, a fixed exchange rate and monetary policy independence. This paper shows that net capital inflows during 1993-4 and 1994-5 were met by un-sterilised intervention: RBI purchased foreign exchange to keep the nominal exchange rate constant and thus to keep the real rate from appreciating. It concludes that as a consequence reserve money and M3 expanded leading to higher inflation and consequent real exchange rate appreciation. The paper then contrasts this with the second episode of capital inflows starting in April 2002, which was handled by sterilised intervention and reduced monetary growth. Inflation remained low but the gap between Indian and global short-term interest rates widened and the fiscal costs of accumulating reserves rose sharply.

This study also explores the monetary impact of currency intervention (on reserve money and money multiplier) and direct fiscal costs of coping with speculative behaviour by private actors. India has made enough progress in opening the capital account and the currency regime comes at the cost of distortions in the monetary policy. Though there may be benefits of such a currency regime there are few costs too that cannot be overlooked and have to be factored into policy analysis and this is where the paper has gained its distinction.

The study was conducted by Dr. Ila Patnaik, Senior Fellow, ICRIER (till November 2003), and has been published as ICRIER Working Paper No. 114. **Funding RBI??**

### IIA.7. Competitiveness & Economic Performance: Inter-State Dimensions

This study brings out the subtle yet striking difference between the patterns of growth of developing and developed countries, since the growth of most developing countries is characterized by instability and volatility. The study reviews the literature on economic growth and its determinants in general and in the context of Indian states in particular. It captures the major recent developments in empirical growth research, though he casts a thought of doubt on the quality of available official data. The study identifies the key issue of growth accounting to be that of Total Factor Productivity (TFP), which depends on the assumptions of the growth accounting framework and the quality of the data on input and

## IIA Macroeconomics Management and Growth

### Projects Completed

output. The paper suggests that case studies of major Indian states be undertaken in as much as the econometric evidence on determinants of growth is found to be inconclusive and somewhat controversial.

The paper takes the coefficient of variation of year-to-year growth rates for a state as a measure of volatility, and concludes that the four most volatile states were Orissa, Rajasthan, Gujarat and Uttar Pradesh where as the three least volatile states were Punjab, Maharashtra and Kerala. The volatility has been declining on the national level since the 1980s. He assesses the determinants of growth in the states both qualitatively and quantitatively and notes that the dispersion of growth rates of states increased considerably in the post reform period. However there is need for exploring other approaches to explaining growth.

This study has been conducted by Dr. K. L. Krishna, Honorary Senior Consultant, ICRIER (till February 2004). **Funding ??**

### Ongoing Projects

#### IIA.8. Essays in Macroeconomic Policy & Growth

This book of essays covers topics of macroeconomic management, growth performance and prospects, economic reforms, external sector management, tax reform, and problems of fiscal stress. The essays seek to combine an analytical approach with 'insider knowledge' of the policy process in India. The book is expected to be completed in draft by September 2004. It has already been accepted, in principle, for publication by Oxford University Press.

#### IIA.9. Critical Issues in Services-led Growth

Services form a diverse group of economic activities not directly associated with the manufacture of goods, mining or agriculture. They typically involve the provision of human value added in the form of labour, advice, managerial skill, entertainment, training, intermediation and the like. With the growing integration of the world economy a new interest in the role of services in world transactions has been generated and this has led to a stream of literature that examines various aspects of this sector.

Studies have theoretically argued and empirically estimated the link between performance of services sector and growth of the economy. Different explanations have been put forward to explain the increasing share of services in GDP, Investment and Employment. Petty's Law that propagates a shift of working population from agriculture to manufactures and from manufactures to services in course of economic growth has also been discussed by different studies and tested for different countries. In this context, studies have also attempted to estimate productivity growth in service sector and link productivity growth in services sector to overall growth of the economy. Further, there has also emerged a corresponding stream of literature that examines how trade in commodities differs vis-à-vis trade in services and discuss the relevance of different trade theories for services.



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With this background, this study proposes to prepare a comprehensive review of studies that examines two critical issues in the service sector, these are international trade & investment in services and productivity growth in services.

The study is being conducted by Ms. Rashmi Banga, Consultant, ICRIER and is expected to be completed by December 2004. This is a policy paper being prepared for the Policy networking Project. Financial support for this study from the Asian Development Bank is acknowledged.

### **IIA.10. Policy Regimes, Growth & Poverty**

This study explores the links between Indian Policy Regimes, Economic Growth Performance and Poverty Outcomes. Issues connected with poverty and hunger will also be explored.

This study is being conducted by Dr. Arvind Virmani, Director & Professor, ICRIER and is expected to be completed by December 2004.



## IIB Financial Development and Reforms

### IIB Financial Development and Reforms

#### Projects Completed

#### Projects Completed

##### **IIB.1. Health Insurance for the Poor in India: A Conceptual Analysis**

This paper while giving a perspective on the topic discusses different types of health insurance arrangements prevalent for the low-income people in India. In extending health insurance to low-income people, the role of nodal agency is considered crucial. Depending on the role that a nodal agency performs, all health insurance arrangements can be broadly be categorised into three different types. Different conceptual issues come up in each type of insurance arrangement. These issues are identified and studied in this paper. Furthermore, the role of public policy in developing microinsurance in the country is analysed.

The study has been conducted by Dr. Rajeev Ahuja, Senior Fellow, ICRIER. The research is financially supported by the South Asian Network of Economic Institutes (SANEI) and will be presented at the SANEI conference scheduled to be held in August 2004.

#### Ongoing Projects

##### **IIB.2. New Institutional & Economic Approaches to Health Insurance for the Poor in India**

The research findings of the first phase, which involved studying economic incentives present in community based health insurance arrangements as observed in different parts of developing countries, were published last year as ICRIER Working Paper 95. The second phase was completed this year and the findings published as ICRIER Working Paper 123. The second phase of the project involved studying health insurance situation in India. The third phase of the project involves identifying a few best practices in health insurance and conducting a primary survey and its analysis of the identified schemes. The primary survey has been completed and data analysis is in progress.

The study is being conducted by Dr. Rajeev Ahuja, Senior Fellow, ICRIER. The study is expected to close by November 2004. It is financially supported by the Volkswagen Foundation, research on this project is jointly being carried out by ICRIER, Centre for Development Research (ZEF), Bonn (Germany) and Centre for Economic and Social Studies (CESS), Hyderabad.

##### **IIB.3. Decentralisation & Centrally Sponsored Schemes: Some Observations**

Interstate performance of two of the Centrally Sponsored Schemes (CSSs), Sampoorna Grameen Rozgar Yojana (SGRY) and Swarnjayanti Gram Swarozgar Yojana (SGSY) of the Ministry of Rural Development are examined in this paper. SGRY is meant to provide wage



## IIB Financial Development and Reforms

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employment, whereas the aim of SGSY is to promote self-employment in the rural areas. The schemes differ substantially in their design and delivery mechanisms. SGRY is implemented exclusively by the PRIs whereas the implementation of SGSY involves many agencies, including PRIs, banks, NGOs and so forth. The study finds that SGSY performs uniformly better than SGRY in all states, except West Bengal. Two important reasons for the difference in performance of these schemes across states are: resource availability of states, and effectiveness of the two different delivery mechanisms. Later, the study relate schemes' performance to the progress on decentralisation across states. The study finds that the performance of both schemes relate positively to a decentralisation index. Similar results are obtained when two other CSSs of the ministry i.e., water supply (sector reforms program) and total sanitation schemes are examined. Currently, the effect of some of the qualitative indicators on schemes' performance is being examined.

This study is being conducted by Dr. Rajeev Ahuja, Senior Fellow, ICRIER, and Mr. Indranil De, Research Assistant, ICRIER.

### **IIB.4. Substitutability of Household Sector Saving Assets in India**

Indian economy has undergone major financial reforms since 1991 and there have been considerable changes in the financial and interest rate structure of the economy. With these changes it was expected that the composition of the house hold sector financial savings will undergo a change through substitution of assets.

With this backdrop, ICRIER attempts to find out such kind of substitution, if any, among the financial assets accessible to the household sector. An important feature, which emerges from the analysis, is that provident fund acts as a substitute for other saving assets. Prima facie this is attributed to the fact that the provident fund offers more return as well as gives tax concessions. And in some sense there is the element of compulsion on the part of the employees in the organized sector to park their funds in the provident fund.

The study is being conducted by Dr. Arvind Virmani, Director & Professor, ICRIER and Dr. Sanghamitra Sahu, Fellow, ICRIER. It will be completed by July 2004.

### IIC Reform Issues

#### Projects completed

##### **IIC.1. Lessons from Indian Economic Reforms: Policy & Institutions**

Economic policy and policy reform over the last few decades has been motivated by the need to accelerate growth or equivalently to reverse a decline in growth rate. The economic literature on the determinants of growth has burgeoned and disagreement has followed consensus on the policy prescriptions that need to be followed to achieve this purpose.

The study moves the focus of the debate to concrete issues of policy formulation and policy change and explores the links between policy and institutions in the context of economic reforms. This exploration draws heavily on the economic reform experience of India and the author's practical experience of these reforms and can be viewed as an effort to conceptualise and generalise the lessons from Indian economic reforms. A subsidiary purpose of the paper is to open the door to multidisciplinary dialogue by bridging the gap between economic and other social sciences by eschewing economic jargon.

This study was conducted by Dr. Arvind Virmani, Director & Professor, ICRIER and presented at the 5<sup>th</sup> GDN Conference in New Delhi and its findings have been published as ICRIER Working Paper No. 121 **Funding??**

#### Ongoing projects

##### **IIC.2. Linkages between Development Researchers & Policymakers in India**

This study seeks to enhance the understanding of linkages between development research and policy planning in the Government of India, keeping in view the institutional framework. The study is based primarily on a critical appraisal of studies in major research institutions and their interactions with the government departments since the post reform period, 1991. The focus is on two significant areas, viz, Liberalization of the external sector and Labour market reforms.

The study deals with degree and direction of success as well as failure along with causes of slow pace of reforms in the above mentioned areas. The key issues that the study deals with are: To what extent has development research Institutes helped the policy makers? What are the lines on which research should improve in order to assist and direct policymaking? Et. al. Such a study is a pioneering step towards improving the link between research and policy making since it includes selected government ministries and research institutions dealing with economic reforms and research in external sector, disinvestment and labour market. It outlines significant recommendations of effectiveness of policy dialogue, prioritization and sequencing of reforms, organizational and institutional set up. It is hoped that this study would set new parameters for development research institutions and private researchers and go a long way in strengthening the linkages between the actual research analysis and policy making, which more often have little or no linkage.

The study is being conducted by Dr. Arvind Virmani, Director & Professor, ICRIER and Dr. Tarun Das, Economic Advisor, Ministry of Finance and Honorary Consultant, ICRIER.