



FORUM FOR GLOBAL KNOWLEDGE SHARING

(*Knowledge Forum*)

<http://FGKS.in>

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Report of the Secretary

(November 15, 2018)

I welcome you all to the general Body Meeting of the Forum for Global Knowledge Sharing (Knowledge Forum).

Report on activities: Since April 2017

Since April 2017 we have made considerable progress in publications. We have been adding about 35 new research papers every year. We also added more material on “COMMENTARIES”. Regarding the conference papers, some members were not in favour of placing their papers in our open website due to restrictions imposed by journals. We are placing these papers under restricted access, protected by pass word. Only registered members with PW would be able to access them. *Springer* is likely to bring out a volume consisting of papers presented at 2017 Conference.

Conferences/Seminars Organised Since April 2017

XII Annual Conference on *Changing Paradigms in Technology, Trade and Development*, in partnership with Tata Trusts, Hosted by: Nabakrushna Choudhury Centre for Development Studies, Bhubaneswar, November 10-12, 2017

About 65 persons from 25 institutions registered and participated in the conference.

Professor S R Hashim, President, Knowledge Forum, Chaired the Introductory Session. Professor Srijit Mishra (Director NCDS) welcomed the participants. Professor N S Siddharthan

presented the ‘Tour of the sessions’ and Professor K Narayanan (IIT Bombay and co-editor of the volume) gave an introduction to the volume published by *Springer* containing select papers presented at our 2016 conference held at IIT Madras. Professor Hashim released the volume. Professor K Narayanan proposed the vote of thanks.

The *Governing Council* and the *General Body* meetings were chaired by Professor S R Hashim, President of the Forum. The General Body decided the following theme for the 13th Annual Conference: *Technology and Employment*

Participation

Scholars from the following institutions participated:

International

1. Georgetown University, Washington DC.
2. Centre for International Environmental Studies, Graduate Institute of Geneva, Switzerland
3. CUNY Brooklyn College and Graduate Center, New York.
4. United Nations University, Maastricht, the Netherlands.
5. Pardos, France

Delhi

6. Delhi University
7. JNU
8. CSIR-NISTADS
9. ISID
10. Society for Development Studies
11. Institute of Economic Growth

Mumbai

12. IIT Bombay
13. Tata Institute of Social Sciences (TISS)

Chennai

14. Madras School of Economics
15. IIT Madras
16. Madras Institute of Development Studies

Bangalore/Karnataka

17. Indian Space Research Organisation (ISRO)
18. National Institute of Technology Karnataka (NITK), Surathkal

19. LifeIntelect, Bangalore

Other Cities

20. NCDS Bhubaneswar

21. IIT Indore

22. Institute of Public Enterprise, Hyderabad

23. National Institute of Technology Goa

24. Punjab School of Economics, Guru Nanak Dev University, Amritsar, Punjab

Technical Sessions:

21 research papers were presented. In addition there was a Ph.D. workshop with 3 presentations.

The following persons Chaired the technical sessions and initiated discussions:

- **K. L. Krishna**, Chairman MIDS and former Director Delhi School of Economics, (DSE)
- **Ashok Jain**, Former Director, NISTAD CSIR
- **Stanley Nollen** (Georgetown University, Washington D.C.)
- **B L Pandit** (Delhi School of Economics)
- **B N Goldar** (IEG Delhi)
- **Y. S. Rajan**, Distinguished Professor (ISRO)

Session 1: *FDI*

Issues Discussed:

- FDI Spillovers and country of origin.
- FDI and ecological footprints
- Surge in FDI inflows

Session 2: *Environment and Resources*

Issues Discussed:

- Relocation and innovation in polluting industries
- Declining energy intensity in energy intensive industries
- Paradigm shifts in irrigation sector

Session 3: *Innovations, R&D and IPR*

Issues Discussed:

- International harmonization of IPR and growth
- R&D behavior of foreign firms

- Knowledge spillovers and R&D
- Innovation and competition

Session 4: *Interplay of Knowledge Sources*

Issues Discussed:

- Knowledge sources of innovations
- Market structure and technological capabilities
- Broad band adoption and firm performance in the informal sector

Session 5: *Trade and global production process*

Issues Discussed:

- Changing pattern of global production process
- Trade liberalization and export performance
- Free trade agreements and FDI

Session 6: *Changing Paradigms*

Issues Discussed:

- Changing paradigms in solar industry
- Patents and paradigm changes
- Paradigm shifts in information technology – Quantum computers
- Econophysics – paradigm shift in economic methodology

Session 7: *Ph.D. Workshop*

Concluding Session

In the concluding session the participants expressed their appreciation and thanked the hosts, NCDS Bhubaneswar, for efficiently organizing an excellent conference. Professor Narayanan proposed a vote of thanks.

Seminar on FDI: Issues and Policy, Saturday, February 24, 2018, (In partnership with Tata Trusts), Hosted by: Centre for Policy Studies, IIT Bombay, Mumbai

In recent years Knowledge Forum Annual Conferences have been having Sessions on FDI. Research papers presented in these sessions have been subsequently published in professional journals and edited volumes published by *Springer*. These are mainly read by scholars who are interested in this area. It is now felt that issues arising out of these studies and their policy implications needs to be made available to a wider audience and in particular to the policy makers. With this in mind Knowledge Forum organized a Seminar jointly with the Centre for Policy Studies, IIT Bombay, on February 24, 2018 at IIT Bombay.

For this purpose, we invited scholars who have been presenting research studies on FDI in the Knowledge Forum Conferences to present papers dealing with the main issues in this area and the policy imperatives based on their research and findings of other scholars.

About 45 persons registered and participated.

Professor S R Hashim Chaired the introductory session. Professor Satish Agnihotri, Head, Centre for Policy Studies, IIT Bombay, welcomed the participants. Professor N. S. Siddharthan, Hon. Director Knowledge Forum and, Honorary Professor, Madras School of Economics, Chennai, delivered the Keynote address. Professor K Narayanan of IIT Bombay and Convener of the conferences of Knowledge Forum proposed the vote of thanks.

Technical Sessions

The following persons chaired the Technical Sessions:

- K L Krishna, Chairman MIDS, Chennai and former Director, Delhi School of Economics
- K Narayanan, IIT Bombay
- Satish Agnihotri, IIT Bombay
- N S Siddharthan, Knowledge Forum and MSE

Issues Discussed

- FDI in Manufacturing
- Push factors of outward FDI
- FDI and Exports
- FDI and spillovers
- FDI, R&D, patenting and spillovers
- Environmental policies and FDI
- Industry case studies

In the concluding Session, Professor K L Krishna delivered the Valedictory Address.

Silver Jubilee Seminar of the Madras School of Economics on “Technology and Development, organised in partnership with Knowledge Forum, August 11, 2018.

Scholars from the following institutions presented papers:

- Indian Institute of Technology (IIT) Bombay
- IIT Goa
- IIT Madras
- Madras School of Economics
- Great Lakes Institute of Management, Chennai
- Jadavpur University

- Institute of Economic Growth, Delhi
- Centre for Development Studies, Trivandrum
- Institute for Financial Management and Research, Chennai
- Madras Institute of Development Studies, Chennai

One important feature of the conference was the active participation of the Post Graduate students of the Madras School of Economics. About 150 students attended all the Sessions and actively took part in organising the conference.

Tour of Sessions and Main Findings

In the Introductory Session Professor C Rangarajan, Chairman, MSE delivered the Key-note address.

‘Technology and Development’ is a broad theme and covers several dimensions. The one day conference covered several of these dimensions. The world is in the midst of Information Technology (IT) and Knowledge revolution and it was appropriate that the conference started with papers dealing with IT. One of the very first sectors to embrace IT is the Banking sector and the first paper dealt with the banking sector.

The paper by Shanmugam and Rakesh Nigam analysed the impact of IT on performance of banks in India. They used machine learning method for clustering data to analyse. In recent years several scholars from physics have been collaborating with economists to analyse economic problems. We have been having some of the physics scholars presenting papers at the Knowledge Forum conferences. Most of them are unhappy with the methodology used by economists. They advocate the use of physics models do analyse economic phenomenon. As a result a new discipline had emerged – Econophysics. This paper comes close to the new discipline.

The paper by Simontini Das and Amrita Chatterjee investigated the role of IT in improving the financial inclusion of the major Indian States. To begin with they also used the cluster analysis and later on switched over to other econometric techniques. Their results showed that technology played an important role in financial inclusion but with a time lag. More importantly the study identified the socio economic variables influencing financial inclusion.

Another important dimension of the theme is technology and labour. There were two papers dealing with labour and employment. The first paper by Arup Mitra along with technology and employment introduced the productivity dimension. What is needed is the growth in productive employment. The paper analysed the impact of technical efficiency and total factor productivity growth on labour absorption. The paper did not find any evidence for a decline in employment due to higher total factor productivity growth. At the same time it did not find evidence in favour

of employment growth either. The results were based on employment intensity. The impact of technology on the overall growth of employment could be different.

The paper by Vidya Mahambare and Sowmya Dhanaraj dealt with the low female participation in the technology intensive industries. They found that access to urban infrastructure and in particular transport facilities important in influencing female work participation.

The next session was devoted to several other dimensions. The paper by Radeef Chundakkadan & Subash Sasidharan, investigated the financial constraints and innovation activities of firms. It showed a negative impact of financial constraints on innovative activities, however, government support to innovative activities could mitigate these constraints and promote innovation.

The paper by K J Joseph and Kiran Kumar, analysed the relative role of science based learning and experience based learning in determining total factor productivity. This is the first paper to deal with this complex issue. The paper also highlighted the role of domestic technology purchases, staff training and managerial experience along with overall institutional architecture and labour market institutions, which were overlooked by the earlier studies.

The paper by Mohina Saxena and Surajit Bhattacharya was a theoretical piece and they developed a three-stage sequential game and showed that if the levered duopolist undertook investment in (process) innovation, then the debt induced innovation driven output was higher than the innovation led output of a completely equity financed duopolist.

The paper by Sunil Paul and Santosh Kumar Sahu analysed the relative importance of aggregate demand shocks and technology shocks in influencing productivity and technical efficiency. Their results indicated the transitory nature of aggregate demand shocks compared to technology shocks.

The paper by Asmita Goswami and K Narayanan analysed the influence of technology efforts on firm level productivity. They found technology imports – both, embodied and disembodied – having a positive impact on productivity of firms. However, in-house R&D efforts contributed to productivity only in the presence of skilled labour force.

Madhuri Saripalle analysed the determinants of the adoption of bio-stimulants based on experiments conducted over 200 rural farms. The paper found reduced use of chemicals in the user farms.

The paper by Debapriya Das and Zareena Begum Irfan was mainly a theoretical paper. It dealt with reducing energy poverty and attaining energy security. The paper advocated policy intervention, choice of technology and monitoring attenuation.

In the concluding Session Professor K L Krishna delivered the Valedictory Address. It was chaired by Professor U Sankar.

13th Annual Conference

I am happy that our General Body is meeting now during the 13th Annual Conference on *Technology and Employment* at the Tata Institute of Social Sciences. We have been having close relationship with TISS for a long time. They hosted our 2009 Annual Conference and a research workshop in 2015. I wish to place on record my indebtedness to Professor Bino Paul and Dr. Unmesh Patnaik for their active involvement in organising the conference. We are grateful to eSocialSciences and in particular to Dr. Padma Prakash for hosting our website. I express my gratitude to Professor S R Hashim for his constant support and encouragement; to Professor K Narayanan for his consistent involvement and active contribution to all our activities. I thank Dr. Santosh K Sahu for his active help in preparing and arranging the conference material.

Financial Position and Audited Statement

As you can see from our audit statement, we have invested the entire membership fee (including corporate members) in fixed deposits. We now have about Rs.7, 34,977 in fixed deposits. Last year interest from fixed deposits came to only about 55,962 rupees. For the current conference we have received Rs.10 lakhs from Tata Trusts. In addition TISS has mobilised another 2 lakhs. I express my gratitude to Tata Trusts for their partnership in organising our annual conferences and seminars.

N S Siddharthan
Hon. Secretary
November 15, 2018