



FORUM FOR GLOBAL KNOWLEDGE SHARING

(*Knowledge Forum*)

<http://FGKS.in>

Registered office: C/O INSTITUTE FOR HUMAN DEVELOPMENT,
New Delhi – 110 002 (India)

President: Professor N. S. Siddharthan nssiddharthan@gmail.com

Mailing address: 47, III street, East Abiramapuram, Chennai – 600 004

Honorary Secretary: Professor K. Narayanan knn.iitb@gmail.com

Mailing address: Department of Humanities and Social Sciences, IIT Bombay, Mumbai 400076

Report of the Secretary

(October 11, 2019)

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

Report on the activities: Since April 2018

Since April 2018 we have made considerable progress in publications. We have been adding about 30 to 35 new research papers every year. One additional feature that we introduced recently is the section on “Communications” [and replaced the earlier section on commentaries], which provides details of the papers presented in our annual conferences or seminars and got published in peer reviewed journals. I am happy to inform you that we have 17 papers listed in it, which is over and above the papers that we have included in the edited books. We have also added a Policy Brief on FDI, prepared based on the discussion in the One day Seminar conducted at Centre for Policy Studies, IIT Bombay in February 2018. 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 and 2018 Conferences, as well as some papers presented in the One day Seminar at IIT Bombay in February 2018. Select papers presented in the Seminar at Madras School of Economics in August 2018 are likely to be published in a Special Issue of the Taylor and Francis published journal ‘*Innovation and Development*’.

The *Governing Council* and the *General Body* meetings were held on 15th and 16th November 2018, respectively, at TISS Mumbai during the 13th Annual Conference. Both the meetings were chaired by Professor S R Hashim, President of the Forum. Professor N. S. Siddharthan was appointed as President of the Forum and Professor K. Narayanan was appointed as Honorary Secretary of the Forum. The General Body also appointed Professor Bino Paul of the Tata Institute of Social Sciences as the Treasurer of the Forum. The General Body placed on records its sincere appreciation and gratitude to the invaluable guidance, support and leadership provided by Professor Hashim as President of the Forum for many years. The

General Body decided that the theme for the 14th Annual Conference to be: *Technology and Economy*.

Conferences/Seminars Organised Since April 2018

XIII Annual Conference on *Technology and Employment*, in partnership with Tata Trusts, Hosted by: Tata Institute of Social Sciences, Mumbai, November 16-18, 2018.

About 80 persons from 24 institutions registered and participated in the conference.

Professor S R Hashim, President, Knowledge Forum, Chaired the Introductory Session. Professor Sasmita Palo, Dean School of Management and Labour Studies, TISS welcomed the participants. Professor Shalini Bharat, Director TISS, also welcomed the participants and gave opening remarks on the Conference and the collaboration between TISS and Knowledge Forum. Professor N S Siddharthan delivered a lecture on the Conference Theme “Technology and Employment and also presented the ‘Tour of the sessions’”. Professor K Narayanan (IIT Bombay and Honorary Treasurer, Knowledge Forum) proposed the vote of thanks.

Participation

Scholars from the following institutions participated:

International

1. Georgetown University, Washington DC
2. Faculty of Economics and Business, KU Leuven, Belgium
3. University of Tokyo, Japan
4. Centre for International Environmental Studies, Graduate Institute of Geneva, Switzerland
5. CUNY Brooklyn College and Graduate Center, New York.
6. United Nations University, Maastricht, the Netherlands.
7. Pardos, France

Delhi

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

Mumbai

14. IIT Bombay
15. Tata Institute of Social Sciences (TISS)
16. Tata Trusts

Chennai

17. IIT Madras

Bangalore/Karnataka

18. Indian Space Research Organisation (ISRO)

19. Azim Premji University

20. National Institute of Technology Karnataka (NITK), Surathkal

Other Cities

21. IDBI Bank, Kolkata

22. BITS Pilani, Goa Campus

23. National Institute of Technology Goa

24. National Institute of Technology Durgapur

Technical Sessions:

14 research papers were presented. In addition, there was a Panel Discussion and a Valedictory Address by Professor S. R. Hashim.

The following persons Chaired the technical sessions, panel discussion and initiated the discussions:

- **K. L. Krishna**, Chairman MIDS and former Director Delhi School of Economics, (DSE)
- **Bino Paul**, TISS, Mumbai
- **Alakh Sharma**, Institute for Human Development New Delhi
- **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: Digital Revolution

Issues Discussed:

- Industry 4.0 and its implications for industrial organisation
- FDI and employment
- Technology intensity and employment

Session 2: Patents

Issues Discussed:

- Outward FDI and Patenting activity
- Does patenting activity leads to greenfield FDI?

Session 3: *Environment*

Issues Discussed:

- Sustainability of energy supply in Islands
- Water Management Systems and Employment
- Management of Solid and Liquid Waste Management and Employment

Session 4: *Other dimensions of employment*

Issues Discussed:

- Micro data and Macro Policies
- Technology, Employment and Value Chain in Leather Industry
- Tools, Techniques and Skill Sets for Data Driven Governance

Session 5: *Labour Market and Other Issues*

Issues Discussed:

- Female Entrepreneurship and Innovation
- FDI, Labour Market and Welfare
- Differences in Employment characteristics across the States of India

Session 6: *Panel Discussion*

Issues Discussed:

- Changing paradigms in Skill sets for employment
- The world in the next 30 years: hopes and fears
- Paradigm shifts in Civil Engineering technology
- Technology and Education strategy for sustainable rural employment

Session 7: *Valedictory Session*

Lecture on “Globalisation, Technology and Employment--Reflections on Emerging Issues” by Professor Hashim, followed by a good discussion.

Concluding Session

In the concluding session the participants expressed their appreciation and thanked the hosts, TISS Mumbai, for efficiently organizing an excellent conference. Dr. Unmesh Patnaik of TISS proposed a vote of thanks.

In addition, as was already mentioned in the annual report of the year 2017-18, the Forum also actively supported:

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 this Seminar 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 to 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.

14th Annual Conference

I am happy that our Governing Council is meeting now during the 14th Annual Conference on *Technology and Economy* at the Department of Humanities and Social Sciences, IIT Madras, Chennai. We have been having close relationship with IIT Madras for a long time. They hosted our 2016 Annual Conference. I wish to place on record my indebtedness to Professor Malathy Duraisamy, Dr. Subash Sasidharan, Dr. Anup Bhandari and Dr. Santosh Kumar Sahu 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 N. S. Siddharthan for his constant support, guidance and encouragement; to Professor Bino Paul for his consistent involvement and active contribution to all our activities. I thank Dr. Santosh Kumar Sahu for his active help in preparing and arranging the conference material. This year's conference could be organised with liberal financial support from the TATA Trusts, as was during the last four years. They have supported us with a grant of Rs. 10 lakhs and IIT Madras has mobilised about Rs.3.5 lakhs to meet the additional expenses for our annual conference. We are grateful to both TATA Trusts and our colleagues in IIT Madras for facilitating our 14th annual conference.

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 and Savings account came to only about Rs. 64,303. For the current conference we have received Rs.10 lakhs from Tata Trusts. In addition, IIT Madras has mobilised another Rs. 3.5 lakhs. I express my gratitude to the Department of Humanities and Social Sciences, IIT Madras for mobilising the resources, making excellent arrangements for hosting our conference, and the Tata Trusts for their support in organising our annual conferences and seminars.

K. Narayanan

Hon. Secretary

October 11, 2019

**FORUM FOR GLOBAL KNOWLEDGE SHARING
RECEIPTS & PAYMENTS A/C FOR THE YEAR ENDED MARCH 31, 2019**

RECEIPTS	AMOUNT [RS.]	AMOUNT [RS.]	PAYMENTS	AMOUNT [RS.]	AMOUNT [RS.]
OPENING BALANCES			Seminar & Conference Expenses		10,62,335
Cash in Hand	-		Other Expenses		279
Cash at Bank	2,33,843	2,33,843	Audit Fees Paid		10,030
Membership Fees		1,000	CLOSING BALANCES		
Fixed Deposit Interest		45,703	Cash in Hand	-	
Savings Bank Interest -		14,760	Cash in Bank	2,78,642	
Sponsorship-TATA		10,00,000			2,78,642
Sponsorship-RBI		50,000			
Income Tax refund AY-17-18		5,980			
TOTAL		13,51,286	TOTAL		13,51,286

Place: Chennai
Date: 28.08.19

For Forum for Global
Knowledge Sharing

For Raghu & Murali
Chartered Accountants

N.S. Siddharthan
N.S. Siddharthan
President

A. Narayanan
A. Narayanan
Partner
M.No:225566



**FORUM FOR GLOBAL KNOWLEDGE SHARING
INCOME & EXPENDITURE A/C FOR THE YEAR ENDED MARCH 31, 2019**

EXPENDITURE	AMOUNT [RS.]	AMOUNT [RS.]	INCOME	AMOUNT [RS.]	AMOUNT [RS.]
Technology and Employment		10,62,335	Fixed Deposit Interest		49,543
Other Expenses		279	Savings Bank Interest		14,760
Provision for Audit Fees		7,080	Sponsorship-TATA		10,00,000
			Sponsorship-RBI		50,000
Excess of Income over Expenditure		44,609			
TOTAL		11,14,303	TOTAL		11,14,303

Place: Chennai
Date: 28.08.19

For Forum for Global
Knowledge Sharing

For Raghu & Murali
Chartered Accountants

N.S. Siddharthan
N.S. Siddharthan
President

A. Narayanan
A. Narayanan
Partner
M.No:225566



**FORUM FOR GLOBAL KNOWLEDGE SHARING
BALANCE SHEET AS AT MARCH 31, 2019**

LIABILITIES	AMOUNT [RS.]	AMOUNT [RS.]	ASSETS	AMOUNT [RS.]	AMOUNT [RS.]
CORPUS FUND:					
LIFE MEMBERSHIP FEE			INVESTMENTS		
Opening Balance	6,02,689		FIXED DEPOSIT		7,34,977
Add: Received during the year	1,000	6,03,689	TDS Receivable		16,775
			Cash in Hand	-	
GENERAL FUND:			Cash at Bank	2,78,642	2,78,642
Opening Balance	3,28,282				
Add: Surplus	44,609	3,72,891			
CURRENT LIABILITIES & PROVISIONS					
Audit Fee payable		3,814			
Other Liabilities		50,000			
		10,30,394			10,30,394

Place: Chennai
Date: 28.08.19

For Forum for Global
Knowledge Sharing

N. S. Siddharthan
N.S. Siddharthan
President

For Raghu & Murali
Chartered Accountants



A. Narayanan
A. Narayanan
Partner
M.No:225566