How to reap the Digital Dividends? Factors affecting Digitization and its Absorption for Innovation and Productivity.

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"Before 4000 BC, not being able to read and write was not a handicap, since no one was literate. Literacy became a new necessity starting some 5,000 years ago. Likewise, digital connectivity is the new necessity of our times. If societies cannot provide this, inequality will rise; and so will poverty. [Digital developments] need a whole host of ancillary services, policies and regulations for their benefits to reach the segment least able to help themselves."— Kaushik Basu, Chief Economist, The World Bank (2016).[1]

1. Motivation and Overview

Emergence of information and communication technology (ICT)—as a general-purpose technology (GPT)—is like a paradigm shift in technology like in the case of Steam engine or Electricity paving the path for Industrial Revolution. Overwhelmed by its pervasiveness, World Bank's flagship publication such as World Development Report (2016, p. 2) has mentioned that: "Digital technologies have spread rapidly in much of the world. Digital dividends—the broader development benefits from using these technologies—have lagged behind. For digital technologies to benefit everyone everywhere requires closing the remaining digital divide, especially in internet access. But greater digital adoption will not be enough. To get the most out of the digital revolution, countries also need to work on the "analog complements"—by strengthening regulations that ensure competition among businesses, by adapting workers' skills to the demands of the new economy, and by ensuring that institutions are accountable."[2]

Innovations, spread and adoption in internet and digital technology has overwhelming ripple effects across any economy and the world in terms of connectivity, organizing socio-economic activities, trade network, vast data and information flows, and even in shaping identities. Rapid evolution of ICT gives access to rapid information network, faster execution of experimental scientific revolution and thus, facilitates quicker adaptability to new lines of inventions. In case of ICT, 'the *use* of IT, not necessarily its production, is what matters for economic development.' However, the "use" depends on multitude of factors like skill, education, social networks, infrastructure, and others´--to name a few—that we purport to highlight in this work. Some countries lag in harboring the benefits and hence, wide development differentials persist among the recipients differing in constellation of factors that enable them to reap the benefits. Due to the evolution of ICT as a prime mover of technological change, organizational changes occur with differences in entrepreneurial abilities and productivity. Digital advances are skewed towards skilled, educated, and socially advantageous groups. For integrating this digitalization into a coherent policy design, it is important to understand what 'capability trap' could stand in the way of reaping digital dividends or, what are the roles of the 'analog complements' or ancillary enablers (WDR, 2016, ibid.). Emergence of organically evolved functionalities is crucial for capability expansion. As in many developing nations the state often lack the capability to implement the human development policies, the sustained improvements in performance for spreading the digital benefits depend on host of factors like investment in education and training, which this research will explore.

2. Objective and Research Scope

Globalization has led to plethora of conduits via which the effects are transmitted across the participants—developed and less developed nations. Emergence of 'Southern Engines for Global Growth 'has changed the global development scenarios, established themselves as 'new' locus of technological dynamism. "Shifting wealth" from North to the emerging South has been due to not only global re-distribution of manufacturing capacity or industrial activity, but also by the pro-active government policy to enable technology absorption and acquisition. Tyson and Lund (2016) has referred to the knowledge creation, globalization of knowledge and resultant productivity as 'one-ring' influencing technology transfer, and development. Recently, the Information technology agreement (ITA, 18 April 2016) of the WTO has expanded

[1] http://blogs.worldbank.org/developmenttalk/development-digital-age accessed on 29th April 2016.

[2] All these have revolutionized lives in Kenya and Tanzania and still lots remain to be done for 'realizing the full potential'. Kenya's M-PESA and Tanzania's mobile finance are good examples of digitization as is the spread of on-line E-commerce activities—via use of digital benefits to reduce transaction costs—has facilitated trade network.

the number of IT-products in the list to 201 and proposed tariff elimination for further boost in trade in such products (7% of global trade with $1.3 trillion in value per year).[3] 'Global Alliance' for ICT and economic development is launched to 'promote the use of ICT in fighting poverty, illiteracy and disease, in protecting the environment and empowering women and girls.' In case of low income countries, esp. the Sub-Saharan Africa, inadequacies of infrastructure in broad sense and weak governance (the pernicious syndrome effects) act as anti-growth. Although some of the developing countries are registering growth, in a post-economic crisis world of uncertainty sound macroeconomic policies and enabling environment via facilitating state apparatus could be necessary to overcome development traps such as lack of human capital, inadequate infrastructure, slack institutions, civil strife, resource extraction, instability, to name a few syndromes of anti-development. Thus, globalization of knowledge and digitalization of production activities leads to restructuring of activities (e.g., flexible and decentralized process like outsourcing off-shore) with networks of individuals and organizations with niches of expertise, and this could lead to organizational change and different returns to human capital as per educational attainment. The variations across nations are explained in terms of structural determinants such as schooling or education, political feasibility, governance, demographic factors as these are necessary for including the marginalized disadvantaged group.

3. Methodology and Contribution:

The aim is to *review/survey* the extant literature. Then, in a quantified framework, we analyze how all country-specific factors create a climate conducive for nurturing the innovation potential for informatization or digitization. The research intend to explore the effect of global diffusion and national innovation systems on organizational changes, and income inequality in the wake of skill-biased nature of ICT-induced technological change. In order to quantify, I intend to measure: the Technology Achievement index, Digitization Indicator, and Absorptive Capacity Index for gauging the capability to reap benefits in the digital age via E-government and E-commerce penetration. All these will be useful for quantifying the relationship between ICT and work organization, productivity, and organizational change in terms of skill-composition, product heterogeneity, trade in sophisticated products, and investments in ICT and training. This will also give insights on synergy between firm performance, productivity, and job creation.

In order to enhance digitization-led inclusiveness for the sustainable development goals by 2020, access is key and this will affect firms' productivity, profitability, and performance through organizational changes. Surveying such aspects, the research will explore: (i) the impact of digitization on organizational factors, for example, labor, firm organization, firm heterogeneity and product diversification, or product sophistication; (ii) demand for skilled labor due to new necessities; (iii) relationship between ICT and organizational factors (complementary); (iii) how does the relationship differ across countries at different levels of development; (iv) role of public infrastructure and digitization for TFP and technical efficiency. We consider firm-level studies for industries, such as, Electronics, Transport Equipment, Chemicals, Metal and Metal Products, which are exposed to competition, and sensitive to digitization and infrastructure.[4]

For quantifying the impact of digitization and its role for inclusive growth, we will estimate these at the Firm-level using panel data and generalized methods of moments (GMM) with lagged dependent variables as instruments. Also, a lower dimensional version of a global multi-regional, multi-sectoral computable general equilibrium (CGE) model will be used for addressing cross-border technology diffusion issues. In particular, Global Trade Analysis Project's (GTAP) Version 9 global database will be used for undertaking the research (see Hertel ed. 1997). Version 9 of the GTAP database disaggregates the World economy into 119 regions and 57 sectors. Major regions are likely to be India, China, USA, Latin America and composite developing regions of Africa. Sectors will be classified according to technological intensity and also we consider services sector having higher incidence of outsourcing.

Followings are some of the potential policy scenarios from the analysis:

a) Effect of Technological spillovers due to R&D activities in ICT sector and impact of regional economic integration arrangements in achieving economic growth.
b) Impact of ICT on the adjustment of the labor market.
c) Effect of labor market competition on wage rates and welfare.

[3] https://www.wto.org/english/tratop_e/inftec_e/inftec_e.htm

[4] Jorgenson and Stiroh (1999) has given evidence on substitution of IT for inputs, such as, labor and capital in the US. This causes change in firms' organization, skill heterogeneity, and adjustment of wages to productivity gains.

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Jorgenson, Dale W. and K. Stiroh (May 1999). Information Technology and Growth. American Economic Review, AEA Proceedings. 89 (2), pp. 109—115.

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- **M. A.** in Economics, **Jadavpur University**, Calcutta, India, Awarded in 1992. ***Cum laude***
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TRAINING:

- **Awarded a certificate of completion for the** "Innovation for Economic Development" program at **Harvard Kennedy School Executive Education** on, June 2014. ***John F. Kennedy School of Government, Harvard University, USA.***
- Participated in ***Training/ Workshop*** on "***Introduction to University Teaching***" organised by *Centre for Higher Education Development*, ***Monash University***, ***Melbourne, Australia***. June, 2000.
- Centre of Policy Studies and the IMPACT Project, ***Monash University, Melbourne***, ***Australia***. *Practical General Equilibrium Modelling* June 23-27, 1997.

CURRENT TITLE & AFFILIATION:

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PREVIOUS FULL-TIME WORK EXPERIENCES:

- *Associate Professor* (September 2008—August 2013), Department of Economics, College of Economics and Business, ***Hanyang University, Erica Campus, South Korea.***
- Assistant Professor (September, 2003—August, 2008), Department of Economics, College of Economics and Business, ***Hanyang University, Erica Campus, South Korea***
- Visiting Professor (September, 2002—August, 2003), School of Economics and Trade, Graduate School of Business, ***Kyungpook National University, Daegu, 702—701, South Korea.***
- ***Past Research-only Full-time Experience:*** Post-Doctoral Research Fellow (January 2001-July 2002), School of Forest Resources and Conservation (Resource Economics and Policy), Institute of Food and Agricultural Sciences, ***University of Florida, Gainesville, USA***. Served as resource ***economics graduate students' mentor*** at School of Forest Resources and Conservation (SFRC)/ Institute of Food and Agricultural Sciences, ***University of Florida***, ***USA***.

VISITING POSITIONS:

- *Visiting Scholar (Research Fellow),* ***United Nations University-World Institute of Development Economics Research (UNU-WIDER),*** Helsinki, Finland for August—November 2010.
- Erasmus Mundus Scholar 2009-2010, Visiting ***Department of Economics, Faculty of Applied Economics. University of Antwerp, Belgium***. May 18, 2010 –August 15, 2010. ***Host:*** Professor Wim Meeusen.
- *Visiting Fellow, Department of Economics,* ***Auckland University of Technology, New Zealand*** for 19th November—10th December 2010.
- Courtesy Assistant Professor (Visiting), ***Department of Economics, University of Oregon, Eugene, USA***. January 9, 2008 – January 30, 2008.
- Visiting Research Scholar, ***International Monetary Fund, Washington DC, USA*** (*Global Development Network Selection*), January, 2005-February, 2005.

SCHOLARSHIPS/FELLOWSHIPS/AWARDS AND HONORS:

- ***5th OECD World Forum on Statistics, Knowledge and Policy: Transforming Policy, Changing Lives. 13-15 October, 2015.*** *Guadalajara, Mexico. Attendance by Invitation with full expenses.*
- ***Executive Education Program*** Attendee with ***Tuition Assistance Scholarship*** for the program ***"Innovation for Economic Development***". *June 15—June 20, 2014.* ***John F. Kennedy School of Government, Harvard University, USA.*** *(Faculty Chair: Professor Calestous Juma)*
- ***Scholarship for Economic Modeling Network (EcoMod), Washington DC***, ***USA*** (March 2012): General Equilibrium Modeling Workshop/Course hosted by EcoMod Network in USA and Europe.
- ***Best (Distinguished) Researcher Award*** (2010), Hanyang University, South Korea (administered by Korea National Research Foundation via Hanyang University)
- Recipient of ***'The Royal Economic Society, U.K.' (RES) Small Conference Grant Fund***, September 2009.
- Recipient of ***Erasmus Mundus Scholarship***, **European Commission** (administered by University of Antwerp, Belgium), 2009-2010. Visiting University of Antwerp, May-August, 2010.
- **Featured** in ***Marquis Who's Who in the World***, 2009—2014/15, 26th /27th Edition—current

edition, N.Y. USA (entry in page 594 in 26th Edition).

- ***Award Finalist*** for the ***Global Development Awards Competition*** for 2006, Global Development Network, St. Petersburg, Russia.
- Awarded ***International Monetary Fund/Global Development Network*** "Visiting Scholarship" in an open competition during January 2005.
- ***Postgraduate Publications Award***, 1999-2000, Monash Research Graduate School, Monash University, Australia
- ***Monash Graduate Scholarship (MGS)*** at Monash University, Australia, 1996-1999
- ***Overseas Post-graduate Research Scholarship (OPRS/IPRS),*** 1996-1999, Monash University and DEETYA, Australia (Full-tuition Scholarship).
- ***University Grants Commission- National Eligibility Test (NET)*** for Lectureship in Colleges and Universities (Master's Level), Government of India. December, 1993.
- ***National Merit Scholarship*** awarded by Government of India, 1984/5-1989/90 for being Rank Holder in the ***State of West Bengal, India***.

PROFESSIONAL EXPERIENCE: ***RESEARCH EXPERIENCE***

- Junior Research Associate, ***Centre of Policy Studies/IMPACT Project and Department of Economics, Monash University, Clayton, Melbourne, Australia***. January, 2000-July, 2000 (extended till October, 2000).
- Research Scholarship (*PhD*), ***Department of Economics, Monash University, Melbourne, Australia***. March, 1996-January, 2000.
- Research Associate, ***International Management Institute, New Delhi, India***. July, 1995-Decmber, 1995.
- Research Assistant (1995), ***National Institute of Public Finance and Policy, New Delhi, India.*** February, 1995-May/June, 1995.
- Project Associate (1994) for the ***Embassy of the U.S.A***., New Delhi, India. November, 1994-December, 1994.

FIELDS OF SPECIALIZATION:

- *Major Field:* Computable General Equilibrium Modelling for Trade and Economic Development
- *Minor Field:* Economic Growth and Development Macroeconomics

AREAS of INTEREST:

- ***Methodological Areas****:* *THEORETICAL WORK* (General Equilibrium Trade), *CGE ANALYSIS* (Comparative-Static and Dynamic Computable General Equilibrium (CGE), especially Global Trade Analysis Project (GTAP) Model developed in Purdue University, USA), *APPLIED ECONOMICS* (development policy analysis).
- ***Substantive and Sectoral Areas****:* *TRADE AND GROWTH* (Modelling the aspects of trade, technology transfer and growth; Inter-sectoral technology flow in the context of information technology, biotechnology; Education and human capital accumulation; Skill-biased technical change); *TRADE AND DEVELOPMENT* (Outsourcing and Fragmentation; Issues related to Free Trade Agreements/Regional trading arrangements, Wage Inequality), *AGRICULTURE ECONOMICS* (Food Security, Land-use change, Biofuel and Agricultural Biotechnology, Productivity).

CURRENT RESEARCH, WORK IN PROGRESS AND FUTURE PROJECTS/ EXTENSION PLANS:

- *Trade and Corruption: Does quality matter for partnership agreements? (With Rahul Sen, **Auckland University of Technology, New Zealand**).*
- *FTAs, Regional Production Networks, and Developing Economies (with Rahul Sen and Sadhana Srivastava, **Auckland University of Technology, New Zealand**).*
- Human Capital-induced Skill, Technology Capture and Capital Flows: Long Run Analysis of Technology Transfer in Global Trade Model with FDI (*with Badri Narayan, **Purdue University, USA***).
- A North-South Model of Technology, Learning and Enrichment, Trade with EU and benefits of New Member States: A North-South Perspective (***Work plan ongoing***)
- How has Food-Fuel trade-off caused Land-use changes and relative price movements? Role of Technology in tackling Food and Nutritional Security: (***research ongoing***), (***future plan***, *with Badri Narayan, Purdue University, USA*).
- Land Deal: Risky Investment in Land and Returns to Factors (***work in progress with Ranajoy Bhattacharyya, Indian Institute of Foreign Trade, Kolkata, India***)
- Industrialization and Disintegration of Production: Role of Technology, Trade and Growth effects
- Does 'Biasedness' matter? Role of Directed Technical Change and its Diffusion in influencing Wage Differentials and Inequality in Productivity (***future extension plan with Prof. Madhumita Bhattacharyya, Monash University, Melbourne, Australia)***.
- Clean Technology Development and its Diffusion (***future interest***): developing a Technology Flow Matrix from Trade Matrix following Input-Output Table, YTC and OECD in the context of developed-developing transmission potentials.
- Democracy, Corruption, Openness and Investment Climate: How do they Matter for Economic Growth and Development? (***current interest**, research plan with Imed Drine, Senior Economist, Islamic Development Bank*).
- Trade Facilitation and International Transport Services (***future plan,*** with *Soamiely Andriamananjara, the World Bank, Washington DC, USA).*

GRANTS/ FUNDED RESEARCH PROJECTS AND DELIVERABLES:

***Grants in South Korean Won are mentioned in US$. Conversion rate: 1USD = 1,000 KRW (for convenience of conversion)**

1. Manmohanomics to Modinomics—Saga of an Elephant's Journey at the Crossroads for Economic Re-awakening: What happened, and What follows? ***Korea Institute of International Economic Policy (KIEP) Project Commissioned Paper. April—October 2015.*** **Amount: $4000 (approx.). (Deliverable:** Research Discussion Paper in 2015 in KIEP Publication series (***forthcoming***).

2. Closing the Development Gap by South-South trade, and Growth Potentials: Context of SAARC **Amount (approx.):** $10,000 ***Hanyang University Research* Award (*Deliverable:*** Published Paper in 2015), 2014-2015**.**

3. *Food-Feed-Fuel: An Exploration into Triple Crisis.* ***Hanyang University Research Fund***, May 2011- May 2013/14. **Amount:** $20,000, (***Deliverables: Two papers published in SSCI Journal***). Additional Paper Award: $7,000.

4. *New Face of Industrialization and Disintegration of Production: Role of Technology, Trade and Growth effects.* ***Hanyang University Research Fund***, June 2009- May 2010. **Amount:** $20,000,

(***Deliverable:*** Peer-reviewed Publication in a Journal)

5. *How far is the Global Technology Frontier? Exploration into some issues of Nexus between Trade, Human Capital, and Current Vintage Technology.* ***Hanyang University Research Fund***, October 2007-September 2008. **Amount:** $20,000 (***Deliverable:*** Peer-reviewed Publication)
6. *On Some Aspects of Fragmentation in Production, Trade, and Factor Prices: Suggested Implications.* ***Hanyang University Research Fund***, October 2006-October 2007. **Amount:** $10,000 (***Deliverable:*** Two Peer-reviewed Publications)
7. *Catching up or, Falling Behind? : A North-South Model of Trade and Technology*. ***Hanyang University Research Fund***, November 2005- November 2006. **Amount:** $10,000 (***Deliverable:*** Peer-reviewed Publication)
8. *Does Technology Facilitate Trade and Inequality Convergence? Exploration in a Global Computable General Equilibrium Model*. ***Hanyang University Research Fund*** and ***Global Development Network-IMF Research Support,*** November 2004- November 2005. **Amount:** $5,000 (***Deliverables:*** Peer-reviewed Publication and ***IMF Working Paper***)
9. *On some aspects of Trade, Growth and Welfare under Regional Trading Arrangements: Quantitative Analysis using a Global Computable General Equilibrium model*. ***Hanyang University Research Fund***, 2003-2004. **Amount:** $5,000 (***Deliverable:*** Peer-reviewed Publication)
10. Does FDI causes reduction in gap/inequality in productivity among countries? Independent project with H. K. Nath, Sam Houston State University, Texas, USA and H. M. Yildiz, Ryerson University, Canada. 2007-2009. (***Deliverable:*** Peer-reviewed Publication)
11. *Modelling some aspects of Trade, Technology and Skills.* ***Kyungpuk National University, South Korea, Research Fund***, 2002-2003. **Amount:** $5,000 (***Deliverable:*** Peer-reviewed Publication)

RESEARCH ACTIVITIES, PAPERS and PEER-REVIEWED PUBLICATIONS

Research Thesis And Projects:

1. [***M.Phil:*** August, 1992- June, 1994] **Title**: "Intra-Industry Trade in Manufactures in Developing Economies: An Empirical Analysis with special reference to India" with *Professor Deepak Nayyar*, Centre for Economic Studies and Planning, Jawaharlal Nehru University, India (*former* Vice-Chancellor, Delhi University, India). Degree Awarded August, 1995.

2. [***Ph.D:*** March, 1996-January, 2000] **Title**: "Embodied Technology Transfer via International Trade: A Quantitative Exploration in a Computable General Equilibrium Framework" with *Professor Alan A. Powell*, Department of Econometrics and Business Statistics, and Centre of Policy Studies/IMPACT Project, Monash University, Melbourne, Australia. Degree Awarded October, 2000.

3. Post-Doctoral Research Projects (2001-2002/3):

- Research in analysing the transfer of forestry biotechnology via international trade in wood products and its impact on productivity growth in the forest products sectors. The analysis has been done by using a multi-regional, multi-sectoral Dynamic Global Applied General Equilibrium Model. ***Deliverable:*** Project report and peer-reviewed publications.

- Multi-regional, multi-sectoral Applied General Equilibrium Modelling of the U.S. economy to trace

the policy implications for region-specific policies in the U.S. regions. Report and paper are published. ***Deliverable:*** Project report and peer-reviewed publications.

- Construction of a lower-dimensioned Social Accounting Matrix for undertaking Computable General Equilibrium Modelling for Florida's regional economy (a research project in University of Florida, USA). ***Deliverable:*** Project report.

PUBLICATIONS:

JOURNALS and WORKING PAPERS:

Journal List: Journal of Economic Policy Reform, Journal of Policy Modelling, Technological Forecasting and Social Change, Journal of Economic Forecasting, International Economic Journal, Journal of Economic Integration, Review of World Economics, International Review of Economics, Forest Policy and Economics, The World Economy, Indian Journal of Economics and Business, African Journal of Business Management, Journal of Economic Development, Modern Economy, Applied Econometrics and International Development, The Korean Journal of Policy Studies, Journal of South Asian Development.

1. **Das, Gouranga G**. *(**January 2015**). "Why some countries are slow in acquiring new technologies? A Model of Trade-led Diffusion and Absorption"* ***Journal of Policy Modelling, 37, pp. 65-91, Elsevier, SSCI)***
2. Bhattacharya, S. K. and ***Gouranga G. Das (December 2014).*** "Can South-South Trade Agreements Reduce Development Deficits? An Exploration of SAARC during 1995-2008." ***Journal of South Asian Development, Vol. 9 (3), pp. 253-285 (ISI, SSCI listed***)
3. **Das, Gouranga G**. *(**March 2014**). "What role 'Learning'? A North-South Tale of Enrichment Effects"* ***Journal of Economic Forecasting,*** Vol. 17 (1), pp. 67-85***. (SSCI, ISI listed)***
4. **Gouranga G. Das (February 2013):** "Moving" land across borders: Spatial shifts in land demand and immiserizing effects, ***Journal of Economic Policy Reform***, DOI:10.1080/17487870.2012.761459, 16(1), pp. 46—67. ***(SSCI, ISI listed)***
5. **Das, Gouranga G. (December 2012).** "Fragmentation in Production, Vertical Integration and Wage Inequality: A Theoretical Note*". **Modern Economy. Vol. 3, pp. 958-964.*** Scientific Research Publications. (**AEA-ECONLIT indexed**)
6. **Das, Gouranga G. (May 2012).** *"Globalization, Socio-institutional factors and North-South Knowledge Diffusion: Role of India and China as Southern Growth Progenitors."* ***Technological Forecasting and Social Change, Elsevier, 79 (4), pp. 620-637. (SSCI, ISI listed)*** http://dx.doi.org/10.1016/j.techfore.2011.05.013
7. **Das, Gouranga G. (July 2011).** *"How does Trade-mediated Technology Transfer affect Inter-regional and Inter-sectoral Competition? Exploration of Multisectoral Effects in a Global Trade Model."* ***African Journal of Business Management, Vol 5 (14), pp 5871-5886. (SSCI, ISI listed)***
8. **Das, Gouranga G. (August 2010).** "*How to Reap the Induced Technological Bonus? A Mechanism and Illustrative Implementation". **Modern Economy. Vol. 1 (2), pp. 80—88***. Scientific Research Publications. DOI: 10.4236/me.2010.12008. (**AEA-ECONLIT indexed**)
9. **Das, Gouranga G. (August 2009).** "*A Hybrid Production Structure in Trade: Theory and Implications*" ***International Review of Economics, Springer, Online Version: September 2009, Vol. 56, No. 4, December 2009, pp. 359-375.*** *DOI **10.1007/s12232-009-0082-9.*** ***(SSCI, ISI listed)***
10. **Das, Gouranga G. (June 2009)**. *"Intra-Industry Trade and Development: Revisiting Theory, Measurement and New Evidences."* ***Indian Journal of Economics and Business, Vol. 8, No. 1, June 2009, pp. 79-115.*** (**AEA-ECONLIT indexed**)

11. **Das, Gouranga G.,** H. K. Nath**,** and H. M. Yildiz **(March 2009)**. "*International Productivity Differences and the Roles of Domestic Investment, FDI, and Trade.*" ***International Economic Journal, Vol: 23, No: 1, pp. 121-142***. **DOI:** 10.1080/10168730802700277, (**AEA-ECONLIT indexed**)
12. **Das, Gouranga G.** (**December 2008**). *"Modelling Sectoral and Welfare Impacts of Information Technology Spillover: A Tale of Two Souths.*" ***Indian Journal of Economics and Business, Vol. 7, No. 2, December 2008, pp. 195-205***. (**AEA-ECONLIT indexed**)
13. **Das, Gouranga G.** (**March 2008**). "*Does Trade and Technology Transmission Facilitate Convergence? The Role of Technology Adoption in Reducing the Inequality of Nations*." ***Journal of Economic Policy Reform, Vol: 11, No: 1, March 2008, pp. 67-92. (SSCI, ISI listed)***
14. **Das, Gouranga G.** (**July 2007**). "*Information Age to Genetic Revolution: Embodied Technology Transfer and Assimilation—A Tale of Two Technologies*", ***Technological Forecasting and Social Change, North-Holland, Elsevier, Vol 74, Issue 6, pp. 819-842***. ***(SSCI, ISI listed)***
15. **Das, Gouranga G.** (**December 2007**). "Who leads and who lags? Technology Diffusion, E-commerce and Trade Facilitation in a model of Northern hub vis-à-vis Southern spokes." **–** ***Journal of Economic Integration***, ***Vol 22. No 4, pp. 929-972***. (**AEA-ECONLIT indexed**)
16. **Das, Gouranga G., and Soamiely Andriamananjara** (**2006**). "*Hub-and-Spokes FTAs in the Presence of Technology Spillovers: An application to the Western Hemisphere*" **—*Review of World Economics, Springer-Verlag (Weltwirtschaftliches Archiv)*** –Vol. 142, No. 1, pp. 33-66. ***(SSCI, ISI listed)***
17. **Das, Gouranga G**. (**2005**). "*Growth and Pattern of Intra-Industry Trade in Manufactures in India's Overall Trade: A Quantitative Analysis*"**—*Indian Journal of Economics and Business,*** Vol 4, No: 1**,** pp. 161-184**,** June 2005, Serials Publications. (**AEA-ECONLIT indexed**)
18. **Das, Gouranga G**., J. R. R. Alavalapati, D. R. Carter and M. E. Tsigas (**2005**). "*Regional impacts of environmental regulations and technical change in the U.S. forestry sector: A multiregional CGE analysis*"**—*Forest Policy and Economics*—**Vol: 7 (1), pp. 25-38, North-Holland, Elsevier Science Publisher. ***(SSCI, ISI listed)***
19. **Das, Gouranga G**. and Janaki R. R. Alavalapati (**2003**). "*Trade Mediated Biotechnology Transfer and its Effective Absorption: An Application to the U.S. Forestry Sector*"**—*Technological Forecasting and Social Change: An International Journal*** Volume 70, Issue: 6 pp. 545-562, North-Holland, Elsevier Science Publisher. ***(SSCI, ISI listed)***
20. **Das, Gouranga G**. (**2003**). "*Elasticity of Substitution and Disaggregation of Labor by Skill Level: Empirical Measurement Using a Global Database*" —***Applied Econometrics and International Development***, Vol: 3, No: 1, pp. 81—102**,** Euro-American Association of Economic Development Studies, University of Santiago de Compostela (Spain). (**AEA-ECONLIT indexed**)
21. **Das, Gouranga G**. (**2003**). "*Cross-Country Analysis of Empirical Evidences of Intra-industry Trade in Manufactures for Dynamic Asian and Other Developing Economies: Implications for Economic Growth and Development*" —***The Korean Journal of Policy Studies***, Volume 17, Number 2, pp. 49-75.
22. **Das, Gouranga G**. (**2003**). "*Trade, Endogenous Technology Capture and Induced Productivity: a Numerical Analysis"* ***Research Institute of Digital Economics (RIDE) Journal of Business and Economics***, Volume 8, pp. 223—246, Hanyang University, South Korea.
23. **Das, Gouranga G**. (**2002**). "*Trade, Technology and Human Capital: Stylised Facts and Quantitative Evidence*"—***The World Economy***, Volume 25, Issue 2, Blackwell Publishers, Oxford (U.K.) &

Boston (U.S.A.). ***(SSCI, ISI listed)***

24. **Das, Gouranga G**. (**2002**). "*Trade-induced Technology Spillover and Adoption: A Quantitative General Equilibrium Application*" —***Journal of Economic Development***, Volume 27, Number 2, pp. 21-44, December 2002. (**AEA-ECONLIT indexed**)
25. **Das, Gouranga G**. (**2001**). "*Absorptive Capacity and Structural Congruence: The Binding Constraints on the Acquisition of Technology—An Analytical Survey of the Underlying Issues.*"— ***The Korean Journal of Policy Studies***, Volume XV, No. 2 (February, 2001), pp. 117-140, Seoul National University, South Korea.
26. **Das, Gouranga G**. and Alan A. Powell (**2001**). "*Absorption Capacity, Structural Similarity and Embodied Technology Spillovers in a 'Macro' model: An Implementation within a Computable General Equilibrium Framework.*"— ***The Korean Journal of Policy Studies***, Volume XV1, No. 1 (August, 2001), pp. 111-132, Seoul National University, South Korea.

Working Papers:

27. ***Das, Gouranga G****. (**April 2012**). Trans-border Land Acquisitions: A New Guise of Outsourcing and Host Country Effects.* ***United Nations University—World Institute of Development Economics Research (UNU-WIDER) 'New Directions in Development Economics' Project Working Paper No. 2012/43.pp. 1—54. Helsinki, Finland. Access at:*** http://www.wider.unu.edu/publications/working-papers/2012/en_GB/wp2012-043/
28. Bhattacharya, S. K. and ***Gouranga G. Das*** (***November 2011***). "Do South-South Trade Agreements enhance member countries' trade? Evaluating Implications for Development potentials in the context of SAARC." ***Working Paper—W-2011/2 (pg.1-49) for the United Nations University Comparative Regional Integration Studies (UNU-CRIS), Belgium. (***at: http://www.cris.unu.edu/fileadmin/workingpapers/W-2011-2.pdf***)***
29. **Das, Gouranga G.** (***January 2007***). "*Does Trade and Technology Transmission facilitate Inequality Convergence? An Inquiry into the role of Technology in reducing the Poverty of Nations.*" – ***Working Paper (WP/07/16) for IMF, Washington DC***. (http://www.imf.org/external/pubs/cat/longres.cfm?sk=19860.0)
30. **Das, Gouranga G., and Soamiely Andriamananjara** (***2004***). "*Hub-and-Spokes FTAs in the Presence of Technology Spillovers: An application to the Western Hemisphere*" (*Electronically published* in Social Science Research Network, Economics Research Network at www.ssrn.com). Also, published as ***Office of Economics Working Paper***, ***United States International Trade Commission, September 2004, No: 2004-09-A***. **(Published).**
31. **Das, Gouranga G**. and Alan A. Powell (***2001***). "*Absorption Capacity, Structural Similarity and Embodied Technology Spillovers in a Macro model: An Implementation within the GTAP Framework.*"—***Working Paper IP-77, Centre of Policy Studies/IMPACT Project, Monash University, Australia.*** Available electronically at *http://www.monash.edu.au/policy/ELECPAPR/ip-77.htm* and also *in Social Science Research Network Electronic Library* (for Economic Research Network) at *http://papers.ssrn.com/paper.taf?abstract_id=281529* (**Published**)
32. **Das, Gouranga G**. (***1999***). "*What is assumed in the GTAP Database's Disaggregation of Labor By Skill Level?*"—***Working Paper IP-75***, ***Centre of Policy Studies/ IMPACT Project, Monash University, Australia***. (**Published**)
    Available electronically at *http://www.monash.edu.au/policy/ELECPAPR/ip-75.htm* and also *in Social Science Research Network Electronic Library* (for Economics Research Network) at *http://papers.ssrn.com/paper.taf?abstract_id=214269.*

Current Submissions:

33. **Das, Gouranga G**. *(February 2016). "Land-Grab in the presence of Skill formation."* ***(forthcoming in Essays in Honor of Professor Deepak Nayyar, Oxford University Press/Routledge)***
34. **Das, Gouranga G**. *(September 2015). "Food-Feed- and Fuel: Role of Technology in resolving Triple Crisis"* ***(submitted to Journal of Policy Modeling, SSCI).***
35. Das, Gouranga G. (February 2016). "*Trade, Technology and Productivity Bonus in a Nested Production Structure: A Theoretical Model with Endogenous Hicks-Neutral Technology Spillover.*" (*submitted to* ***Metroeconomica, SSCI***).

Books/Book Chapters in Edited Volumes

1. ***Invited Book Editor***: **Das, Gouranga G.** '*Current Issues in International Trade: Methodologies and Development Implications for the World Economy*.' **Nova Science Publishers, NY, USA. Published August 2014**. **ISBN:** 978-1-63321-405-7
2. **Das, Gouranga G.** (August 2014). CGE Methodology And Trade-Technology Nexus Redux: Illustrations And Synthesis For Modelling And Policy Analysis. In **Das, Gouranga G (Ed.)** '*Current Issues in International Trade: Methodologies and Development Implications for the World Economy*.' **Nova Science Publishers, NY, USA. Published August 2014**. **ISBN:** 978-1-63321-405-7
3. **Invited Book Chapter/*Lead Author: "Land Use, Land Cover, and Food-Energy-Environment Trade-off: Key issues and Insights for Millennium Development Goals." In Encyclopaedia of Agriculture and Food Systems, Vol. 4,*** Editor-in-Chief Neal Van Alfen (August 2014), **Elsevier, San Diego: pp. 114-133**.
4. **Invited Book Chapter/*Lead Author:* Das, Gouranga G.** and Hongyul Han (April 2013). "Trade in Middle Products between South Korea and China: A Survey on Extent of Off-shoring." **pp. 276-310**. ***Invited Book Chapter*** in: *Bardhan, Kroll and Jaffe (University of California Berkeley, USA) (Editors-in-Chief)*, ***Oxford Handbook of Off-shoring and Global Employment***. ***Oxford University Press, UC Berkeley and Oxford***.
5. **Invited Book Chapter/*Lead Author:* Das, Gouranga G.** (March 2014). ***"Food Security and Sustainable Agriculture in Asia: Exploring the Implications of the Cooperation between the EU and Asia via Technology"*** In ***Book publication*** "Food Security - The Role of Asia and Europe in Production, Trade and Regionalism", Invited Chapter, EU-ASIA Dialogue Project (implemented by: East Asian Institute, National University of Singapore, and European Policy Centre, European Union Centre Singapore, and Konrad-Adenauer-Stiftung e. V. (KAS).
6. **Invited Book Chapter/*Lead Author:* Das, Gouranga G.** (2009). "Triads of Food, Feed, and Fuel: Economic Implications of Developing Science and Technology in Soybean and Other Crops." ***Book Chapter*** in: Frank Columbus (Editor-in-Chief), Soybean Crops: Growth, Fertilization and Yield. Nova Science Publishers, N.Y., USA.
7. **Das, Gouranga G.** (November 2008). "Agricultural Trade Reforms and Development Experience in the 1990s: A Bird's Eye View with Special Focus on India." ***Monograph Series*** (ISBN: 978-89-86998-14-6), Hanyang University, KISDI Publishers, South Korea.
8. **Invited Book Chapter/*Lead Author: (with*** Alavalapati, Janaki R. R., and C. Wilkerson. "*Emerging Issues of Globalization: Implications for Forest Use in the U.S. and Canada*"**— *Book Chapter*** in: B. Shindler, B. Steel, and T. Beckley (eds.), Two Paths through the Forest: The Sustainability Challenge in Canada and the United States. ***Oregon University Press***, USA, pp. 251-270. 2003
9. **Invited Book Chapter/*Lead Author: (with*** Arindam Banik, and Rajat Kathuria. "*Indo-US Trade: A*

Birds Eye View of the Issues", ***Book Chapter*** in: Pranab Banerji (Editor)**,** Issues in the U.S. Trade, **Kanishka Publishing House**, New Delhi, India. 1996

Project Report:

1. Alavalapati, J. R. R., D. R. Carter, ***Gouranga G. Das***, and David Wear (December, 2001). "*Changes in environmental regulations, investments and international trade in U.S. forestry: implications for the U.S. South—A Regional Computable General Equilibrium Analysis*", ***Project Report*** presented to ***United States Department of Agriculture Forest Service Southern Research Station, USA***.

BOOK REVIEWS:

1. "Giovanni Anania, Mary E. Bohman, Colin A. Carter, and Alex F. McCalla (Editors): ***Agricultural Policy Reform and the WTO-Where are we heading?*** Cheltenham, UK; Northampton, MA, USA: Edward Elgar Publishing, ISBN 1-84376-892-5 (Hardcover). ***Journal of Agricultural Economics (January 2007), Vol. 58 (1), pp. 163-166.*** Blackwell Publisher.

2. Evenson, R. E., and V. Santaniello (Editors): ***International Trade and Policies for Genetically Modified Products.*** CABI Publishing, UK; Cambridge, MA, USA: 2006, 208 + xiv pages. ISBN 0-85199-056-8 (Hardcover). ***Journal of Agricultural Economics, Vol. 59 (1), January 2008, pp. 207-210,*** Blackwell Publisher.

3. "Operationalising Sustainable Development: Economic-Ecological Modelling for Developing Countries", Indo-Dutch Studies on Development Alternatives 22, Kanchan Chopra and Gopal K. Kadekodi (eds.). In ***South Asia***, New Series, Vol. XXIII, No.1, June 2000. Journal of the South Asian Studies Association.

4. "Economy and Organization: Indian Institutions Under the Neoliberal Regime" Amiya Kumar Bagchi (ed.). In ***South Asia***, New Series, Vol. XXIII, No.2, December 2000. Journal of the South Asian Studies Association.

5. "Technovation, Management and Workers." In ***The Book Review***, Vol XX, No. 7, July 1996, The Book Review Literary Trust, New Delhi, India.

6. "Technological Revolution, Nations and Agents: A Macro View." In ***The Book Review***, Vol. XX1, No. 4, April 1997, The Book Review Literary Trust, New Delhi, India.

7. "An Alternative Analysis." In ***The Book Review***, Vol XX, No.6, June 1996, The Book Review Literary Trust, New Delhi, India.

Published Abstract:

- **Das, Gouranga G**. (2001). "*Embodied Technology Spillover via International Trade and Absorption Capacity: A Quantitative Exploration in a Computable General Equilibrium Framework.*" **5th Spring Meeting of the Young Economists, Oxford University, U.K.,** 27-28 March 2000. Young Economists' Conference 2000, **Book of Abstracts,** Oxford University.

TEACHING EXPERIENCE

- Professor, ***Department of Economics***, ***Hanyang University***, ***South Korea***. September, 2003-Till now.
- Visiting Professor, ***School of Economics and Trade, Graduate School of Business***, ***Kyungpook National University***, Daegu 702-701, South Korea. Developed curriculum for teaching the following ***modules***: (i) Macroeconomics (Undergraduate); (ii) Seminar in Economics and Trade 1 and 2 (two

Undergraduate Courses); (iii) Principles of Economics (Undergraduate); (iv) Advanced International Economics (Post-graduate); (v) Comparative Economic Development (Post-graduate).

- Worked as a Teaching/Research Assistant in ***International Management Institute,*** B-10, 30 Qutab Institutional Area, New Delhi, India.

MODULES TAUGHT:

- ***Undergraduate Level***: Intermediate Microeconomics, Intermediate Macroeconomics, Seminar in Economics and Trade 1, Seminar in Economics and Trade 2, Principles (Understanding) of Economics, Theory and Applications in Economics, English Readings in Economics, Principles of Macroeconomics, Principles of Microeconomics, Information Economics, International Economics.
- ***Graduate Level***: Advanced International Economics 1, Comparative Economic Development, Seminar in Economics, Economics Workshop (Seminar in Economics).
- ***Teaching Medium:*** All Course Lectures are delivered ***in English***.
- **Teaching Interests:** Microeconomics, Macroeconomics, Mathematical Economics, International Trade and Commercial Policy, Economic Growth and Development, Computable/Applied General Equilibrium Modelling, Technological Economics.

ADMINISTRATIVE AND PROFESSIONAL ROLES:

University Administrative Roles:

Member: *Academic Committee for the Orientation Program*
Member: *Faculty Committee, Academic Planning*.
Member: *Faculty (Business and Economics) Representative in Foreign and Korean Professors Orientation Program, 2008 (Invited Speaker).*

- *Participant in the University Faculty Workshop (Meeting for Campus Activities), 2003-till now.*
- *Invited Speaker in the Hanyang University Campus Upgrade Workshop, 2004*

Faculty Advisor:

- *Advisor for Freshman Students for the adjustment to college (2005-till now)*
- *Senior Students' Advisor for Career Plans and Learning (2008 onwards)*

Member: *Intellectual and Scholarly Activities Committee*.
Member: *Faculty search committee.*
Member: Globalization Committee in the College for recruitment of foreign faculty.
Member: *Curriculum and Academic Standards Committee, Graduate and Undergraduate Committee*.

Referee/Book Reviewer:

Economic Modelling (ISI), Emerging Market Finance and Trade (ISI), Technological Forecasting and Social Change (SSCI) Journal of Economic Integration, Journal of Economic Policy Reform (ISI), Review of Urban and Regional Development Studies (ISI), Journal of Technology Transfer (ISI), Contemporary Economic Policy (ISI), Modern Economy, African Journal of Business Management (ISI), Indian Journal of Economics and Business, Applied Economics (ISI), Journal of Science and Technology Education Research (JSTER), Research Institute of Digital Economics, Journal of Business and Economics, South Korea, Reviewer of Conference and Journal Papers for International Academy of Business and Economics, IABE, (www.iabe.org, www.iabe.eu).

Book Reviewer for Journal of Agricultural Economics, Conference Abstract Reviewer for Global Trade Analysis Project (GTAP) Annual Conference on Global Economic Analysis, Purdue University, USA

Editorial Responsibilities:

Associate Editor, Journal of Development and Agricultural Economics (Academic Journals), Editorial Board Member, Research in Applied Economics (Macro think Institute, USA), Journal of Modern Economy, African Journal of Business Management. Guest Editor: 'Special issue on Technological Economics' in the Journal of Modern Economy.

External Doctoral Thesis Examination:

- Nominated in the *Panel* of Examiners for the Thesis—APEC Digital Divide: Economic Policy Implications by Wojciech Szewczyk, PhD Candidate, Macquarie University, Australia (2008).

MEMBERSHIP OF PROFESSIONAL ASSOCIATIONS:

- Member of **the *American Economic Association, USA***.
- ***Global Development Network*** (GDN) (Featured Researcher)
- ***Center for Global Trade Analysis and Project (GTAP), Purdue University, USA***. Featured Researcher: https://www.gtap.agecon.purdue.edu/access_member/profile/profile_display.asp

RESEARCH NETWORKS:

- **Research Gate**: http://www.researchgate.net/profile/Gouranga_Das3
- **Google Scholar: http://scholar.google.co.kr/citations?hl=en&user=tFQoj1EAAAAJ**
- **Academia.edu: https://hanyang.academia.edu/GourangaDas**
- **Munich Personal RePEc Archive**: http://mpra.ub.uni-muenchen.de/view/people/Das=3AGouranga=3A=3A.html
- ***RePEc***: http://ideas.repec.org/cgi-bin/htsearch?q=gouranga+gopal+das+ (incomplete list due to restrictions on access to some Journals in which I published my papers (not in the REPEC database).

Member of Institutions, Trade and Economic Development (InsTED) Network (University of Exeter) at http://blogs.exeter.ac.uk/insted/researchers/ .

INVITED INTERNATIONAL CONFERENCE PRESENTATIONS (1998—PRESENT):

1. **Policy Conference "Food Security in the Context of climate Change" under the Project "**EU-Asia Dialogue – Shaping a Common Future for Europe and Asia". Konrad-Adenauer-Stiftung (KAS), Germany, East Asia Institute of the National University of Singapore, Centre for South Asian Studies (CSAS), ***19—21st March, 2014.***
2. ***Das, Gouranga G. and Imed Drine (June 2013). How Far away is Africa?*** *Technology Catch-up in Africa****—invited presentation at the 'L2C—Learning to Compete: Industrial Development and Policy in Africa' United Nations University—World Institute of Development Economics Research (UNU-WIDER) Conference, Helsinki, Finland, 24—25 June 2013.***
3. **Das, Gouranga G. (2012).** "Technology Adoption and Land Grab"—research work presented at the ***9th edition of Institute for Study on Employment and Occuation (ISEO) Summer School Workshop (organised by the ISEO Institute, Brescia, Italy, Founded by Nobel Laureate Professor Franco Modigliani and currently presided by Nobel Laureate Professor Robert Solow), 23rd—30th June, 2012.***
4. **Das, Gouranga G. (2011).** "That far-off land": A Production Model of Land-deal and Host country effects"-- Paper presented for the ***Oikos Young Scholars International Economics Academy: Management of Natural Resources and International Trade (organised by University of St. Gallen***

***and Oikos foundation for economy and ecology). John Knox Centre, Geneva, Switzerland, August 28-31, 2011*.**

5. **Das, Gouranga G. (2010).** "What role 'Learning'? A North-South Model of Technology Transmission, Enrichment Effect and Absorption"-- Paper presented for the ***4th Technology and Economic Development (TED) International Conference on Industrial Dynamics, Innovation Policy and Growth, Izmir University of Economics-EKOLIDER and Middle-Eastern Technical University-TEKPOL, Turkey, May 21-22, 2010*.**
6. **Das, Gouranga G. (2009).** "What role 'Learning'? A North-South Model of Technology Transmission, Enrichment Effect and Absorption"-- Paper presented for the ***3rd All China Economics (ACE) International Conference, City University of Hong Kong, December 14-16, 2009*.**
7. Bhattacharya, S. K. and ***Gouranga G. Das*** (2009). "Do South-South Trade Agreements enhance member countries' trade? Evaluating Implications for Development potentials in the context of SAARC." Paper presented at the ***United Nations University-World Institute for Development Economics Research (UNU-WIDER) and UNU-Comparative Regional Integration Studies (UNU-CRIS) International Workshop organised by the UNU, 5-6 November, 2009***.
8. **Das, Gouranga G. (2009).** " Role of Agricultural Biotechnology and Induced Productivity in Tackling Food and Fuel Trade-offs: A Tale of Twin Crisis"
   -- Paper presented at the ***Asia-Pacific Trade Economists' Conference (Trade-led Growth in times of Crisis), Bangkok, Asia-Pacific Research and Training Network on Trade (ARTNeT), November 2-3, 2009*.**
9. **Das, Gouranga G. (2008).** "Technology Diffusion and Trade Facilitation in a model of Northern hub vis-à-vis Southern spokes--A Tale of Two Souths" --Paper presented at the ***11th Annual Conference on Global Economic Analysis***, ***Theme: Future of Global Economy***, Organised by *UNU-World Institute for Development Economics Research* (WIDER), Helsinki, *Center for Global Trade Analysis, Purdue University*, USA and *Government Institute for Economic Research (VATT), Finland*. ***June 12-14, 2008*.**
10. **Das, Gouranga G. (2007).** "Who leads and who lags? Technology Diffusion, E-commerce and Trade Facilitation in a model of Northern hub vis-à-vis Southern spokes" --Paper presented in the ***Shanghai Forum 2007***, ***Theme: Economic Globalization and the Choice of Asia***, Organised by Fudan University, China. ***May 25-27, 2007***.
11. **Das, Gouranga G. (2006).** "*Cross-Country Inequality Convergence: An Inquiry into the role of Trade and Technology in reducing the Poverty of Nations.*" –Paper accepted for ***6th Global Conference on Business and Economics***, Organised by Association for Business and Economics Research and International Journal of Business and Economics, Gutman Conference Center, ***Harvard University***, Cambridge, USA. ***October 15-17, 2006***.
12. **Das, Gouranga G. (2004).** "*Information Age to Genetic Revolution: Embodied Technology Transfer in Agriculture and its Assimilation—A Tale of Two Technologies*", Paper prepared for the International Consortium on Agricultural Biotechnology Research (ICABR) ***8th ICABR International Conference On Agricultural Biotechnology: International Trade and Domestic Production***, Ravello (Italy), ***July 8-11, 2004***. (available at ICABR Website: http://www.economia.uniroma2.it/conferenze/icabr2004/summaries_of_the_papers/default.asp)
13. **Das, Gouranga G., and Soamiely Andriamananjara** (2004). "*Hub-and-Spokes FTAs in the Presence of Technology Spillovers: An application to the Western Hemisphere*" Paper presented for the ***7th Annual Conference on Global Economic Analysis "Trade, Poverty and the Environment"***

(organised by ***The World Bank and the Center for Global Trade Analysis, Purdue University, USA*** *June 17-19, 2004*.

14. Timko, T., J.R.R. Alavalapati, J.Zhang, and **G. Das (2004)**. "*Effect of Environmental Tax and Incentives for Silvopasture on Florida's Ranching Industry: A CGE Approach.*" ***Southern Forest Economics Workshop***, ***St. Augustine, Florida, USA,*** March 14-16.

15. Das, Gouranga G., H. K. Nath and H. M. Yildiz (2003). "*Does foreign direct investment reduce inequality among countries in productivity?*" Paper presented for the ***50th Annual North American Meetings of the Regional Science Association International*** (organised by the ***North American Regional Science Council (NARSC)), Philadelphia****, November 20-22nd, 2003*.

15. Das, Gouranga G. (2002). "*Trade, Endogenous Technology Capture and Induced Productivity: A Numerical Analysis"* Paper published in the *Refereed Conference Proceedings in CD* for ***The 2002 International Business and Economics Research Conference***, Las Vegas, Nevada, ***USA***, October 7-11, 2002.

16. Das, Gouranga G. and J. R. R. Alavalapati (2001). "*Biotechnological Innovations in the Forestry Sector and their Economic Impacts on Other Sectors via Embodied Technology Transfer: An Investigation within Dynamic GTAP Framework*" Paper presented to the ***Fourth Annual Conference on Global Economic Analysis,*** June 27-29 2001, the ***Center for Global Trade Analysis, Purdue University, USA.***

17. Alavalapati, J. R. R. and ***Gouranga G. Das*** (2001). "*Socio-economic Impacts of Biotechnological Innovations in the Forestry Sector: A Dynamic Applied General Equilibrium Analysis*" Paper presented at the ***International Conference on Social and Economic Perspectives of Boreal Forest Ecosystem Management***, held at ***Herriot Watt University, Edinburgh, Scotland, 5-8 June, 2001***.

18. Wu, L., J. R. R. Alavalapati, D. R. Carter, D. Wear, and **Gouranga G. D**as (2001). "*Assessing the Impact of Trade Policy and Technology Changes in the U.S. Forestry Sectors*." ***31st Southern Forest Economics Workers Annual Meeting on "Forest Law and Economics",*** March 27-28, 2001, Atlanta, USA.

19. Das, Gouranga G. (2001). "*Trade, Technology Capture and Productivity: A Numerical Analysis"* Paper *accepted* for the ***Canadian Economics Association Conference 2002***, ***36th Annual Meeting of the Economists, University of Calgary, Alberta, Canada,*** May 30-June 2, 2001.

20. Das, Gouranga G. (2000). "*Embodied Technology Transfer via International Trade and Disaggregation of labor payments by skill level: A Quantitative Exploration in GTAP Framework*" Paper presented at the ***Third Annual Conference on Global Economic Analysis,*** June 27-30 2000, organised by The ***Centre of Policy Studies, Monash University, Australia in conjunction with The Center for Global Trade Analysis, Purdue University, USA.***

21. Das, Gouranga G. (2000). "*Embodied Technology Spillover via International Trade and Absorption Capacity: A Quantitative Exploration in a Computable General Equilibrium Framework*" Paper Presented to the ***Young Economists' Conference 2000***, ***5th Spring Meeting of the Young Economists, Oxford University, U.K.*****,** 27-28 March 2000.

22. Das, Gouranga G. (1999). "*What is assumed in the GTAP Database's Disaggregation of Labor By Skill Level?*" Paper Presented to the Faculty of Business and Economics Doctoral Research Conference, ***Monash Mt. Eliza Business School***, ***Monash University, Melbourne, Victoria, Australia, 13-14 December 1999***.

23. **Das, Gouranga G**. (1998). "*Absorption Capacity, Structural Similarity and Embodied Technology Spillovers in a Macromodel: An Implementation within the GTAP Framework.*" Paper presented in Canberra at the [national] ***Annual Ph.D Conference in Economics and Business*** under the aegis of the ***Centre for Economic Policy Research, Research School of Social Sciences, Australian National University, Canberra and Economic Research Centre, Department of Economics, University of Western Australia, 4-6 November 1998***. Published in Conference Proceedings.

OTHER ROLES IN INTERNATIONAL CONFERENCES:

24. *Technical Discussant* ***in APEC Capacity-Building Workshop on Quantitative Methods for Assessing Non-Tariff Measures (NTMs) and Trade Facilitation***" 8—10 October 2003, Bangkok, Thailand. Organized by the ***United States International Trade Commission*** and ***Australian Productivity Commission*** with funding support from the ***APEC Trade and Investment Liberalization Fund***.
25. *Discussant and Reviewer of Paper titled 'Manufacturing Productivity in Indian States: Does Investment climate matter? By C. Veeramani and B. Goldar* ***in 7th Annual Global Development Conference on 'Institutions and Development: At the Nexus of Global Change. January 19-21 2006, St. Petersburg, Russia.***
26. *Chaired a Session on 'Economics/Finance' in* ***6th Global Conference on Business and Economics***, Organised by ***Association for Business and Economics Research and International Journal of Business and Economics, Gutman Conference Center, Harvard University, Cambridge, USA.*** *October 15-17, 2006*.
27. *Discussant of a paper titled: 'An Empirical Study of Price dispersion in Homogeneous Goods Markets.' in* ***6th Global Conference on Business and Economics***, Organised by Association for Business and Economics Research and International Journal of Business and Economics, ***Gutman Conference Center, Harvard University, Cambridge, USA.*** *October 15-17, 2006*.
28. *Chaired a Session on 'Poverty' in* ***11th Annual Conference on Global Economic Analysis***, ***Theme: Future of Global Economy***, Organised by **UNU-World Institute for Development Economics Research (WIDER), Helsinki, Center for Global Trade Analysis, Purdue University, USA and Government Institute for Economic Research (VATT), Finland**. *June 12-14, 2008*.
29. *Invited Conference Participant:* One-day International conference on **'The Economic Crisis and the Process of European Integration'. European Parliament, Brussels, Belgium.** *2nd June 2010.*
30. *Department for International Development (DFID), The United Kingdom (dfid.gov.uk)***, Invited in Roundtable Discussion, *22nd July 2010,* on Innovation and Growth in Low Income Countries (Contact: N-Gaminiratne@dfid.gov.uk, t-hatton@dfid.gov.uk), Webhost: http://www.dfid.gov.uk/Media-Room/News-Stories/2010/Online-consultation-on-innovation-and-economic-growth-in-poor-countries/**

Invited Seminar Participation (2000—present):

1. Das, Gouranga G. (2014). "Why some countries are slow in acquiring new technologies? 'Ideas' and Anti-learning Syndromes", Seminar Paper presented in ***Indian Institute of Foreign Trade (IIFT), Kolkata, India, 21st January, 2014***
2. Das, Gouranga G. (September 2013). "Triple-Crisis: Nature and Solution", Seminar Paper presented in ***Research Institute of Digital Economics, Hanyang University, Erica Campus, South Korea.***
3. Das, Gouranga G. (August 2012). "That Far-off Land: Land Deal and Host-country Effects", Seminar Paper presented in ***Research Institute of Digital Economics, Hanyang University, Erica Campus,***

South Korea.

4. Das, Gouranga G. (2010). "Land Grab and Host-country Effects", Seminar Paper presented in ***United Nations University-World Institute of Development Economics Research (UNU-WIDER), Helsinki, Finland September*** 23, 2010***.***
5. Das, Gouranga G. (2010). "Why some countries are slow in acquiring new technologies? 'Ideas' and Anti-learning Syndromes", Seminar Paper presented in ***Department of Economics, Auckland University of Technology, Auckland, New Zealand, 3rd December***, 2010***.***
6. Das, Gouranga G. (2008). "Trade-mediated *Technology Diffusion and its Effective Absorption*", Seminar Paper presented in ***Department of Economics, University of Oregon, Eugene, USA,*** January 15, 2008***.***
7. Das, Gouranga G. (2000). *"Embodied Technology Transfer via International Trade and Assimilation: An Applied General Equilibrium Analysis"*, ***Department of Economics, Monash University, Australia, Graduate Staff Seminar,*** May 2000.
8. Das, Gouranga G. (2000). "*Modelling Embodied Technology Transfer and Assimilation within the GTAP Framework: Current Results and Scope for Development*", Seminar Paper presented in ***Centre d'Etudes Prospectives et d'Informations Internationales (CEPII)***, ***Paris, France***, October 2000.

POPULAR ARTICLE/S: OP-ED COLUMNS IN NEWSPAPER

1. *Inclusiveness: the new Imperative.* **'Opinion to the Editor' in International Herald Tribune and Joong-Ang Daily, September 29, 2006.**
2. *Peace, Poverty, and Prosperity: Triad of Development.* **'Thoughts of the Times' In The Korea Times, February 20, 2007.**
3. *Whither Inclusiveness? Shed Myopic Inhibitions (Korea Needs to Start Welcoming Immigrants)***. 'Opinion/Overseas View' In International Herald Tribune and Joong-Ang Daily, February 26, 2007.**
4. *Aging and Immigration***. 'Thoughts of the Times' In The Korea Times, October 9, 2007.**
5. *The Money-happiness equation***. 'Opinion/Overseas View' In International Herald Tribune and Joong-Ang Daily, December 4, 2007.**
6. *Façade of Globalization***. Opinion/Times Forum. In Korea Times, September 16, 2008.**
7. *Keynes is back!* **Opinion/Times Forum. In Korea Times, January 13, 2009.**
8. *Government Crisis Plans should be Clear-headed and Transparent***. 3rd February 2009, Global Crisis Debate in http://voxeu.org/index.php?q=node/2981 , http://voxeu.org/index.php?q=node/2830 (reprinted from The Korea Times article—vide 7 above)**
9. *Happy Birthday Keynes!* **Opinion/Times Forum. In Korea Times, June 11, 2009.**
10. *Detection of Earthquakes.* **Opinion/Times Forum. In Korea Times, June 11 (print version), 2010.**
11. *Better Quake Warning System.* **Opinion/Times Forum. In Korea Times, March 27 (web version), 2011.**
12. *Underbelly of Food Inflation.* **Opinion/Times Forum. In Korea Times, August 18 (print version), 2011.**
13. *Is Globalization Passé?* **Opinion/Times Forum. In Korea Times, November 5 (print version), 2011.**
14. *Where are all the kids gone***? Opinion/Times Forum. In Korea Times, August 15 (print version), 2012.**
15. *A Reflection on Indian Economy and Other Concerns***. Korea Institute of International Economic**

Policy (KIEP). Invited Column, 14th May, 2012.

16. *Matching Technology with Humanitarian Goals.* **Opinion/Viewpoint. In The Korean Herald, August 21 (print version), 2013.**
17. *Ideas and Expressions.* **Opinion/Viewpoint. In The Korean Herald, December 26 (print version, eversion December 25, 2013), 2013.**

REFERENCES:*

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