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Summaries of the Conference Papers

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CONTENTS

About the Conference	xiii
About the Organiser	xiv
Conference Themes	xv

Theme 1 FOOD AND NUTRITIONAL SECURITY

KEYNOTE PAPER

Food and Nutrition Security in India: An Assessment Manoj Panda	3
---	---

TECHNICAL SESSION 1.1

Health Impacts of Extreme Weather Conditions in India: Operational Frameworks for Building Climate Resilient Health Systems CS Verma	5
Agrarian Change in India in the 2000s: A Study in Continuing Distress Saurabh Rastogi	6
Climate Change and Rice Productivity in India and Pakistan: A Comprehensive Analysis Ahab Rizvi and Shahid Ashraf	7
Factors Associated with Stunting Prevalence in Under 5 Children in India: Evidence from the Trends in National Health Surveys during 2005-06 to 2019-2021 M. Sridevi and Ch. Khadar	9

TECHNICAL SESSION 1.2

Globalization, Agricultural Development and the Role of State: A General Equilibrium Analysis Ranjanendra Narayan Nag, Asmita Das and Damayanti Sau	11
The Role of Cooperative Societies in National Food Security Act of Assam Smriti Rekha Singha and Rajshree Bedamatta	12
Determinants of Food and Nutrition Security in Tribal Areas of Rural Jharkhand Swati Dutta, Sunil Kumar Mishra and Shreeranjana	13
Hunger and Food Security in the Time of COVID 19: Evidence from the Worst Affected Country, India Debakshi Bora and Ankita Kotoky	14

Food Security in the Context of COVID- 19 in Rural India: A Cross Sectional Study from 12 States Alwyn D'Souza	15
TECHNICAL SESSION 1.3	
Agricultural Domestic Support Reforms at the WTO: An Assessment of the Proportional Reduction Approach Paavni Mathur, Sachin Kumar Sharma, Abhijit Das, Suvayan Neogi and Teesta Lahiri	17
Child Malnutrition across Gender among Major Tribal States in India Puja Das	18
Trends and Patterns of Prevalence of Undernourishment in India since 1980s: An Assessment using Sustainable Development Goal (SDG) Indicator 2.1.1 and National Consumption Surveys Vaishali Bansal	19
Drought and Food Insecurity in India: Understanding the Nature & Pattern at Household Level Basanta Sahu	20
TECHNICAL SESSION 1.4	
Analysis of Pulses Cultivation and Nutrition Security in Odisha Neela Madhaba Sheekha	22
Food Wastage and Post-Harvest Losses in India: A Qualitative Analysis with Certain Policy Implications Ilma Rizvi, Shahid Ashraf	23
People's Hotel: A Means to Nutritional Empowerment Seethal Davis and Manjusha P	24
A Review Paper on Food and Nutritional Security with Special Reference to Jharkhand Kumar Harsh	25
Who is Well Nourished in India? An Age and Socio-economic Matrix Mukesh Kumar and Pratap Mohanty	26
TECHNICAL SESSION 1.5	
Impact of COVID-9 on the Fish Production in Kerala Salini U, and Manisha M.U.	28
Security in Times of Insecurity: A Study on Food Security among EWS Households of Delhi during COVID-19 Uma and Shubhangi Singhal	29

Sustainable Livelihood and Nutrition Security for Tribal Farmers: An Assessment of CSR Intervention in Dungarpur, Rajasthan	30
Ratna Verma and Mahima Purohit	
The Role of Groundwater for Food Security in India	31
Manikandan P. and Rajendran S.	
Trends and Patterns of Malnutrition Across States in India	33
Arifa Sultana	
Cognitive Planning of Mid-day Meal Scheme: A Way Forward for an Inclusive and a Balanced MDM Model	34
Gopinath. R, M. Rekha, J. Kaviya Nijaritha, R. Rengalakshmi and M. Janakavi	
TECHNICAL SESSION 1.6	
Consumer Response to Online Food Delivery Services during COVID-19: A Study on Mumbai and Pune	36
Varade Sahasrabudhe	
Special Safeguard Mechanism (SSM) for Agriculture: Implications for Developing Members at the WTO	37
Raihan Akhter, Abhijit Das, Sachin Kumar Sharma and Teesta Lahiri	
Understanding Household Food Insecurity from COVID-19: A Qualitative Study in Rural Rajasthan	39
Namrata Borthakur	
Sustainability of Food Grains Production: A Special Reference to Karnataka	40
Ramesh S. Kampli and S.T. Bagalkoti	
Integrated Nutrient Management of Papaya (<i>Carica Papaya L.</i>): Application of Microbial Consortium Enriched Organic Manures for Yield and Fruit Quality Enhancement	41
Bindu B	
TECHNICAL SESSION 1.7	
Integrated Child Development Scheme in Karnataka: An Analysis of Funds Released and Utilised	42
Vidya Magadum and Honnappa S.	
Concentration and Diversification of Food Industries in Indian Market: Analysis based on Market Strategies and Diversity Index	42
Ilma Rizvi, Ateeqa Ansari and Shahid Ashraf	
Determinants of Healthy Food Diversity in Kerala: Evidence from a Pooled Cross-Section Regression Model	44
Retheesh P.K. and R. Santhosh	

Does Food Insecurity Explain Psychological Distress among Indian Elderly? Pallabi Gogoi	45
Emerging Natural Farming, Food Security, and Triple Burden of Malnutrition in India: FA Case of Indigenous Families who Applied Nutri-sensitive Farming Approach in Tri-junction Area Jayesh Joshi	46
Urban Food Insecurity: Role of Annapurna Canteens in Manoeuvring Food Insecurity in Hyderabad Sridevi Gummadi, Amalendu Jyotishi, Srinivas Matta and Balaji Patturi	47
Assessing the Status of Malnutrition Among Children in Maharashtra from 1998-99 to 2019-20 Vikram Aarne and Amita Dharmadhikary Yadwadkar	48

Theme 2

SOCIAL AND ECONOMIC VULNERABILITIES OF MIGRANT WORKERS WITH FOCUS ON COVID-19 PANDEMIC

KEYNOTE PAPER

Vulnerable Migrants during the Pandemic: A Political Economy Perspective Deepak K Mishra	53
--	----

TECHNICAL SESSION 2.1

Scheme Specific Analysis of Social Protection in India Sarathi Acharya	54
Automation, Work and Job-Insecurity: A Case Study of India's IT-BPM Industry Nausheen Nizami, Tulika Tripathi and Meha Mohan	55
Havoc of the Pandemic on the Migrant Workers in India Saurabh Sanyal and S.P. Sharma	56
Impact of COVID-19 Pandemic on Distress Migration in India Ashok Sahu	57
A Meta-Analysis of Covid and its Ramifications on Unemployment, Inequality, and State of Women Anima Chowdhury	58

TECHNICAL SESSION 2.2

An assessment of Impact of COVID-19 Induced Lockdown on Informal Workers in Telangana State Pradeep Kamble and E Revathi	59
---	----

Economic Impacts of COVID-19 Induced Lockdown on Reversed Migrant Workers in North Bengal: A Case Study Kalyan Das	59
Covid-19 Lockdown, Family Migration and Unemployment in a Gendered Society: A Theoretical Analysis Shushobhan Mahata, Rohan Kanti Khan, Ranjanendra Narayan Nag and Sarbajit Chaudhuri (late)	61
Precarious Condition of Children of Workers at Construction Industry: A Case of District Gandhinagar, Gujarat Priyanka and Tulika Tripathi	62
Nationwide Lockdown and its Impact on Employment in India: An Empirical Study Kulwinder Singh and Pooja Sikka	63
Socio-Economic Development of the Eastern Uttar Pradesh: Evidences from the Secondary Data Nagendra Maurya and Roli Misra	65
TECHNICAL SESSION 2.3	
A Glimpse to The Pattern of Unemployment Rates: Factors & Causes Atanu Sengupta and Madhusree Mukherjee	67
Circularity and Vulnerability of Migrant Workers in India Post-COVID Sumedha Pandey	69
Socio-Economic Vulnerabilities and Coping Mechanism: The Case of Migrants in Bihar Indu B Sinha	70
Migration through Movies: Understanding the Creation of Migrant Identities and Linking their Narrative with the Development of Cities through Indian Cinema Kirti Koushika	71
Circulating and Ecological Sphere Approach for Bridging Urban-Rural Gaps through Rural Revitalisation: A Policy Framework for COVID-19 Induced Reverse Migration in India Richa Chaudhary and Subir Sen	73
TECHNICAL SESSION 2.4	
Neither Here nor There? The Plight of Overseas Migrant Workers from Sri Lanka during the COVID-19 Pandemic Kalinga Tudor Silva	75
Impact of Job-displacement during COVID-19 on Earnings: Evidence from Indian Labour Market Gunjan Kumari, Neha Gupta and K. Narayanan	76
Impact of COVID-19 and its Implications for the Gulf Return Migrants: The Indian Experiences Anisur Rahman and Niharika Tiwari	77

Impact of Lockdown on Migrants: Evidences from Uttar Pradesh and Bihar Surya Bhushan, Aditi Thakur, Shankar Purbey, Sayed Qadri and Urvashi Kaushik	79
COVID-19 Lockdown: Protecting the Poor Means Keeping the Indian Economy Afloat M. Kumar Raju, A. Ranga Reddy and R. Suneetha	80

TECHNICAL SESSION 2.5

Pattern of Interstate Labour Migration in India: Findings from NSSO Data Madhumita Bhattacharya	82
Women Migrants and their Vulnerabilities in the Shadow of Pandemic: Gender Dimension Shaveta Gagneja	83
Returning Migrant Workers During Covid 2019 Nirati Gupta	84
Health of Migrant Workers at Ship-recycling Industry, India Hrudanand Misra	85
The Affliction and Futility of Indian Economy in View of Recovery Mechanism V. Saravanan	86
Addressing Economic Vulnerabilities through Public Programmes: MGNREGA and the Pandemic Induced Retrograde Migration Arushi Jain and Dilpreet Sharma	87
Livelihood Condition of Stranded Migrant Labourers in COVID-19 Lockdown in India: A Study of Bengaluru Tania Sengupta	88

Theme 3

GOVERNANCE OF PUBLIC DELIVERY SYSTEM (FOOD, EDUCATION AND HEALTH)

KEYNOTE PAPER

Governance and Delivery of Public and Social Programmes: A Case Study in West Bengal Parmod Kumar and Dipanwita Chakraborty	93
---	----

TECHNICAL SESSION 3.1

Factor Affecting Maternal Health Care Utilisation in the Nalbari District of Assam: A Field-based Investigation Dipanjali Devi and Bhaskar Sarmah	95
An Exploratory Study Assessing the Current Scenario of the Health Insurance Policies in the Rural Parts of Assam, India Bhaswati Adhikary and Debabrata Das	96
A Study of the Labour Directorate's Work in Odisha Manju Bhagat	97

Digital Divide Jeopardizing the Educational Outcomes in Third World: Challenges and Opportunities for E-inclusion	98
Monisha Israni	
MGNREGA Activities in the Post COVID 19 Era: Exploring the Inter-State Efficiency of Employment	100
Pritam Bose, Rajesh Kumar and Indraneel Bhowmik	
TECHNICAL SESSION 3.2	
Karnataka's Unique 'Preventive Protocol' for Retention of Children in Schools	102
Kathyayini Chamaraj	
Labour Market Transformations in the Era of the Fourth Industrial Revolution: A Comparative Analysis of General-Purpose Technology (GPT) versus the Specific-Purpose Technology (SPT)	103
Sushobhan Mahata, Rohan Kanti Khan and Ranjanendra Narayan Nag	
Segregation and Occupational Association: School Education System in India	104
Samyak Jain	
Spatial Disparities in Health Status and Access to Health-related Interventions in Madhya Pradesh	106
Alinda George and Pritee Sharma	
TECHNICAL SESSION 3.3	
Women and Millets: Governance, Convergence and Food Sovereignty	108
Tulika Talukdar and Rajshree Bedmatta	
Dual Burden of Disease and Disease-Specific Morbidity in Assam based on NSS 60th Round to 75th Round (2004 to 2017-18)	109
Nayanakhee Sarma and Rajshree Bedmatta	
Elementary Education Outcome Efficiency in Indian States	110
Jyotsna Rosairo and Shanmugam K.R.	
Role of MGNREGA in Augmenting Farmers' Income in India: Evidence from the Situation Assessment Survey, 2018-19	111
Ranjana Roy and Prerna Terway	
TECHNICAL SESSION 3.4	
Good Governance and Some Aspects of Development in Indian States: A Panel Vector Autoregression Analysis	112
Nausheen Sodhi and Upinder Sawhney	
Appropriate Design: The Key to Successful and Effective Public and Social Programmes: Lessons from the Integrated Rural Development Programme (IRDP) and the Self-help Group (SHG) based Microfinance Programme	113
Amita Dharmadhikary-Yadwadkar	

Impact of the COVID-19 Pandemic on Rural Sanitation Workers in India Shamsher Singh and Sabah Siddiqui	114
Palliative Care and Quality of Life: A Case Study Chandan Sharma	116
Understanding Gender Gap in Literacy and Education Dropouts among Tribals in India Atreyee Sinha Chakraborty, Rajesh Danane, Sunil Bhosle and Anjali Radkar	117
Evaluating the Impact of Students' Perceptions of Classroom Environment and Teacher Beliefs & Attitudes on Student Outcome Konica Seghal	118
TECHNICAL SESSION 3.5	
Public Health Expenditure, Infrastructure and Outcomes in EAG States Swati Jain	120
Quality of Healthcare: A Study of Perception of Patients of Bishnupur and Thoubal Districts of Manipur Deepali Chanu Sanasam	122
Reassessing Financial Incentives: Impact of Scholarships on Absenteeism in Schools of India Manvika Gopathi and Reshmi Sengupta	123
Role of Oral Reading Fluency (Hindi) and Reading Comprehension in India: Evidence from Five Selected States Sarbeswar Padhan	124
Water Sharing Dispute on River Brahmaputra and its Socio-economic Impact on the Stakeholders Living in the Char Areas of Assam Puja Das	125
Government of Public and Social Programmes (Employment, Education, Health, Food and Livelihoods) Bharat R. Shah	125
TECHNICAL SESSION 3.6	
How Effective is Student Financial Aid Programmes in India? A Policy Evaluative Study of Post-Matric Scholarship Scheme Deepak Kumar Swain and Rajesh Karna	127
MGREGA and Financial Inclusion in Hoshiarpur District of Punjab Reenu Ahluwalia	128
Paraphrasing the Framework of Public Health in British India Shreya Singh	129

Really! If There is a Will, there is a Way: Experimental Evidence from Indian States on Enrolment	130
Binay Shankar, Kajal Verma, Noma Fatima, Shivani Mohan and Simran Mishra	
Relationship between Revenue and Expenditure in India: An Econometric Analysis of Time Series	131
Durgesh Pujari, Rudragouda Biradar, and Shreya Suppannavar	
Does Government Expenditure on Education Promote Economic Growth? An Empirical Evidence from Hilly States in Northern India	132
Farhana Wani and Tosib Alam	
TECHNICAL SESSION 3.7	
Child Labour and Education in a Developing Economy: A Policy Analysis	133
Rohan Kanti Khan, Late Sarbajit Chaudhuri, Jayanta Kumar Dwibedi and Dibyendu Banerjee	
Educational Development Programmes in North-East India: Availability, Achievements and Challenges	134
T Thangjahao Haokip	
Are Contractual Employments Proving an Implementational Loophole for the Maternity Benefit Amendment Act 2017?	135
Kimsi Sonkar	
Corruption, Good Governance and Sustainable Development	137
Sanjoy Karna	
Gynaecological Morbidity due to STI among the Women in India	137
Priyanka Kumari	
Land Alienation and Restoration in the Agency Region: A Reality Check	138
P. Raghupathi	
TECHNICAL SESSION 3.8	
Saving Mothers and New-Borns through Reformed Healthcare: An Empirical Investigation of Janani Suraksha Yojana (JSY) in Uttarakhand	139
Archana Sinha	
A Study on Determinants of Maternal Health Service Utilisation in India	140
Rajkishore Sahu and Hemangi Kadlak	
Commercialisation of Agriculture, Pricing Policy and Farmers' Welfare	141
Soumyajit Mandal and Sukanta Bhattacharya	
Estimating Inequality of Opportunity from Conditional Inferential Regression Tree	142
Balwant Mehta and Siddharth Dhote	

Working Conditions of Rural Sanitation Workers in Haryana Sabah Siddiqui and Shamsheer Singh	
Impact of COVID-19 on Employment and Livelihood: Insights from the Unorganised Coal Mines Women Workers Experience Prity Kumari	145

TECHNICAL SESSION 3.9

Health Workers' 'Everyday Work' in Integrated Health Programmes in Bihar, India: An Institutional Ethnography Vikash Kumar	146
Women's Self-health Care – Analysis using DHS V and VII India Data Bipasa Banerjee and Binay Shankar	147
Effectiveness of Teacher Training Programme on Quality Education: An Analysis of Primary Schools in Delhi NCR and Maharashtra Antra Singh, Niharika Singh and Prajakti Gokhale	147
An Empirical Study on the Challenges Faced by the Elderly Women Neelam Batra	148
Effect of Air Pollution on Cognitive Performance in India Damini Singh, Indrani Gupta and Sagnik Dey	149
Some Arguments on the Notion of Cash Transfers as an Alternative to the Basic Public Healthcare Services in India Sri Narayan	150

ABOUT THE CONFERENCE

The 21st Annual Conference of the Indian Association of Social Science Institutions (IASSI) will be held during 13-15 June, 2022 at the Indira Gandhi Institute of Development Research (IGIDR), Mumbai, India. Dr. Kirit Parikh, the well-known economist and Chairman, IRADe and former Member, Planning Commission is the Conference President. Professor A. Ganesh Kumar, IGIDR and Dr. Jai Mohan Pandit, Registrar, IGIDR are the Organising Secretaries of the Conference.

Researchers, professionals and other social scientists will contribute conceptual and/or empirical papers on topics/subtopics related to the following Conference themes:



CONFERENCE THEMES



Food and Nutritional Security



Social and Economic Vulnerabilities of Migrant Workers with Focus on Covid-19 Pandemic



**Governance of Public & Social Programmes
(Food, Education, Health, Employment and Livelihoods)**

ABOUT THE ORGANISER

Indira Gandhi Institute of Development Research (IGIDR) is an advanced research institute established and fully funded by the Reserve Bank of India for carrying out research on development issues from a multi-disciplinary point of view. IGIDR was registered as an autonomous society on November 14, 1986 and as a public trust in January 1987. On December 28, 1987 the campus was inaugurated by Late. Shri Rajiv Gandhi, the then Prime Minister of India. Subsequently, the Institute was recognized as a Deemed to be University under Section 3 of the UGC Act.

The Institute has a body of researchers from a variety of academic backgrounds working in different areas. These include standard economic sub-disciplines such as microeconomics, macroeconomics, econometrics and special areas such as agricultural policy analysis, industry studies, financial economics modeling, and studies of poverty, rural development and human development. The choice of topics for research in the Institute depend on the academic interests of the faculty members, the Institute's perception of emerging analytical and policy issues in the national and international context, and sponsored projects reflecting the importance of current empirical issues. The Institute's conscious aim has been to encourage the use of economic analysis to further the understanding of developmental issues, with a fine balance between theory and practice.

CONFERENCE THEMES



THEME 1

Food and Nutritional Security

Under-nutrition, micronutrient deficiency, and over-nutrition (overweight and obesity) are the three aspects of malnutrition prevalent in India, as is in any other developing countries of the world. Under-nutrition can be sub-divided into four broad sub-forms: stunting, underweight, wasting among children, and underweight among adults. Stunting (Height-for-Age) is a measure of linear growth retardation and cumulative growth deficits. Wasting (Weight-for-Height) measures body mass in relation to body height or length and determines the current nutritional status. Wasting may result from inadequate food intake or from a recent illness causing weight loss. Underweight (Weight-for-Age) is a composite index of height-for-age and weight-for-height. It takes into account both acute and chronic under-nutrition. Body Mass Index is one of the indicators of nutritional outcomes. If a woman's body mass index is less than 18.5, she is considered as thin/underweight. It is generally indicative of inadequate food intake. Micronutrient deficiencies are measured through anemia and other vitamin deficiencies. Overweight and obesity are measure of over-nutrition.

In regard to under-nutrition, the 2015-16 National Family Health Survey (NFHS) data has shown that 38.4 per cent, 35.8 per cent, and 21 per cent of five-year old children are stunted, underweight and wasted, respectively, in India. Between 2006 and 2016, the prevalence of stunting and underweight has declined considerably, while that of wasting has risen among children in India. The decline in stunting was higher in the last decade compared to the decade prior that. The rapid decline in the stunting rate since 2006 has enabled India to catch up with the rate of decline in other countries. However, India has the world's largest number of stunted (46.6 million) and wasted

children (25.5 million) children. The trends and patterns have varied across states in the country. In 2016, the prevalence of stunting in children from 1-5 years of age bracket was very high i.e., greater than 40 per cent in the agriculturally lagging states such as Bihar, Jharkhand, Uttar Pradesh, Madhya Pradesh, Meghalaya and Assam. It is to be noted that none of the Indian states have acceptable levels of underweight among children.

As far as micro-nutrition deficiency is concerned, anemia among women in the reproductive age bracket, pregnant women and children also indicate malnutrition. In 2016, majority of states in India had experienced high to moderate prevalence of anemia among women of reproductive age. The prevalence has declined slightly from 55 per cent to 53 per cent nationwide between 2006 and 2016. At the national level, anemia among pregnant women declined from 58 percent to 50 percent between 2006 and 2016. However, this decline was not uniform across the country.

Prevalence of over-nutrition (overweight/obese) has increased from 12.6 to 20.6 among women (15-49 years) and from 9.3 to 18.9 among men (15-49 years) between 2005 and 2015- 16. Moreover, the problem of overweight in women in the relatively better off states has widened from urban and well-off families compared to poor and rural families. The number of overweight children under 5-years of age is fast equalizing the number of children who suffer from wasting within this age group. The proportion of overweight or obese has increased from 13 percent to 21 percent among women in the reproductive age and from 9 percent to 19 percent among men. The longitudinal panel data on children's nutrition enables one to examine the nutrition trajectories of children in terms of persistently nutrition children, persistently malnutrition children, recovered from malnutrition and children fallen into malnutrition.

The factors responsible for the emergence of nutritional outcomes can be broadly grouped into two categories - dietary and non-dietary. Dietary factors have been identified in food security framework. Food security has four components, viz., availability, adequacy, accessibility and availability of food on a regular basis, as per the population's nutritional requirements and food preferences. Agriculture has to address these four elements of food security. Food security has to be examined at two levels- macro level and household level.

At the macro level, adequate food grains-cereals, such as paddy, wheat, nutri-cereals and pulses, are available. However, the production levels need to be enhanced to meet

the everincreasing demands. There has also been dietary diversification towards non-cereal foods, but the production of non-cereals like vegetables, fruits, milk, meat, egg and fish are not available as per the requirements. The share of nutri-cereals in food grains which provide micronutrients, apart from other nutrients, has been declining over time. Enhancement in the production levels of cereals and non-cereals put pressure on the available land for cultivation, as the demand for land for non-agricultural purposes is also increasing. What should be done for releasing pressure on existing cropped area and to enhance the production levels? There are two possibilities that contribute to the enhancement in the production levels. There are: raising crop yields and increasing land productivity by its intensive use for increasing cropping intensity.

In regard to food security at the household level, the consumption basket of households has undergone changes between 1972-73 and 2011-12. The proportion of expenditure on food has declined considerably. The big change is the shift from cereals to non-cereals. The decline in the share of cereals in the total consumption of food has largely been substituted by rich food (high value food) items such as milk and its products, oils and fat. The income elasticities of non-cereals are very high compared to cereals, even for the poor. The cereals for part of the staple diet and also are the cheapest source of protein. They are essential for a balanced diet, especially for the poor. But, the diversification of diets increases the cost of consumption basket for the poor, si nee the cost of per unit of energy increases due to dietary diversification to non-cereal foods. This is the reason why staples have remained as the single largest source for energy for households even in 2011-12. Hence, households need more income to absorb the costs associated with dietary diversification to high value diets, and this is to avoid micro nutrients deficiency. The studies support that dietary diversification address the triple burden of malnutrition. It is also evident from the studies that dietary diversification is determined by the farming systems. The emerging natural farming systems in the country may also provide solutions to the triple burden of malnutrition. Moreover, it is also pertinent to assess the food security in the context of Covid-19

The food-based interventions, such as the Targeted Public Distribution System (TPDS), MidDay Meal (MDM), and ICDS have contributed to the food security. The PDS should not only supply food grains but also non-cereal foods at subsidised prices. The meal under MDM and Supplement food under ICDS should be tuned to

provide diversified food for achieving complete nutrition. The debate on PDS and Cash Transfer also assumes importance in the context of Covid-19.

In this context, papers are invited on the following sub-themes:

- Trends and patterns of malnutrition in India
- Trends and patterns of malnutrition across states in India
- Trends and patterns of malnutrition between rural and urban areas across states in India
- Trends and patterns of malnutrition among social groups across states in India
- Trends and patterns of food security status at the macro level, and its contribution to
 - the reduction in malnutrition in India
- Trends and patterns of food security at the macro level and its relationship to the
 - reduction in malnutrition across states in India?
- Trend and patterns of food security at the household level and its contribution to reduction in malnutrition between rural and urban areas, among social groups and across states in India
- Food-based interventions of governments and their contribution to the decline in the malnutrition in different states of India
- Food security in the context of Covid-19 across states in India
- Public Distribution System and Cash Transfer Scheme in the context of Covid-19
- Different farming systems, diversification of consumption basket among children and their nutritional status
- Emerging natural farming systems, food security and triple burden of malnutrition across states in India
- Longitudinal panel data on children's nutrition, nutrition trajectories, diversified children's consumption basket and different cropping systems



THEME 2

Social and Economic Vulnerabilities of Migrant Workers with Focus on Covid-19 Pandemic

Migration takes place for a variety of reasons and motivated primarily for accessing better employment and livelihood opportunities at the place of destination. Such movement of people, however, takes place with significant cost, monetary and other costs as well. In addition to the monetary costs, such movement has other associated costs at the place of origin that manifest increased vulnerability. Usually, out-migration results in tightening the local labour market that eventually leads to high female drudgery, involvement of children in cultivation and livestock rearing. The drain of young people has cascading socio-economic effects on the migrating family and local labour market conditions. Socio-economic implications take the form of drain of human resources, impact on reproductive behaviour, long separation from family adding to family insecurity etc. To some extent shortage of labour gets replaced by women by putting in long hours thus increasing their drudgery and by children helping in cultivation and animal care activities. Shortage of labour affects agriculture productivity adversely and is manifested in the labour market through increased wage rates, which is generally higher than market determined wage rate. The implications at the destination are widespread and adversely affect the migrants. Often, migrants have to face discrimination in the labour market and have to work under precarious working and living conditions. They are exploited and most often no social security benefits are provided to them. Migrants thus become the most vulnerable lot in the urban labour market. The vulnerability of migrants becomes unprecedented and extraordinary at the times of economic upheaval. The most recent example is the Covid-19 induced pandemic that has wiped out livelihood opportunities and brought unusual misery and despair to the migrants and their families.

As per Census, during 2001-2011, there were a total of 454.1 million migrants. By March 2020, the migrant population might have reached up to 644.0 million, with the last decadal growth rate of 47.0 percent. With decadal growth rate of 47.0 percent, by March 2020, they would be about 63.0 million. At least 10.0 million migrants of more than 10 years duration are left, net urban migrant workers are 53 million; and

if their family members are also at the rate 0.5 per worker, total migrants arrive at 80 million members. At least 30 to 50 percent of them had left the urban centres after 25.03.2020. In fact, the Finance Minister of India, declared on 14 May 2020 that there were 80 million migrants who had to receive free food grains for 2 months.

The plight of reverse migrants was indeed challenging and faced multiple hardships. The sad predicament of the informal migrant workers was glaring affected faced multiple hardships, as many of them were forced to leave the cities, being unable to pay for rent or food where they worked at just a few hours' notice.

The unprecedented pandemic brought about by COVID-19 has entailed an enormous loss of human lives and virtually crippled economies worldwide. Economic activities have been halted partially or fully, disrupting all industries.

The disastrous pandemic has resulted in massive erosion of jobs and livelihoods. This was palpably being evident in India and elsewhere.

Clearly, lives and livelihood were a non-binary issue as both have a symbiotic and circular relationship. It was estimated that over 91 million lost their employment in April 2020 and the most hard -hit among them were the informal and unorganised sector workers. The unemployment rate was recorded exceptionally high at 27.1 per cent in the week ending on May 3, 2020 and one in four employed lost job across India in March- April 2020. India registered -23.9per cent GDP growth in the first quarter (April-June) of 2020-21. The growth rate during 2019-20 was recorded at 4 per cent.

Exports had fallen sharply over 35 per cent during March 2020 alone. The gradual opening of the economy after lockdown 3.0 is regarded as a highly welcome move. However, full -scale opening of the economy was not possible in the current situation hence huge losses of revenues for the governments is imminent and inescapable. The situation has worsened in terms of job losses, income squeeze, hunger and destitution. Some suggest that since India's Debt-GDP ratio is lower (around 69%) compared to other countries and that provides enough fiscal space for financing the economy in such a difficult time. Along with increased borrowing, fiscal deficit can help boost a sluggish economy by pumping more money into the hands of people and supporting economic activities across sectors. The dilemma was clear before governments on how to stop the outbreak of the coronavirus on the one hand and restart the economic activities on the other. Clearly, a fine balance has been attempted by the governments despite the fears of spread of disease. In any case, this disease is likely to stay for some

more time and therefore business activities can no longer be put off indefinitely and people need to learn gradually to live with it.

COVID-19 induced nationwide pandemic has impacted the lives and livelihoods of the migrant workers. The most vulnerable lot of workers are in the informal economy constituting about 217 million (non-farm) out of 465 million workforce. It was estimated that 60 to 65 million are vulnerable migrants, including periodic and seasonal migrants, in the informal economy. A large chunk of these vulnerable workers are engaged in numerous petty activities such as cart pullers, bicycle peddlers, rickshaw pullers, domestic workers, casual workers in construction, home-based women workers, street vendors, and workers in small business establishments. A huge chunk of the floating population come from poorer states like Bihar, Uttar Pradesh, Chhattisgarh, Jharkhand, Orissa, West Bengal who sprung up temporarily in big cities and metro towns in a bid to earn livelihoods. The pandemic had brought about enormous plight to the migrant workers as evident that thousands of migrant workers stuck in big cities who flocked from these states. The images of such a huge stranded influx of migrant workers faced with untold miseries that were manifested around the railway stations, bus stands and on the roads who desperately wanted to go home. The forceful confinement of migrant workers was considered no longer a solution and the pressure was rightly mounting to liberate them. This was the moment of emotional bonding to kith and kin to their native places. Government took the right step by sending them back to their respective places and placating the situation.

However, the decision to unbound them remains a challenge when the economy is progressively being opened up and need workers to resume manufacturing activities, running shops and establishments, construction activities, other production facilities and alike activities. These sectors of the economy are likely to face a huge shortage of manpower. A palpable sense of double loss is imminently clear for migrants, losing the jobs in the urban market on the one hand and no income and job opportunity in their native place on the other, thereby escalating their poverty, hunger and deprivation further. Many would likely fall well below the poverty line among the previously counted non-poor. This has serious implications on them and those depending on the main breadwinners. This also poses new challenges towards mitigation of the hardship of migrant workers. Clearly, there is an urgent need for developing strategies to lessen the vulnerabilities. Some possible short, medium and long term strategies stand out clearly to alleviate their miseries.

Several issues of concern in respect to migrant workers with a focus on the Covid-19 pandemic can be considered and studied under the following broad themes. Some of the major issues have been indicated below which can be deliberated under the theme.

- Impact of the pandemic on employment and livelihood
- Migrant workers and severity of vulnerability
- Pandemic and precarity of circular migration
- Covid-19 impact on the interstate and intrastate urban migrant workers
- The coping mechanisms and public policies during the pandemic
- Public health care and the migrant workers during the pandemic
- Return migration during the pandemic and the livelihood crisis
- Loss of jobs, debts and mental health during the lockdown
- Role of labour protective institutions during the pandemic
- Labour migrants and social security provisions



THEME 3

Governance of Public and Social Programmes (Food, Education, Health, Employment and Livelihoods)

Food, education, and health are all the basic needs of human beings. Apart from having intrinsic value, they provide basic capabilities to human beings and improve their access to opportunities in the economy and life. Even under neoliberal policy regime, it is the duty of the government to ensure that everybody gets adequate and nutritious food, free and quality education up to elementary level, and basic health services, free or subsidized to all. These three services are the basic tool that enables the marginalized to break the divide and enter the mainstream economy and society.

Unfortunately, India's performance in all the three fields has been far from satisfactory. Also, there is a wide and widening gap between access to these basic services by the bottom 30-35 percent population and the top 10 percent people. It is a challenge for policy makers how to bridge the gap and ensure equal opportunities to all in the economy.

It is not that there are no efforts made by the government in these areas. Government has a strong multi-level administrative network from top to bottom spread over the entire country - rural and urban areas and rich and poor states - which is expected to be having designated staff, infrastructural facilities, required material and funds. Again, there are many schemes and programmes to reach the different marginalized sectors of the population. Despite this, the outcome is poor. The real question is whether these research studies are adequate, and what prevents the governments to implement the findings of the research to meet the three basic needs of marginalised regions and sections of the population. There is a need to address this question and find how and why this huge deprivation of the marginalized population continues.

Public Delivery in Food

India is very low in the Global Hunger Index, and is in “serious hunger category”. One-third of the under/malnourished of the world are in India (37.9% of children under 5 years are stunted and 20.8% are wasted, compared to the Asia average of

22.7% and 9.4%, respectively) and the incidence of malnourishment of women is also significant. However, on paper, there is a long list of schemes for feeding the people: right from food supplementary schemes for mothers and infants to Anganwadi scheme for ensuring holistic development of children and Mid-Day Meals for school children. In addition, there is PDS for BPL households, PDS for APL, APL, Annapurna Yojana for people above 65 years, scheme for feeding adolescent girls and many emerging feeding programmes. However, somehow these do not deliver good results.

Public Education Services

Education is a basic capability. Apart from having intrinsic value, it is essential for creating good citizens and sound democracy. It opens up newer opportunities for people to the labour market and the economy. It is an important tool to break the divide between the rich and the deprived. The Indian government has designed many schemes, such as Aanganwadi for holistic development for early childhood development, mid-day meal scheme

for retaining children in schools, Sarva Shiksha Abhiyan, RTE scheme, National scheme of incentives to girls for secondary education, scholarships for marginalized socio-economic groups, Rashtriya Madhyamik Shiksha Abhiyan and Sakshar Bharat Abhiyan for adult education.

Public Health Services

Public health services include wide range of services like preventive care services (safe drinking water, sanitation, and nutrition), vaccination services, family planning services, curative medical services, health services for women, children and the marginalized, health services at primary, secondary and territory levels etc. These health services are provided by the government at the village level (ASHA), sub-PHC at group of villages' levels, PHC at block level, referral hospitals and territory level hospitals. However, the health outcomes are poor in terms of IMR, TFR, children's health, MMR, women's health, etc. The progress made is too low to have much impact on people.

Employment and Livelihoods

There are several programmes both at central and state levels to generate employment and enhance livelihoods. Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) and National Rural Livelihood Mission (NRLM) are the two important central sponsored programmes. These programmes involve considerable governance

and delivery issues both at central and state levels. Many new innovations have also been done at various levels. It will be good to examine them.

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Some Critical Issues

Some important critical issues, common as well as specific to each of the services, are listed as follows:

- MGNREGA requires considerable coordination with enhanced accountability and transparency for better governance in the delivery of the Scheme. Privatization of basic services: How far does it help? What has been our experience? Does it create wide range of inequalities in the economy?
- Cash transfers vs public services - Is cash transfers a workable alternative? Pros and cons of cash transfers.
- Evaluation studies of the government schemes on health, education, and food to understand why these services have not given enough results, and whether the government has learnt any lessons.
- Reaching the last mile - decentralization of services to reach the marginalized. What are the major constraints and problems? What all needs to be done?
- Funding to food, education, or health services - adequacy, fund flows, corruption, and related issues.
- Concerns arising from Covid-19 and lockdown - withdrawal of some of these services, widening the gap between rich and poor, and rural and urban areas. Issues related to recovery with the opening of the economy.
- Radically reforming public administration at different levels, making it transparent, accountable for effective delivery of services.

- Specific issues concerning education, health, and food services. For example, assessing the National Education Policy - is it likely to solve the problems of education that we are facing today?
- Collapse of education services during the lockdown and later, and how to resolve it.
- Universal PDS to address hunger and to use up the FCI food stocks, decentralisation of the PDS, how to improve other food schemes etc.
- Suspension of regular health services during the lockdown and thereafter - will it have long-term impact on the country, strengthening local health systems etc.
- MGNREGA requires considerable coordination with enhanced accountability and transparency for better governance in the delivery of the Scheme.



Theme 1

FOOD AND NUTRITIONAL SECURITY

KEYNOTE PAPER

Food and Nutrition Security in India: An Assessment

Manoj Panda, Former Director, Institute of Economic Growth

About a third of the world's 690 million malnourished population lived in India 2019. This meant 15-20% India's population is not able to meet food required for a healthy life, even though there have been many folds rise in average income. India is a prominent party to the UN's 2030 Sustainable Development Goals which cannot be achieved in several dimensions unless India improves its performance.

Food and nutritional security are interrelated but distinct concepts. India's achievement on both the fronts have been mixed. During the colonial era, India witnessed several famines leading to large scale starvation deaths. A few major irrigation projects got developed prior to independence in some states. Yet, frequent food shortage was a reflection of absence of a strategy to ensure food security of the people. After independence, the government laid priority to expand production of food grains.

The introduction of the green revolution in late 1960s helped to eliminate dependence on imports and later enabled exports. The white revolution following the green revolution contributed in similar way in meeting market demand for milk. The increasing trend in production and consumption of pulses, fruits and vegetables in recent decades needs to be continued to diversify the food basket consumed by an average Indian to overcome protein and micronutrients deficits.

Once production became adequate to meet domestic demand for food, public concerns and government policies shifted to other dimensions in food and nutritional security such as household access to adequate nutrition, protein content of food basket, deficiency of micronutrients, clean drinking water and sanitary conditions. Special schemes are there for vulnerable groups like children and women needing special attention.

Several programmes such as Public Distribution System, National Rural Employment Guarantee Scheme, and Integrated Child Development Services have played a major role on the food and nutritional front. India could tackle the hunger

crisis more or less satisfactorily in the last two years during the COVID-19 crisis because of the existence of institutions built up to run these programmes.

As we move ahead, the current policies need to address certain major concerns for sustainability of food and nutrition security. To list a few:

Efficient and effective utilization of resources is crucial for long run sustainability of programmes. Recent moves on using technology to monitor beneficiaries seem to have reduced large scale leakages in some programmes. Involvement of the gramsabhas and non-government organizations (NGOs) could help in reducing such leakages.

Government market intervention and building up of huge public stocks needs a thorough examination in the changing supply-demand context and need to provide right market signals. Public food grains stocks rose by 4 MT even during the pandemic year 2020-21 despite enlarged food distribution. Given the recent problems in attempts to reform market intervention, a socio-political consensus within the federal setup needs a statecraft from a new perspective.

The flip-flop in trade policy during the current Russia-Ukraine war reflect short run tactical moves rather than a long run strategy to be reliable partners in global supply chain. Lastly, it is time to think of an affordable universal income benefit policy because of limited absorption of labour in the growth process.

TECHNICAL SESSION 1.1

Health Impacts of Extreme Weather Conditions in India: Operational Frameworks for Building Climate Resilient Health Systems

CS Verma, Senior Fellow & Coordinator, Public Health Research, GIDS, Lucknow

Extreme weather events due to climate change are impacting all regions of the world, but the resulting health risks to human populations vary significantly, depending on the socio-economic conditions of the communities. The LMICs and their economically weakest population are often the most vulnerable to extreme weather events and are frequently the most susceptible to weather-related damages, which are often of multi-dimensions and impacts the health of poorest communities negatively thus leading to further increase in health inequity.. Using a structured review method the study considers evidence regarding currently used and observed and anticipated future impacts of extreme weather on health systems. General conclusions are highlighted related to existing ill health in these regions and communities that further increases vulnerability and reduces the capacity of individuals and groups to adapt. Despite such disproportionate level of impact and preparedness in the LMICs, overall dominance of research is focused on developed nations. Therefore, there is a need for building climate resilient health systems in India and significant investment in research to understand how extreme weather events owing to climate change, will affect health service delivery; to evaluate the effectiveness of interventions and systems under diverse climatic conditions and enhance institutional capacity.

Agrarian Change in India in the 2000s: A Study in Continuing Distress

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The period of 1990s witnessed very high distress in Indian agriculture as discussed in the prominent literature, particularly the period from 1995 to 2003, which accounted for high indebtedness and over one lakh farmers' suicides (reported by National Crime Records Bureau [NCRB], unreported numbers can be even higher), unprecedented in the history of Indian agriculture by then. This led to some important policy interventions in the 2000s, public expenditure on agriculture grew, resulting in higher investment on infrastructure, irrigation facilities and credit supply. The Minimum Support Price (MSP) on most crops was increased. The Agricultural Produce Market Committee (APMC) Act and Genetically Modified (GM) seeds also came in around that time. This encompassed an interesting debate. On one side, there is some literature which states that income of agricultural households grew significantly and there were higher growth rates of Indian agriculture during the 2000s. While on the other hand, there is literature which talks about simultaneous episodes of distress. There are several case studies which states low or even negative returns from cultivation. So, the question arises, are those instances of distress sporadic, or is there something systematically wrong about the growth process of the 2000s, where some sections of farmers are doing well vis-à-vis others.

There has not been a proper analysis to understand the growth process of the 2000s and the dynamics of its agricultural households. Though Narayanamoorthy (2017) did try to put up a systematic analysis using Situation Assessment Surveys (59th & 70th rounds) of the National Sample Survey (NSS), but the focusing was on income composition of agricultural households at the state-level. He did not delve into the household dynamics of the distressed households. This is one lacuna we found in the vast literature of Indian agriculture. This is why, in order to understand the nature of this distress, this paper undergoes an analysis of the most affected households, that is, the households who are earning negative income from cultivation, using the three rounds of nationally representative NSS surveys from 2002-03 to 2018-19.

The negative income households are the households who are not even able to cover their costs, let alone earning a decent livelihood. For this reason, we have taken

the total value of output, means if something is used for self-consumption, that is also taken, and on the expenses side, we are just taking the paid-out expenses, and not the imputed value of expenses. Therefore, this is an as accurate measure as possible. And, we have found that most of these households are situated in states like Andhra Pradesh, Telangana, Maharashtra, Karnataka and Tamil Nadu, both in absolute and relative terms. And, they are mostly engaged in crops like paddy, cotton and wheat, which brings forth the combination of more distress-prone states and crops. This paper shows that not just the small and marginal households, but even medium and big households are distressed, pointing against the popular understanding that only small and marginal farmers are under distress. Besides, in terms of expenditure incurred on cultivation, they are spending more than non-negative income households on inputs per hectare like seeds, chemical fertilisers, leased land, human labour, machines, interest on loans. In fact, their average leased land and average possessed land are both higher than non-negative income households, so they are not some peripheral households who are using agriculture as a secondary occupation, instead they are ambitious households, who are spending more on land, labour, machines, and other inputs, but still incurring losses. So, this dependence on markets is going against the interest of these classes of farmers. And, we will also see episodes of better prospects for households, where government machinery is more effective. Therefore, government intervention is definitely instrumental in deciding the income dynamics of these households. This will help us to draw implications for the role of state and markets, especially for these states and crops. Besides, we will also see they are spending less on inputs like diesel, electricity and irrigation, but more on human labour, so, this also hints towards the likelihood of capital-intensive farms doing better than the labour-intensive farms with higher market dependence.

Climate Change and Rice Productivity in India and Pakistan: A Comprehensive Analysis

Ahab Rizvi, Research Scholar, Jamia Milia Islamia, Delhi

Shahid Ashraf, Professor, Jamia Milia Islamia, Delhi

This study focuses on comparative analysis of the impact of climate change on rice yield in India and Pakistan. Rice is the major food crop that is produced and consumed globally. India has been the top exporter of rice over the past few years.

This study, with the help of Autoregressive Distributed Lag (ARDL) bound test for cointegration and Error Correction Mechanism (ECM) established the long and short run relationship between the climatic variables and rice productivity in India and Pakistan. First of all, verification of the long run association of the variables was done using ARDL bound test for cointegration. Further, after the verification of long run association among the variables the ECM was used to find the short run dynamics. The results show that CO₂ and average annual rainfall have a positive impact on the rice yield in India and Pakistan. The Nitrous Oxide emission has a severe negative impact on the rice yield in the long run as compared to short run in both the countries. In short run the temperature increase in India has a positive impact whereas it negatively affects the rice yield in the long run. The average annual temperature in Pakistan shows a negative relationship with the rice yield in the long as well as in the short run. The study suggests that India needs to focus on providing adequate facilities and prices to the farmers for their produce. Agricultural subsidy should be provided to each and every farmer of the country as well as easy collateral free credit should be made available to the farmers to motivate them to produce more. In addition, the government must strengthen and construct a better irrigation system, as well as to obtain improved weather predicting technologies. The concerned authorities and policymakers should be aware of climate change's severe effects on the most important food crops. As a result, legislators should suggest some significant strategies for long-term sustainability through implementing new agricultural technologies, food security Subsidies for agricultural inputs, as well as a new seed variety that absorbs the negative effects of climate change and ensures a sufficient supply of food for India's huge population. A prompt action needs to be taken otherwise soon India would have to import large quantity of rice to meet the continuously increasing demand of its huge population.

Factors Associated with Stunting Prevalence in Under 5 Children in India: Evidence from the Trends in National Health Surveys during 2005-06 to 2019-2021

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India is considered as a major global economy and a country in epidemiological transition, but the economic performance has not translated into reduction in undernourishment levels among children. India today reports the highest prevalence of stunting (35%) and wasting (19%) among children, and growth faltering rates are much above the critical levels of 20 per cent, which needs immediate attention to achieve the global targets of the World Health Organization (WHO).

The main objectives of this paper are to observe the trends in the prevalence of stunting, wasting and underweight by age based on National Family Health Survey (NFHS) data during 2005-06 and 2015-16; to analyse the state-wise trends in child stunting rates in NFHS-5 (2019-20) as compared to NFHS-3 (2005-06) and estimate the percentage change in stunting during the period; and examine the factors contributing to stunting prevalence in children under 5 in India during the 15-year period (2005-06 to 2019- 2021).

This study is based on secondary data from the cross-sectional study of the national health surveys in India during the period 2005-06 to 2019-2021 (NFHS-3, 4, 5 and RSOC data). To estimate the association between stunting prevalence and various maternal indicators during the 15-year period, linear regression was modelled. The maternal indicators included are Low Birth Weight (LBW) prevalence, low Body Mass Index (BMI) in pregnant women, anaemia prevalence during pregnancy, exclusive breastfeeding, 4 or more antenatal care (ANC) attended during pregnancy and consumption of iron and folic acid (IFA) tablets for more than or equal to 180 days during pregnancy.

Regression model predicts that the levels of stunting increased at a growth rate of 5 percent and 4 per cent by age during NFHS-3 and NFHS-4 time periods respectively, and higher stunting levels was observed in 18–23-month-old children, higher wasting

levels in children under 6 months of age during the two time periods (NFHS-3 and 4), and highest levels (39.1%) of underweight in children under 48-59 months of age during NFHS-4 time period and increasing by age at a growth rate of 2.3 per cent and 2 per cent respectively. The association between the trends in maternal indicators and stunting prevalence was modelled through linear regression analysis. Regression estimates show that there is negative association between exclusive breastfeeding (EBF) and stunting prevalence, revealing that for every one unit increase in EBF, stunting prevalence would decline by 0.55 units. The association between LBW and stunting prevalence reveals that for every one unit decline in LBW prevalence, there would be a decline in stunting prevalence by 3 units. Further for every one unit increase in low BMI in mothers, there would be an increase in stunting prevalence of children by 0.748 units, while with every one unit decline in anaemia prevalence, stunting prevalence in children would reduce by 1.47 units. Similarly, for every one unit decline in pregnant women attending 4 or more ANC's, there would be increase in stunting prevalence in children by 0.42 units, and for every one unit increase in IFA tablets consumption during pregnancy, stunting prevalence would decline by 0.827 units.

TECHNICAL SESSION 1.2

Globalization, Agricultural Development and the Role of State: A General Equilibrium Analysis

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The paper makes an attempt to explain the importance of agricultural innovation and the role of state in a globalized economy. In so doing, we have attempted to construct a three-sector general equilibrium model, which accounts for certain specific features of a small developing economy (like India), namely diverse trade patterns, capital mobility, and a domestic agricultural sector. Consequently, in this paper we use the aforementioned three-sector general equilibrium framework to analyse how these affect performance of the various sectors in an economy (service, manufacturing and agricultural), the skilled-unskilled wage gap and income distribution. In this general equilibrium framework, we have an export-oriented service sector, an import-competing manufacturing sector and a non-traded agricultural sector. The goods produced in the service sector are entirely exported, and thus there is no domestic consumption of the same. Foreign capital is used specifically in this service sector. We have considered that a tax is imposed on foreign capital, which finances the government expenditure in the non-traded agricultural sector. We obtain that, technological innovation in the agricultural sector, leading to an increase in the technological parameter, decreases the skilled-unskilled wage gap, increases the returns to domestic capital and makes the rentier class worse off. The tax levied on foreign capital increases. The service sector and manufacturing sector contracts. On the contrary, the non-traded agricultural sector expands, and the price of the agricultural commodity decreases. We also infer that the welfare increases under certain specific conditions. An increase in the

government expenditure, reduces the skilled-unskilled wage gap, decreases return to domestic capital and makes the rentier class better off. The tax levied on foreign capital increases. The service sector expands while the, manufacturing sector contracts. In the agricultural sector, the production remains unchanged, however the price of the commodity increases. In this case as well, the welfare, increases under certain specific conditions.

The Role of Cooperative Societies in National Food Security Act of Assam

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The paper examines the role of village-level credit cooperative societies in the food security system in Assam. Gaon Panchayat Sambay Samiti (GPSS) is the Primary Agricultural Credit Society (PACS) in Assam. Under the aegis of The Cooperative Credit Societies Act of 1904, PACS was established in 1904 in India. Based on subsequent revisions of the 1904 Act, they were also promoted as multipurpose cooperatives societies at the village level. The primary functions of PACS are credit and non-credit agriculture-allied activities. The nature of credit businesses is primarily the disbursement of short-term and medium-term crop loans for agriculture and allied activities. The non-credit businesses are supply of farm inputs, marketing and processing, and distribution of essential commodities. The GPSS being a PACS, performs both credit and non-credit agriculture-allied activities, giving a platform for rural poverty alleviation. Apart from this, the GPSS also performs the responsibilities of transportation and storage of Public Distribution System (PDS) items. In 1972, the former chief minister of Assam, late Sarat Chandra Singha, brought the idea of the 'Single window' approach. The approach was to facilitate farmers in availing agricultural credit and essential commodities through GPSS. This decision made Assam the first state to channel the PDS of essential commodities through GPSS. It continues till the present. The GPSS has been positioned as a state depot between the PDS central depot, the Food Corporation of India (FCI), and PDS retailers, Fair Price Shops in Assam. Thus, GPSS became a state agency to lift and transport PDS items in Assam. The paper examines GPSS functioning with the National Food Security Act (NFSA). The paper observes that GPSS has mainly reduced their diverse non-credit activities to PDS work. We

also examine how the GPSS, for being a state depot of PDS, could not perform other non-credit activities therein; GPSS could not progress in bringing rural development or alleviating rural poverty. The phase-wise changes in the PDS and the absence of Civil Supplies Corporation in Assam indicate that GPSS are taking the burden of extra cost. The study observes how the position of GPSS in the NFSA system of Assam has affected rural masses by dampening the spirit of cooperative society and reducing GPSS to handle merely the PDS. The irregularity in payment for intrastate movement and handling of NFSA allocation from the Government to GPSS has led GPSS to the vicious circle of debt, which ultimately results in the loss of food entitlement of beneficiaries under the NFSA.

Determinants of Food and Nutrition Security in Tribal Areas of Rural Jharkhand

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This paper examines the complex dimensions of food and nutrition security in the tribal region based on a primary survey conducted in 24 blocks and 48 villages spread across 6 districts of Jharkhand. Household dietary diversity score, food frequency score and Household Food Insecurity Experience Scale were used to understand food diversity among the tribal households.

The study highlights the evidence of deprivation among tribal households across districts in terms of average levels of multidimensional endowments – education, economic activity, availability of land and other productive assets, basic amenities and public utilities such as pure drinking water and sanitation facilities. This shows that tribal households are much more vulnerable than their non-tribal counterparts which lead to adverse food and nutrition security outcomes for the former.

Household consumption patterns mostly depend on the family size, dependency levels and earnings members. The income profiles of the households, as well as the potential capacity of the households to generate economic means, are the significant determinants of the food and nutrition security outcome of the households. On the other hand, households with low income or low capacity to generate economic means

will reach sub-optimal levels of food and nutrition security outcomes. In addition, if households have a lack of water and sanitation facilities compounded by an absence of knowledge on the different signs of morbidities it further compromises adequate nutrition, even if diets are adequate.

The study found that poverty and multidimensional deprivation influenced the food and nutrition security outcome. The results reiterate that households with better levels of living and in richer economic class have better food and nutrition security in terms of dietary diversity, and food frequency. Our results strongly emphasise the positive influence of public programmes on households' food insecurity. Public Distribution System/National Food Security Act (PDS/NFSA) plays a major role in terms of maintaining household food security. However to improve nutrition, security provision of pulses needs to be added to the PDS basket to support the micronutrient requirements of the households.

The most common measures used to manage food shortages are relying on less expensive food, limiting the quantity of food consumed, purchasing food on credit, or reducing the number of meals eaten. This indicates that the most useful strategy for households to cope with food shortages is changing their dietary practices.

Hunger and Food Security in the Time of COVID 19: Evidence from the Worst Effected Country, India

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COVID-19 pandemic which had its epicentre in Wuhan province China slowly moved to every part of the globe bringing normal life to a halt. It had its influence on every sector of the economy. India is said to suffer from food insecurity, undernourishment and malnutrition in spite of its increasing GDP figures even prior to the pandemic. In such a scenario, the pandemic has created a state of health crisis and intensified the situation. The pandemic has further deteriorated household level food insecurity.

The paper aims to highlight the plight of food insecurity coupled with hunger and malnourishment scenario in the wake of COVID-19 crisis. The paper is divided in four sections as follows: section I represents introduction including data sources and literature review; section II shows present scenario of hunger, malnutrition and situation of food security in India; section III presents impact of COVID-19

lockdown and situation of hunger. Section IV represents policy implication and conclusion. This study is based on systematic review of numerous relevant articles related to hunger, malnutrition, and food security. This study also incorporates some relevant articles published in various national and international newspapers, journals, magazines etc. Data used in this study is collected from various relevant literatures, reports published by World Health Organization (WHO), various reports published by UNICEF, various rounds of NSSO data, National Family Health Survey, etc. Analysing neighbouring country wise data on hunger, stunting, under five mortality shows India's situation in contrast to the other countries. India is one of the countries where hunger situation is considered serious. It is also the country with highest number of undernourished population and prevalence of wasting under age five. In comparison to its neighbouring countries, India ranks second in terms of stunting followed by Pakistan. This alarming situation is a serious threat as food insecurity has already worsened since the crisis that hit hard and would presumably further worsen in near future unless rapid measures are sprinkled. This study also found that during the pandemic, disturbance in food supply and shocks in food production and decline in incomes and remittances have created stress and food insecurity in countries. Due to their high degree of subsistence on farming, it created a bleak situation of hunger and malnutrition among them. On the contrary, this shock in supply side is extended to the demand side also. COVID-19 resulted in a shock on the food demand by depleting the purchasing power and economic accessibility leading to widespread loss of jobs and income for workers of the informal sector. Finally, this study concludes that the public distribution system (PDS) and the targeted PDS (TPDS) should be monitored regularly so that the beneficiaries receive the benefits. Government support like financial assistance, cash kind subsidies, should be made available to the vulnerable population. Central and state government new schemes to safeguard the vulnerable population should be well monitored as also the old schemes undertaken earlier.

Food Security in the Context of COVID- 19 in Rural India: A Cross Sectional Study from 12 States

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COVID 19 pandemic brought the entire world to a standstill, affecting almost everyone in various proportions. In the case of India, though the first wave was considered to have predominantly affected the cities, the second wave devastatingly affected the

lives and livelihood of even the rural population. Numerous studies and reports have emerged in the past two years, from different perspectives, highlighting the impact of COVID-19 in rural India, and how rural population has been affected in terms of loss of jobs, fall in incomes, increased poverty, inequality and distress. However, many of those studies were largely state-specific or at the most covering a small number of states.

This paper is a result of a research study that was carried out in 12 states (covering 474 villages in 46 districts) between June 2021 to January 2022, through 5,210 household samples. Here, the author looks at the status of food security in 12 states of India during the time of COVID-19, based on the functioning of three social security schemes, Public Distribution System (PDS), Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) and Mid-Day Meals Scheme (MDMS).

The findings show that during the time of COVID-19, 61 per cent of the households experienced hunger (food deprivation) in rural India, 71 per cent lost their livelihood and 56 per cent said that they struggled as the schools didn't provide mid-day meals for the children. On the positive side, close to 84 per cent of the households found the functioning of the PDS during the pandemic either good (63%) or very good (21%), 79 per cent said that they got full quota of grain under the PDS and 55 per cent of the respondents said that they want the MGNREGA to continue.

The findings also show that among the 61 per cent who experienced hunger, a majority of them were from the Scheduled Caste (SC) and Scheduled Tribe (ST) category. Similarly, a greater number of SCs were unhappy with the functioning of PDS in their respective states, with 5.6% of the them calling the functioning of PDS as 'Bad' and 1.7% calling it 'very bad'. Thus, we find that women and people from SC and ST categories have experienced greater food insecurity with the poor functioning of the social security schemes like PDS, MGNREGA and MDMS.

Though the study has the limitations like a limited sample from each of the 12 states, covering less than 50 per cent of the states in India and its predominant focus on the rural population, yet there are some important findings that throw more light on the situation of rural population and their dependence on these important social security measures to live dignified lives, free from hunger and food insecurity.

TECHNICAL SESSION 1.3

Agricultural Domestic Support Reforms at the WTO: An Assessment of the Proportional Reduction Approach

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Disciplining the domestic support is the most burning issue in the agricultural negotiations since the Doha Development Round, and is a litmus test for a successful agricultural outcome. Some of the Cairns group members such as Australia, New Zealand, Canada and Costa Rica as well as the Chair's text suggested the proportional reduction approach for capping and reduction of the sum of current global of trade-distorting domestic support (TDDS) entitlements by at least half by 2030. The contributions to these reductions would be undertaken only by non-less developing countries members and would be proportionate to the size of an individual member's current TDDS entitlement.

It is argued that the global TDDS entitlement is growing rapidly due to the combined de minimis entitlement which is based on the value of production. As the combined de minimis entitlement of developing members (20%) is double that of

developed members' entitlement (10%), a narrative is being built to show the developing members with the highest TDDS entitlement. However, it ignores the basic difference between the flexibilities in the combined de minimis entitlement and the final bound total aggregate measurement of support. It has been the main reason for the persistent demand by developing and LDC members to eliminate the FBTAMS entitlement. Moreover, the developing and LDC members have legitimate concerns regarding the market support price methodology in which the current applied administered price is compared with the fixed external reference price based on 1986-1988 prices, which leads to inflated Amber box support. Instead of addressing these demands, there is a frequent questioning of the de minimis and development box entitlements of the developing members. The proportionate reductions approach can be viewed as an attempt to take this approach forward.

The suggested approach has failed to incorporate the issues, sensitivities and challenges persistently faced by the developing and LDC members. In general, the outcome of proportionate reduction in TDDS would require the developing members to contribute more than the developed members. Contrary to the general belief that LDC members' policy space would remain intact, this study found that LDC members would lose US\$ 49 billion or at least half of their TDDS entitlement by 2030 due to fixing the limits in monetary terms. Further, the outcome of the option on reducing TDDS would substantially dilute the existing special and differential treatment provisions of the agreement on agriculture.

Child Malnutrition across Gender among Major Tribal States in India

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Malnutrition is considered as a catalyst to global burden of diseases and it is a major concern in the developing countries like India. Child malnutrition has declined over the decade but one third of children are still malnourished which adversely effects the mental health of children and is a risk factor of child mortality as well as morbidity. Due to malnutrition, 1.04 million under-five mortality occurs in India. This present study examines child malnutrition across gender among the states and major tribal states in India. For this study purpose, National Family Health Survey (NFHS)4 data is used to analyse gender-wise child malnutrition status among all states and 14 major tribal states

in India. Bivariate and binomial logistic regression model has been done to understand the distribution of malnutrition status among children and the impact of background variables in the child malnutrition. These results show that high prevalence rate of malnutrition is observed in Northern, Central and Eastern parts of India; it is about 40% in the stunting and underweight indicator among malnutrition parameters. Half of the children belonging to the socially backwards class are at a higher risk of malnourishment. Prevalence rate of malnutrition indicators such as stunting and underweight is very high about 50% in Jharkhand among the major tribal states. Significantly, this study found that female children are less malnourished than the male one but, in the Manipur, Meghalaya and Mizoram, underweight is high among girls as compare to boys and stunting is high in female than the male in the Maharashtra among the tribal population. So, we urgently need an effective nutrition and health policy for reducing malnutrition in India and to fulfil the SDG goals 2 and 5 and the targets by 2030. For reducing child malnutrition, public policy should focus on food distribution pattern and intake of food diversity among tribal and marginalised group of people in India.

Trends and Patterns of Prevalence of Undernourishment in India since 1980s: An Assessment using Sustainable Development Goal (SDG) Indicator 2.1.1 and National Consumption Surveys

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Despite more than 70 years of independence, the problem of hunger and malnutrition remains central to the public policy in India. In a country where food security status of people is so poor, it is imperative to aptly quantify the extend of the problem so that effective public policy aimed at eradicating hunger could be implemented. Traditionally, undernourishment is measured by comparing dietary energy intake of individuals with an average dietary energy requirement to assess whether or not an individual is undernourished. This, however, is methodologically incorrect because energy requirements of people vary as per their body size, age and physical activity levels, and hence, such an averaging across the population is incorrect. The Food and Agriculture Organization (FAO) proposes a robust measure of hunger, called the Prevalence of Undernourishment (PoU) which is also used to track progress of SDG Target 2.1 (End Hunger) across the globe. While PoU is based on a statistically sound methodology, due to unavailability of data and certain standard assumptions for cross country comparisons, estimates of PoU by FAO for India are too far (low) from the

actual extent of problem in the country. In this paper, we use revised PoU methodology combined with national surveys data to assesses the trends and patterns of proportion of undernourished population in India and across states since 1980s. We essentially estimate the probability that calorie intake for the representative average individual in the population is below the average Minimum Dietary Energy Requirements of individuals in the population, accounting for differences in calorie requirements of people due to differences in age, sex, height and physical activity levels using the national employment surveys. Further, we also present trends in average calorie intake and variation in dietary consumption across Indian states using the national consumption surveys. The most striking finding of this study is that since 1980s, about half of the population in India is suffering from chronic deficiency of calories. While there was a small fall in undernourishment in India in the 1980s, it rose significantly in the 1990s during the period of economic liberalisation. Falling mean calorie intake despite rising calorie requirements since the early 1990s, as presented in the study, confirm that introduction of economic liberalisation reforms was catastrophic for the food security status of the country. The period witnessed agricultural slowdown, fall in per capital availability of food grain, falling incomes, rising inequality, and falling public expenditure to aim for fiscal consolidation. From 2004-05 to 2011-12, data show a small decline in prevalence of hunger. However, the proportion of population hungry is still at, as high as, 47 per cent of the total population. Since data for latest consumption survey were withheld by the government, one cannot provide accurate estimates of PoU for recent years. However, media leaks showed that there has been a fall in the consumption expenditure of people in India, indicating a fall in average calorie intakes, hence a further rise in hunger in the country.

Drought and Food Insecurity in India: Understanding the Nature & Pattern at Household Level

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Droughts have widespread, underestimated and lasting impacts on society in general and on household's food and nutritional security in particular. Droughts cause multiple costs that are borne disproportionately by the poor, weaker sections, women. Understanding and analysis of diverse nature and structure of household food insecurity in drought affected areas are not adequate in India. Drought induced

food and water scarcity, loss of farm output and income, loss of entitlements, and poor human development, especially in semi-arid and backward dry areas has drawn attention of researchers and policy makers. The present paper is a modest attempt to analyse and understand rising abiotic stress due to recurrence of drought that not only challenge household food security but weaken their risk coping capability which vary across regions and groups. Using primary data, the paper analyses nature and pattern of household food arrangements and food consumption in drought affected areas that influence their drought coping, intra-household risks sharing, gender relations. Effort has been made to capture different household food consumption coping strategy by using coping strategy index (CSI)¹ based on four broad groups such as dietary change; augmenting short-term food availability; decrease numbers of family members; rationing food consumption to understand household food consumption strategy better in regional contexts. Major finding of the paper suggests that both 'labour smoothing' and 'consumption smoothing' strategies often followed by households to cope with food scarcity during drought are neither ensure household food security nor they are gender neutral. Drought induced shortfalls adversely affect both quality and quantity of average food consumption and other critical expenditures which disproportionately shared by women. Inefficient and poor drought coping response in terms of food arrangements, adjustment in quality and quantity of food consumption, occupational changes, informal borrowings, liquidation of assets etc. found common as household ex-ante strategies with some region and group specific variations on the scale of development and resource endowment. The paper analyses socio-economic costs of drought and its impact on household food security, occupational mobility and gender equity that vary in both dry and backward areas and irrigated developed areas in Gujarat and Odisha. Local weather and farm conditions and other land and water-based activities remain critical for household food security in drought affected areas. Subsistence farming, inadequate and unequal access to resources (land, water, credit, farming practices) and markets conditions (product and input) poor drought preparedness (missing of long term drought measures), can make several poor households as food insecure even some short term temporary food and employment provisioning like PDS, MGNREGS, relief measures etc. are in operation but they fail to address the nature and structure of household food security and scarcity in drought affected areas.

TECHNICAL SESSION 1.4

Analysis of Pulses Cultivation and Nutrition Security in Odisha

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The distress of the farming community has increased in recent years. It has resulted in a decline in the growth rate of agricultural production. In this regard, pulses cultivation needs to be analysed to understand the performance of pulses cultivation since the crop is a major source of nutrition security. In this context, the present study examines the nutrition status of Odisha and explains the importance of pulses cultivation to have nutrition security in the state. Therefore, the study analyses the trends in the area, production and yield of four different groups (Mung, Biri, Kulthi and Arhar) of pulses across all the districts of Odisha since 2000-01. The data sources of the study are the Directorate of Economics and Statistics, Government of India; Economic Survey of India 2019-20; Odisha Economic Survey 2019-20; Odisha Agricultural Statistics, Government of Odisha and other published sources. The study found that there is poor nutrition status in Odisha. Moreover, the trends of the area, production and yield of pulses are calculated to track the rate of growth over three sub-periods. The compound annual growth rate of the pulses production has been stagnant during 2010-11 to 2016-17. It was found that there are substantial agricultural disparities in the trends in the area, production and yield of different groups of pulses cultivation across all the districts of the state. Further, the productivity of pulses was found below the national average. And, the per capita availability of the pulses for consumption is meagre in the state. Therefore, the crop needs immediate government intervention in terms of policies to have nutrition security in the state.

The paper examined the critical indicators of health and nutrition per se, which has been a grave concern for policymakers in Odisha. Low HDI indicated the state to

make public spending on different HDI indicators to improve the overall development and poverty ratio showed a considerable share of the population is still below the poverty line in rural Odisha till date. The percentage of children under stunting, wasting and underweight is considerably high in the state. The IMR is high in rural Odisha than urban Odisha. Thus, Odisha has a record of poor nutrition status. Keeping this track of the nutrition and development indicators, numbers of literature have shown a pathway of development in boosting the agriculture sector and meeting the minimum nutrition requirement for large sections of the society.

Food Wastage and Post-Harvest Losses in India: A Qualitative Analysis with Certain Policy Implications

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The on-going market trends may prove out to be a boon for developing economies like India. Most of the developing nations rely on agriculture sector in order to boost their overall economic growth and so is the case with the Indian economy. Many times agriculture sector has to resort to providing food as well as employment to its people. There has always been a dilemma about changing demand patterns and its impact on the economic performance of the agriculture sector. The recent COVID-19 epidemic has emerged as the changing phase for most of the developing nations. This epidemic has suggested more on strengthening the infrastructural facilities while simultaneously being concerned about the climate change. Past has always taught us about the importance of both climatic balance as well as agricultural balance in nurturing the economic performance of any nation. This is why there's always been a requirement to learn and implement more about the green and clean technology. During the lockdown phases, almost everyone has to resort to 'work-from-home' practice and with this new normal there has been a drastic change in the consumption pattern of individuals. Due to the raised nutritious intake concern, people started having more of packaged and processed foods. This year gave a highly increasing demand pattern for ready-to-cook and ready-to-eat foods. Such families where both the parents are bread earners had relied heavily on such food practices. But there has been an unseen story of the journey of food from farm to plate. There are numerous published sources claiming a disrupted channel of food from farm to processing to

its presence on plate. This paper tries to enrich more on the food wastage and post-harvest losses, especially witnessed in developing nations and would further enlighten more on the suggestions as to how a developing nation could avoid such losses and simultaneously learn more about the usage of green and clean technology. This paper is an attempt to bring the findings of certain varied reports/surveys/studies at a single page and provide suggestions and ways to achieve the set targets. Thus, this will be a qualitative study with its significant implications to policy makers.

People's Hotel: A Means to Nutritional Empowerment

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The NFHS-5 report states that anaemia is more prevalent among children and women than men in India. In this context, what role can be played by 'People's Hotel' an initiative of the Kerala government as a part of the hunger-free Kerala programme is discussed in this paper. People's Hotel comes under the common brand Subhiksha hotels. On average, 500 to 1,500 people have lunch in a day at these hotels which is priced at ₹20. Kudumbashree/voluntary organisations and co-operatives have entered into an agreement to cook and distribute lunch at People's Hotel. The questions we are trying to address are: How malnutrition among children and women can be addressed through People's Hotel? How People's Hotel can reduce the burden of a housewife and a working woman as child-rearing activities are time-intensive, particularly for younger children. We visited the nearby 'People's Hotel' at Mulagunnathukavu in Thrissur district. The hotel is run by four Kudumbashree members. Kudumbashree, a community network, is the poverty eradication and women empowerment programme implemented by the State Poverty Eradication Mission of the Government of Kerala. Presently, People's Hotel only provides one-time meal (without any additives), however if the government takes initiative to provide meal more than once a day, it will ensure nutritional security. The augmentation of People's Hotels must be in accordance to reduce iron deficiency. As of now major customers of People's Hotel are men. More children and women needed to be the beneficiaries of People's Hotels as it will reduce the work burden of both housewives and working women, who particularly have younger children. Cooking fuel has to be provided at a subsidised rate. Local self-

government should take efforts to procure locally available vegetables. People's Hotels are a viable option as they can meet their expenditure from their revenue. Low-interest rate loans from Kudumbashree and other financial aid from the local self-government and the state government can help the women entrepreneurs to run the business.

A Review Paper on Food and Nutritional Security with Special Reference to Jharkhand

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The first and the foremost thing which arise when one studies about food and nutritional security is how to actually find which region or person is food and nutritionally secure or insecure? The studies related to the 'identification problem' has considered different determinants of food and nutritional security. One can argue that although the studies have attempted to address the 'identification problem', there is no clear way out yet. However, this is not true. Over the period, with evolution of studies, certain parameters that play a dominant role in ensuing food and nutritional security have come up. One of such parameter is the 'role of woman'. A clear and positive implication of placing women in the centre of food and nutritional security studies is that child nutrition is automatically taken care off. In this multipolar world which has its multiple priorities, the hurdles to food and nutritional security is not just the implications of recently occurred COVID 19 pandemic. But there are other constraints as well, which are there since the long run – climate change, reduced agricultural productivity, etc. Some researchers differ from the popular opinion that increase in the real income necessarily led to increase in calorie intake and that the role of government interventions are limited. Results suggest that the calorie-elasticity of Public Distribution System (PDS) transfers is twice as large, as compared to additional out-of-pocket income equal to the cash equivalent of PDS transfers. There may be differences on the reasons behind differentiated efforts of the countries with respect to food and nutritional security, but there is almost a consensus that, prioritising sustainable agriculture is crucial for ensuring food and nutritional security. The state of Jharkhand is an example of sharp contrast as the mineral prosperity of the state could not be converted to its overall social wellbeing. Of all the parameters of social wellbeing, food and nutritional security is the most poorly placed. The National Family

Health Survey (NFHS) data shows that Jharkhand stands amongst the bottom states on almost all nutritional parameters. There are 32 tribes in Jharkhand and some of them are worst impacted. Bihar and Chhattisgarh have outpaced Jharkhand in terms of ensuring food and nutritional security. Sustained reforms, coupled with political and social will to improve PDS access, being the key.

Who is Well Nourished in India? An Age and Socio-economic Matrix

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Nutrition is fundamental for the health and well-being of individuals of all ages and is a basis for sustainable development and economic growth. Undernutrition, the leading form of malnutrition in India, would imply the absence of freedom to lead a minimally healthy life. From the human development perspective, undernutrition demands a higher degree of priority, as it signifies deprivation or deficiency than overweight/obesity, which indicates excess. On the one hand, India ranked poorly in Global Hunger Index (GHI) 2021, and COVID-19 further intensified the malnutrition and hunger problem. On the other hand, overweight/obesity is rising rapidly among adults.

The nutrition transition is underway in India, and we do not have food and nutrition intake data since 2011-12, almost a decade. Therefore, we tried to map the nutritional status of all ages (children 0-10 years, adolescents 11-19 years, adults 20-45, and elderly 45 and above) people in India using the most recent nutritional outcome-based data in the lack of updated nutrition intake data.

Earlier, we have National Family Health Survey (NFHS) to assess the nutritional outcomes, but the limitation of NFHS is that it covers only children under five and adults of reproductive age. To overcome these issues of lack of data on school-age children, adolescents, and the elderly, we use the Comprehensive National Nutrition Survey (CNNS 2016-2018) and Longitudinal Ageing Study in India (LASI Wave-1 2017-18). To measure the nutritional outcome of children and adolescents, we followed World Health Organization (WHO) 2006 child growth standard and WHO 2007 growth reference. For adults and the elderly, standard Body Mass Index (BMI) criteria are used to classify the nutrition status.

We find that in India, there is a persistent and substantial disparity in nutritional outcomes across the different socioeconomic spectrums, i.e., rural-urban, sex, wealth groups, and social classes (caste and religion). In terms of stunting, children aged 24-59 months are most vulnerable, and 38.6% are stunted. Within this age group, 55%, 48%, and 41% of the children from the poorest wealth group, STs, and rural areas are stunted. Although the prevalence of stunting is 21%, 25%, and 29% among children aged 5-9 years and adolescents (10-14 years and 15-19 years), socioeconomic disadvantages persist.

The prevalence of underweight among adults (20-44 years) and the elderly is 19% and 21%, whereas a larger proportion faces obesity. Compared to men, women have a higher prevalence of underweight and overweight/obesity. Except for disadvantaged groups, overweight is more prevalent among adults, and 22% of adults and 27% of the elderly are overweight/obese. This indicates a more complex nutrition reality of the dual burden of malnutrition—the coexistence of undernutrition and overweight/obesity.

Our study presents a factsheet on the child, adolescent, adult, and elderly malnutrition in India. Apart from other socioeconomic yardsticks, we are also a deeply unequal society borne out of a nutritional standpoint. There are stark rural-urban, social, and economic disparities in nutritional outcomes. Tackling health and nutritional inequalities are very critical because these reinforce each other throughout the life cycle. And to avoid a looming public health crisis of increasing obesity, policymakers should formulate appropriate nutrition policies for adults and the elderly.

TECHNICAL SESSION 1.5

Impact of COVID-9 on the Fish Production in Kerala

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Fisheries sector plays the most prominent role in the economy of Kerala. Kerala is the second largest in the case of fish consumption. The sector contributes not only to the GDP and employment, but also stimulates growth in a number of subsidiary industries. At the same time, fisheries are an industry for many possibilities provided as production of fish, employment opportunities, handicrafts products and precious metals. Not only that, the ocean is also an important asset for many businesses like ownership of mechanised boats and foreign made vessels and fishermen are mediators of all these kinds of business. But the traditional fisher folk of Kerala have been acknowledged as one of the marginalised communities. So, we can attempt to evaluate the importance and role of fisheries sector to enhance the livelihood of the human being. On 24 March 2020, the Government of India under Prime Minister Narendra Modi ordered a nationwide lockdown for 21 days, as a preventive measure against the COVID-19 pandemic in India, and further extended the lockdown until 31 May 2020. Although these steps were undertaken for the safety of the mankind, but it created numerous hurdles for the growth of the economy. COVID-19 and the measures instituted to control it have adversely affected all the sectors of the economy like agriculture, industry, tourism, education etc. It has also had an adverse effect on the fisheries sector.

The research for this article was based on secondary data sources such as Economic Review, Marine Fisheries Census 2010, Department of Fisheries, Government of

Kerala, CMFRI, various Journals, Magazines, and reports of the state, national and international organisations. Firstly, growth of fisheries sector data was collected from fisheries census, Handbook of Fisheries Statistics. Secondly, the data on the role of fish production to the development of the economy and fisheries sector was accessed from the Economic Review. We must investigate these facts to prove the role of fisheries sector and through it understand the importance of fish production on the food habits of Keralites. We specifically mention that the role of fish production to the improve the livelihood of the human being in the economy. This study finds that the marine fish production declined during the COVID-19 period and at the same time inland fish production increased. But the overall fish production decreased during COVID-19. The share of export of marine products also decreased during this period and the contribution of fisheries sector during the COVID-19 period decreased as compared to the previous year.

Security in Times of Insecurity: A Study on Food Security among EWS Households of Delhi during COVID-19

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COVID 19 has affected all sections of society across caste, class, region and state, but needless to say that it disproportionately affected the poor, daily wage workers, migrant workers, small and marginal workers. A shortfall in income due to job loss and lockdown significantly affected the households of these workers. People experienced food insecurity, monetary crunch along with health havocs and losing the near and dear ones due to severe crisis at different levels. Targeted provision of food and cash was the greatest need of the hour to minimise the pain and agony of the desperate people of the country. This was more required in the poor households of the country. The aim of this study is to evaluate the impact of food security on the livelihoods of the EWS households of Delhi during the times of COVID 19. Simultaneously the paper also focuses on the cash assistance extended by the Government and NGOs during the times of COVID 19 and its impact on the lives of people of Delhi. The purpose of the study is to evaluate the efficacy of Distributive policy of the Government to

handle the unprecedented health led food and financial crisis. The survey is conducted in April 2022 on 150 households of Delhi on random sampling basis. The questions are meant to assess the experiences of households for the period April 2020 to March 2022. The present study will be a great addition in the process of policy formulation and implementation. The academia, Faculty and scholars are definitely going to get a deeper understanding of the after effect of COVID 19 on the lives and livelihood of the people of Delhi and the efforts of the Government and NGOs to address the grim situation.

As per the results of the questionnaire survey, it was analysed that major population of the survey was aware of the prevailing food and cash benefits provided by the government. It was also analysed that respondents who received food benefits felt secure after the implementation of the government policy as they received adequate amount of foodgrains, wheat and pulses as given under the policy regime. In contrast to this, the government policy of Direct Benefits Transfer of cash provision during COVID-19 was not found to be successfully implemented. Respondents also agreed that government had more reach to them than NGOs and only a few respondents agreed to having received benefits from the NGOs.

Sustainable Livelihood and Nutrition Security for Tribal Farmers: An Assessment of CSR Intervention in Dungarpur, Rajasthan

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Dungarpur is a tribal-dominated district of Rajasthan. The district is exemplified by low agriculture productivity, migration, and high incidences of malnutrition. The Dharampal Satyapal Group, as a Corporate Social Responsibility, has built a model of three-tier system of cultivation in wadi to reduce climatic, biological, market risks and secure livelihoods and nutrition for deprived tribal farmers' family. The study was an attempt to understand the impact of wadi Intervention on farmers' income, dietary diversity and nutrition security for women & children.

The study used quantitative and qualitative methods for data collection. The 24-hour dietary recall method was used to measure micronutrient intake and anthropometric

data was captured for women & children under five. The study covered 100 farmers' families from the project intervention villages and 100 from non-intervention villages.

The findings indicate that wadi cultivation, through production of diversified crops, has dramatically increased family income up to rupee 5000 per month throughout the year. The wadi also enhanced food basket of farmers families and provided options to consume diverse food by sustaining food and nutrition security for women and children. The anthropometric data also revealed better nutrition outcomes in the intervention areas as per Recommended Dietary Allowance of ICMR. The study proposes to scaling up the model by convergence with other government schemes.

The tribal population in the remote rural villages of the Dungarpur district is facing severe livelihood distress due to shrinking agriculture production on which they were traditionally dependent. The three tier of wadi model under the PAHAL intervention provided a sustainable solution for marginalized and poor farmers to secure their livelihood and improve their socio-economic status. The increased family income turned out to benefit them in terms of their saving, investment in livelihood assets, and reduced migration. The Intervention has also provided a spectrum of diverse food basket and availability of nutritious food for consumption for family. The better nutrition status, increased family income and reduced migration has emphasized the need for replicating the model to the other non-intervention areas. The approach needs to be converged with other government schemes such as Pradhan Mantri Krishi Sinchayee Yojana, ICDS and National Nutrition Mission for better livelihood and nutrition outcomes

The Role of Groundwater for Food Security in India

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As the population of India is increasing rapidly, the demand for food grains is also increasing. Irrigation water is must to improve the agricultural production and productivity. Due to the climate change and unscientific usage, the availability of surface water is shrinking. In such a situation, the dependence on groundwater as the reliable source of fresh water has increased immensely. But the unregulated bore well drilling

and free electricity has led to inefficient and uneconomical use of *groundwater* infiltration resulting in groundwater depletion in many parts of the country. This paper is an attempt to portrait the groundwater resource use pattern in the both agriculture and non-agriculture activities. Though India has huge groundwater resources, it is in diversified form. The northern alluvial aquifers have large quantity of groundwater, but it is very low in the hard rock aquifers contained in the Deccan Plateau. Like-wise, its consumption for the both agricultural and non-agricultural purposes are also not even among the major Indian states. Irrigation being the major consumer of groundwater, its consumption depends on groundwater availability, crop cultivation, availability of electricity and micro irrigation coverage. In the case of domestic and industrial usage, consumption of groundwater is higher in the urbanised states. Agriculture is the major sector that consumes the largest portion of the groundwater resource in India. For which, irrigation is the major factor. Groundwater is also the supplementary source of irrigation for many farmers. Its consumption is very high in the groundwater resource abundant northern and eastern states of India. Though the peninsular Indian states are highly dependent on groundwater irrigation, there groundwater consumption for irrigation is comparatively less because of their hard rock aquifers conditions. Generally, the reason for the high groundwater extraction for irrigation is dependent on crops and availability of the electricity. The micro irrigation coverage may also play a significant role in it. Due to the high dependency on deep tube wells in the states of Punjab, Haryana and Uttar Pradesh, the irrigation ability from one pump set is very much higher in these states compared to all other states.

The urbanisation growth poses a greater challenge to providing drinking and domestic water to households. Though the groundwater consumption of domestic households is less than the irrigation, the highly urbanised state's consumption is very high. The industrial groundwater consumption in the resource abundant states is also high. Along with that, its consumption is also high in the states of Chhattisgarh, Jharkhand though the groundwater availability in these states is lower than the national average.

Trends and Patterns of Malnutrition Across States in India

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As per the Global Hunger Index (2021), India ranked poorly at 101 among 116 countries in the World, and is projected as seriously severe among the countries of the world. Though India ranks second in food production in the world, it is also second in undernourished population in the world. This paper brings out the trends and patterns of under-nutrition, micronutrient deficiencies and over-nutrition among children and adults across states in India using National Family Health Survey (NFHS) data. The under-nutrition status shows that the stunted children in India on an average as per NFHS-5 are 31.60 per cent, a little less when compared to NFHS-4 at 32.23 per cent. The states like Bihar, Uttar Pradesh, Jharkhand and Meghalaya continue with highest rates of stunted children having more than 40 per cent. There has been an increase in the stunted children in most of the northeast states and Telangana in south and Dadra & Nagar Haveli and Lakshadweep among Union Territories and Himachal Pradesh in north. The status of underweight children shows that there has been a decrease in most of the states except a few states. There has been a reduction in the child wasting rate in most of the states in India. In case of malnourishment among women, it is observed that the Body Mass Index (BMI) < 18.5 for women aged 15-49 has improved in all states except in Punjab and in Dadra & Nagar Haveli. Similar situation exists for malnourished men except for seven states.

The situation of anaemic children across states has worsened where most of the states have witnessed an increase with some of the states with very high increase in anaemic condition of children. Except a few states like Goa, Tamil Nadu and Dadra & Nagar Haveli, all other states have witnessed an increase in anaemic children. Anaemic condition of men and women has risen in most of the states. After malnutrition, over-weight has become another alarming problem in India, the status of overweight children aged 6 to 59 months shows that there has been an increase in the overweight cases across states in India. The percentage of overweight women has increased across states in India except a few states like Rajasthan, Meghalaya, Nagaland, Gujarat and Lakshadweep. There has been an increase in overweight cases of men in all states except Andhra Pradesh and Dadra & Nagar Haveli. The NFHS-5 computed waist to hip ratio for the first time and it reveals that on an average about 60 per cent of women and 48 per cent of men in India are at high risk for heart diseases, diabetes

and premature deaths as the waist to hip ratio is high. Though there is a positive change but the extent of change is very less and it is the need of the hour to take up healthy diet habits and curb the problems of malnutrition and also the newly added problem of over-nutrition which is scaling up high in most of the states in India. Policy interventions are also needed to curb the problems of malnutrition.

Cognitive Planning of Mid-day Meal Scheme: A Way Forward for an Inclusive and a Balanced MDM Model

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Malnutrition is a great concern among the policy makers as it is one of the main reasons for growth failure. Children from the lower income group and below poverty fall into the trap of malnutrition. Malnourished children fail to attain required amount of nutrition at the early stage of their brain and physical development, which affects their mental and physical capacity to work, their economic productivity, contribution and efficiency in later stages of life to the country. Malnutrition deficiencies of the young population can lead to unhealthy and poor working population of the future. Under nutritional population also increases the burden of the government in their future stages of life, demanding more of social benefits and health care expenditure from the government. Therefore, policy makers are more concerned to ensure nutrition security at the early stages of a child's development. School feeding programme like Mid-day meal (MDM) is one such concern. Globally, especially in many of the developing countries, school feeding programmes acts as a life line to millions of underprivileged, marginalised and disadvantaged children. India's Mid-Day Meal (MDM) scheme is the largest school meal programme in the world, reaching

over 118 million children. daily. The MDM scheme is also one of the most promising interventions by the Government of India (GoI) to ameliorate classroom hunger, improve children's nutrition, and enhance school enrolment and attendance. The scheme covers students in primary and upper primary government and government-aided schools for at least 200 school days per year and ensures access to one hot cooked meal per day. The innovations on provision of MDM across the states have brought about variations in the diet pattern. However, this paper examines how far such innovations impacted the nutritional status of children under MDM. Specific assessments in the areas of how the initiatives/innovations are effective in addressing the barriers against minimum acceptable dietary intake among children. The present study explores the critical nature of state's nutritional interventions and diverse dietary practices. There is also lack of detailed analytical research on the relationship between region specific attributes and the difference in provision of food in MDMS to school students. Therefore, the objectives of the study are, to examine the uniqueness of MDMS, provided by different stakeholders across the country, to identify ways to enhance nutrition under MDMS, from the steps taken by different stakeholders across the country, to suggest a sustainable and an inclusive model according to their local conditions.

TECHNICAL SESSION 1.6

Consumer Response to Online Food Delivery Services during COVID-19: A Study on Mumbai and Pune

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The year 2020 and the COVID-19 pandemic per se entirely altered the lifestyle of the masses. During the initial stages of the pandemic, people were sceptical as to whether ordering food online is a safe option or not. Thanks to the aggressive marketing skills of the Food Delivery Apps (FDA) businesses like Swiggy and Zomato, people gradually started ordering food online through these apps since hotels and restaurant services had not been resumed fully-fledged.

Government restrictions are one reason why the FDA businesses felt a pinch, another important factor can be the spread of fake information about the pandemic. During such a crisis, social media fabricates and exaggerates many facts and is an expert at ad-libbing the truth. Many so-called WhatsApp forwards were sent during the pandemic, stating how ordering food online is a dangerous affair. Some part of it is true, for instance, ordering food online would indeed increase the risk of the virus spreading; having said this other much hoax information was forwarded and unfortunately people believed such news.

The FDA however used this point to come back into the business. They started marketing their brand with a new concept viz, “contact-less delivery” or “zero-contact delivery”. By preventing a contact if food is delivered to your doorstep directly, why would one refuse to use it? During the pandemic barring the initial few months of lockdown, these apps made a sizeable number of profits that benefitted not only the end consumers but also several hotels and restaurants. In addition, the paper also seeks to understand the pre- and post-COVID food ordering patterns.

From the study, it was observed that the pre-COVID online ordering frequency was less as compared to the post-COVID ordering. The study also revealed the food ordering patterns among the respondents. The patterns of food ordering were gauged by knowing the food choices and the preference of the cuisines of the respondents. It was seen that the most frequently ordered food category was fast food and main course, and often ordered cuisine was Indian, followed by Chinese. These responses tell us about the pattern of consumer behaviour ordering online.

The screening of the respondents was done based on having access to FDA. Almost 90% of the respondents had access to FDA like Zomato and Swiggy. It is worth noting that the majority of the respondents belonged to the age group 15-25 years, and belonged to the student category. These demographics can have a significant impact on the intention to order online. Females being more in the study also tells us about the different behavioural patterns.

Several factors motivate the consumers to order from the FDA. The main aim of this research was to find out and analyse which are these factors and what role did they play in deciding whether to order online or not. Several factors were taken into account and their intensity or importance to the consumers was gauged by Likert scale responses.

Special Safeguard Mechanism (SSM) for Agriculture: Implications for Developing Members at the WTO

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For a long time, developing members have been seeking SSM for shielding their farmers from import surges and price depression. The result of this study shows that developing members such as Ghana, India, Indonesia, Namibia, Philippines, Senegal,

Sri Lanka and Turkey have experienced import surges in agricultural products. Further, it was also observed that some of these members such as Sri Lanka, Turkey, the Philippines and Namibia do not have adequate policy space to raise tariffs to counter import surges on many agricultural products. As shown by this study, the flexibility of these countries to use tariffs as a policy instrument to protect their farmers will shrink if they have to reduce their bound tariffs as part of market access negotiations at the WTO.

Access to SSM, and its effectiveness in dealing with import surges, depends on the trigger, remedy and other attached conditions. As brought out clearly in this study, SSM as a policy instrument would be almost inoperative, if it is based on the conditions specified in the documents that have been the basis of negotiations during the Doha Round of multilateral trade negotiations. In particular, the requirement to calculate the trigger for Volume-Based SSM and Price-Based SSM on the basis of Most-Favoured Nation (MFN) trade would prevent most developing members from having recourse to it, as most of them do not collect trade data separately for MFN trade and preferential trade. Similar difficulties could also be encountered in complying with legal obligations based on domestic production and consumption data. Developing members may also be hard put to comply with many of the other obligations, particularly volume cross-check for Price-Based SSM.

Overall, it would not be unfair to state that conditions sought to be imposed on access to SSM and the remedy, as contained in the negotiating texts at the WTO, is not aligned with the policy instrument envisaged by the developing members for countering import surges and price dips. Given the socio-economic situation of developing members, price depression and import surges of agricultural products can endanger the food security and livelihood of millions of low income or resource poor farmers. The issue of SSM should not be seen from the angle of pure commercial interest, but as a crucial tool in achieving various Sustainable Development Goals (SDGs) including zero hunger, eradication of poverty and doubling agricultural productivity. Therefore, it is imperative that all members engage constructively for reconciling their differences on various aspects of SSM.

Understanding Household Food Insecurity from COVID-19: A Qualitative Study in Rural Rajasthan

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This research paper attempts to provide an understanding of how the pandemic has changed and impacted the status of food security at the micro level documented through field insights in selected villages in the state of Rajasthan. This paper will specifically explore the impact of the pandemic on the access to food, if any, and the consequential impact on the food security status of rural households.

This study on household food security is based on qualitative research premised on observation and narratives. Capturing the actual lived experiences of people on the ground, it serves as a complementary addition to conventional measures of understanding food insecurity.

Providing descriptive evidence, this paper specifically explores the impact of the pandemic on the dimension of access to food from the perspective of women. The experiences are all voices of women since they are the primary decision makers in terms of management and preparation of food in the household. Due to this reason, the woman was considered as the representative of the household. It is also observed that a decline in food security status of a household burdens the women the most.

It is known that periods of sudden shocks such as that of the pandemic are marked by a general reduction in availability of food, but perhaps what is more severely impacted is people's access to food. This paper highlights how a households' access to food is determined by their level of entitlements.

This paper also delves into whether there was any loss of welfare mechanisms due to the pandemic and if it did how it has exacerbated food insecurity at the household level. It is found that there was a hiatus in social safety nets which has further contributed towards curtailing a household's access to food. The example of the Integrated Child Development Services intervention, notably the Supplementary Nutrition Programme (SNP) component is taken to illustrate this point.

In the absence of reliable access to food, this paper then also throws light upon the variety of coping mechanisms the women in the household devise to manage food supplies in the face of scarcity.

It is established that during pandemic induced food insecurity has plagued the marginalised and disempowered groups the most. Therefore, there is an urgent need for interventions to focus on safeguarding these vulnerable groups.

Sustainability of Food Grains Production: A Special Reference to Karnataka

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Green revolution implemented in 1966-67 in India introduced new production technologies for sustaining food production in the country. The benefits from this revolution became insipid in few decades due to overexploitation of land by chemicals and variation in climate matters. New economic policy (1991) was implemented to open up Indian internal economy to global economy. This resulted in agriculture land being converted to non-agriculture land for building industries and infrastructures, and reduction in food grain production in favour of commercial crops for export. Hence, the per capita availability of food grains declined continuously which impacted on human capital by reduction in nutrition intake. India is home to at least 15 per cent of the world's malnourished. According to the Food and Agriculture Organization (FAO) estimation, over 190 million people go hungry every day in the country. Therefore, sustainability of food grains production is a challenging task. Sustainability refers to meeting our own needs without compromising needs of our next generation.

This present paper aims to analyse the reasons for unsustainability in food grain production in Karnataka state. Variation in rainfall, high level of fertilisers usage, droughts, increase in fallow land and non-agriculture land, marginalisation of landholdings, government industrial policies etc., are major causes for unsustainable agriculture food grains production. With the help of secondary data of various published articles and government's reports, and employing various statistical tools like average, percentage, compound annual growth rate and Geographic Information System (GIS), this paper led to following findings and suggestions: increase the productive capacity of the soil, conserve soil health by introducing organic farming, adopt collective farming to reduce cost of cultivation, use water conservation methods, improve the food distribution system to reduce malnutrition, take action against the wastage of food etc. The paper also suggests that government policies should concentrate on primary sector, especially for research and innovative ideas.

Integrated Nutrient Management of Papaya (*Carica Papaya* L.): Application of Microbial Consortium Enriched Organic Manures for Yield and Fruit Quality Enhancement

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Papaya is an important fruit crop of Kerala. Integrated nutrient management (INM) involves efficient and judicious supply of all major and micro components of plant nutrients including local available resources on sustainable basis. Papaya is known to be a heavy feeder of nutrients (NPK) and information regarding the effect of INM is rather rare. Hence, an experiment was undertaken to study the effect of integrated nutrient management on growth, yield and quality of papaya under Kerala conditions. The trial was conducted in RBD. Papaya variety used for the study was Surya with ten treatments. The results revealed that the applications of microbial consortium enriched organic manures in papaya plants (NPK (25 %) as PGPR mix-1 enriched vermicompost along with N, P and K 75% of recommended dose of fertilizers (240 N: 240 P₂O₅: 480 K₂O (g plant⁻¹) + 10 kg FYM) resulted in the highest number of fruit production, enhanced fruit weight, total fruit yield per plant. It also resulted in the production of fruits with highest fruit length, girth, pulp percentage and flesh thickness. Fruit quality characters like high TSS, less acidity, higher carotenoid content, ascorbic acid content, highest total sugar content and reducing sugar content were enhanced in papaya. Organoleptic characters of fruit were also enhanced by the integrated nutrient management of papaya.

TECHNICAL SESSION 1.7

Integrated Child Development Scheme in Karnataka: An Analysis of Funds Released and Utilised

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Children are the future of the country, investing and utilizing capital on Women and Children is the result of healthy India. With the vision of healthy India, it is essential to take precautionary measure than suffering with the diseases in future. Hence the GoI has launched ICDS in India to reduce malnutrition, Anemia and various mental and physical health issues in children. Investing capital on women indirectly will bring up healthy children and healthy society which doesn't require more social welfare schemes which are addressing diseases of the children. In order to address these issues, the GoI is releasing huge funds but all the funds which are released should be utilized in a given period of time efficiently. Utilization of funds is as important as releasing funds by the GoI.

Concentration and Diversification of Food Industries in Indian Market: Analysis based on Market Strategies and Diversity Index

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Consumers' being the primary drivers of the market help producers in easy assessment of the market for their produce. Further they reveal their demand

through preferences. And all these revealed preferences are responsible for the total market supply of the product. However, consumer behaviour in general is very unpredictable and this is why a situation of disequilibrium arises in the market. Available producers in the market face a competitive situation wherein they have to resort to numerous marketing techniques to make their product attractive to sustain the prevailing competitive market conditions. Use of social media, advertising skills and marketing strategies helps in making the product marketable and attractive to the consumers. Considering the present economic situation of the Indian economy, there is every possibility that food requirement will be impacted due to the fast changing consumption patterns. Conceptually this paper talks about how different aspects of products are interrelated and how these characteristics (of products) are responsible for the consumer behaviour. Further it outlines the important economic integrated values and system responsible for predictability of consumers' demand and experiences with the product which further helps in figuring out the utility and usability of the product. Through the analysis of food products and different interwoven characteristics like price, taste, packaging, societal influence, social media marketing, brands, processed food preferences and monthly income of the consumers an empirical analysis is undertaken. Adjacently, the pre and post COVID-19 changes in demand of food products and its effect on the market are also covered under this research article. This study with the inculcation of primary data is directed in analysing the interdependent factors of consumer behaviour influencing their purchase actions. This study also tries to cover some of the underlying consumer related behavioural factors along with some marketing strategies of distinct firms in the processed food market. Furthermore, it also takes into consideration the computation of diversity through Simpson's diversity index wherein diversity amongst the existing brands is indexed. This computation would help in analysing the diverse nature of processed food market in India. This paper concludes with some note of suggestions provided by the participants to enrich the existing study and provide a greater insight to the food processors to strategies the presence of their product(s).

Determinants of Healthy Food Diversity in Kerala: Evidence from a Pooled Cross-Section Regression Model

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India faces the triple burden of malnutrition, i.e., undernourishment, micronutrient deficiencies and overnutrition, due to the nutrition transition during the post liberalised regime. The food policies, in general, we formulate are based on calorie intake, which is insufficient to tackle the triple burden of malnutrition. Diversified healthy food consumption is important in this context to tackle the burden and socio-economic factors that constrain it. Whereas many empirical studies have been devoted to analysing consumer demand for dietary quantity in Kerala, much less attention has been paid to the demand for dietary quality, an equally important aspect of food security. To address this gap in the literature, this paper examines the magnitude and the determinants of healthy food diversity in Kerala using National Sample Survey (NSS) 50th, 61st and 68th unit-level data. This paper measures diet quality by generating the Simpson healthy food diversity index based on the Dietary Guidelines for Indians, a manual published by the National Institute of Nutrition. The pooled cross-section regression model is employed to identify the significant factors determining healthy food diversity in Kerala. This study found that the value of Simpson's healthy food diversity in Kerala is less than 0.5, indicating that diet quality in Kerala is not up to the level recommended by the National Institute of Nutrition. It has been observed that there are significant differences in healthy food diversity between low, middle, and high-income households in Kerala. We find that income level, educational attainment, gender of the household head, landholding size, unit value of milk and pulses are important factors that affect the households consumption of diverse, healthy food. Further, it is observed that there are significant differences in healthy food diversity between male and female-headed households in Kerala across fractile classes of monthly per capita expenditure. This paper highlights that people's diversified, balanced and healthy dietary behaviour demands the involvement of diverse stakeholders and sectors to ensure a healthy food environment in Kerala. The immediate policy implication of the study is that policymakers should focus both on diet quantity and diet quality while framing food security programmes to tackle the triple burden of malnutrition in our country.

Does Food Insecurity Explain Psychological Distress among Indian Elderly?

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Food insecurity affects not only nutrition and physical health, but also, more importantly, it may impact psychological well-being. This paper investigates whether experiencing food insecurity may explain the state of psychological distress among the Indian elderly controlling for important socio-economic and demographic confounders. Such understanding around food security and welfare is essential given the growing aging population across the countries.

The present study is based on cross-sectional data derived from the Longitudinal Ageing Study in India (LASI) Wave-1, 2020. There were about 32,346 individuals aged 60 years and above in the sample. Excluding the missing data, the present paper was restricted to 29,308 individuals aged 60 years or above for the final analysis. In the final sample, 48% were male, and 52% were female, with an average schooling of 3.5 years.

Using the LASI Wave-1 (2017-18), the probit estimates reveal a strong association between psychological distress and state of food insecurity among the Indian elderly. Overall, the likelihood of being “moderate to very high” psychological distress increases by 1.7 percentage points among the food insecure elderly compared to those who are food secure. The association tends to increase for those who had never married or others (including divorced, separated, widowed, etc.) and whose children are not living with them. From gender perspective, the food insecure females have had higher marginal effects for psychological distress than males even after controlling for demographic and socio-economic confounders. Similarly, having a family member with a functional disability also contributes significantly towards the rising psychological distress among the Indian elderly.

These findings have important policy implications for understanding the pattern of psychological distress caused by food insecurity to develop effective programmes and policies targeting especially the mental health of elderly exposed to food insecurity, given the rising share of the ageing population in the country.

Emerging Natural Farming, Food Security, and Triple Burden of Malnutrition in India: FA Case of Indigenous Families who Applied Nutri-sensitive Farming Approach in Tri-junction Area

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Since few decades, India is going through a dilemmatic phase of malnutrition among women and children of rural and semi-urban areas. As per World Bank (2009) one-third of the total malnourished children of the world live in India, which makes it one of the highest-ranking countries. The women health is also a major concern here as National Family Health Survey (2015-16) proclaims 53.1% women of age (15-49 years old) are anaemic.

In our interaction in early 2016 with women tribal leaders of self-help group (SHG) of Central-Western Tribal region of India it was indicated that this situation has arisen due to ignorance of traditional farming systems and crop diversity. The interaction brought out the fact that earlier small and marginal farmers used to cultivate mainly for family nutrition and the market was the second priority. Market-controlled farming has resulted in gradual shrinkage in food diversity associated with traditional diets, which are now on the verge of extinction.

This research aims to address how India can combat malnutrition and achieve nutritional security by 2030. The study identifies a natural farming mechanism for improving food security as well as addressing the multi-dimensional determinants of malnutrition. For achieving the objective, the study followed the methodology of Participatory Learning Action (PLA) and data collection. Formative interactions with community leaders on assessment of traditional and existing farming systems were carried out and based on its findings a PLA NSFS (Nutrition Sensitive Farming System) module was developed which focused on the adoption of circular economy approaches to achieve nutrition security. The module included 10 learning sessions grouped in four separate identifiable phases, namely: Triggering Thought Processes; Deciding and Taking Actions; Action Monitoring, and Evaluation, and these sessions have been carried out simultaneously in 1,000 tribal villages with 1,000 SHG of tribal tri-junction. During this action research, PLA included live interactions, pictorial display, demonstrations, community actions, and guided discussions. To generate data for our study the methodology of structured interview was carried with 1,000

participant (10 participant from 100 groups) in 100 villages of the tri-junction of Rajasthan, Madhya Pradesh and Gujarat. Group-wise data was collected and analysed to assess the effectiveness of various tools within PLA sessions.

Our analysis shows a strong correlation between adoption of PLA-NSFS and re-establishing of nutrient flow and energy cycle at farm. Analysis data reveals that 88% of the respondents have adopted at least five components or practices at their farm which is promoting towards nutrition security and improved farming practices. The children of these families were found in a better condition when screening was organised for nutrition camp and only 7.8% children out of 2,687 were found under MAM category and

0% under SAM. Thus, we can conclude that the adoption of NSFS presents a win-win situation for small and marginal farmers by addressing the problem of malnutrition, supporting the family economy and maintaining the local environment. In the long run, this can create more value from resources and increase production, and secure food and nutrient supplies to families.

Urban Food Insecurity: Role of Annapurna Canteens in Manoeuvring Food Insecurity in Hyderabad

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Food insecurity in urban areas is due to the large percentage of unorganised labour force and this issue has to be addressed swiftly otherwise it results in unplanned growth of slums that ushers in underdeveloped healthcare and hygiene facilities. Migrants from the rural regions form a large mass of population referred to as 'informal sector'. The development of these informal sector population in the urban areas has led to increase in the number of slum dwellers characterised by scarce amenities viz., water and sanitation facilities, inadequate housing and augmented food insecurity. The reliance of this informal sector population on daily employment wages which tends to be variable on different days of the month can also be seen as another factor for urban food insecurity. The scanty daily wages of migrant workers, dependency on

their future employment and poor living conditions makes their food procurement and access to food to fluctuate. In India, all the benefits of the government schemes and programmes that are aimed at helping the poor people specifically people are below poverty line in urban areas, is enjoyed only by notified slum population; and approximately half of the slums in urban areas are un-notified and thus are deprived of the government schemes. People from these un-notified slums have to purchase food from the fair shops rather from Public Distribution System (PDS). Despite economic growth since liberalisation, the availability, accessibility, utilisation, stability indicators of food security announce that an enhancement in nutritional intake is ignored and a weakening trend is tangible in terms of food security. A persuasive necessity to operationalise the concept of nutrition security along with food security has to be taken up by the governing bodies. These institutions, programmes and policies in order to address the acute problems of hunger and food insecurity, need to act on these issues. A state of acceptance has to be undertaken and that will in turn might lead the existing institutions and pathways aid the urban spaces in a nation to be in the state of secured, food and huger wise.

Assessing the Status of Malnutrition Among Children in Maharashtra from 1998-99 to 2019-20

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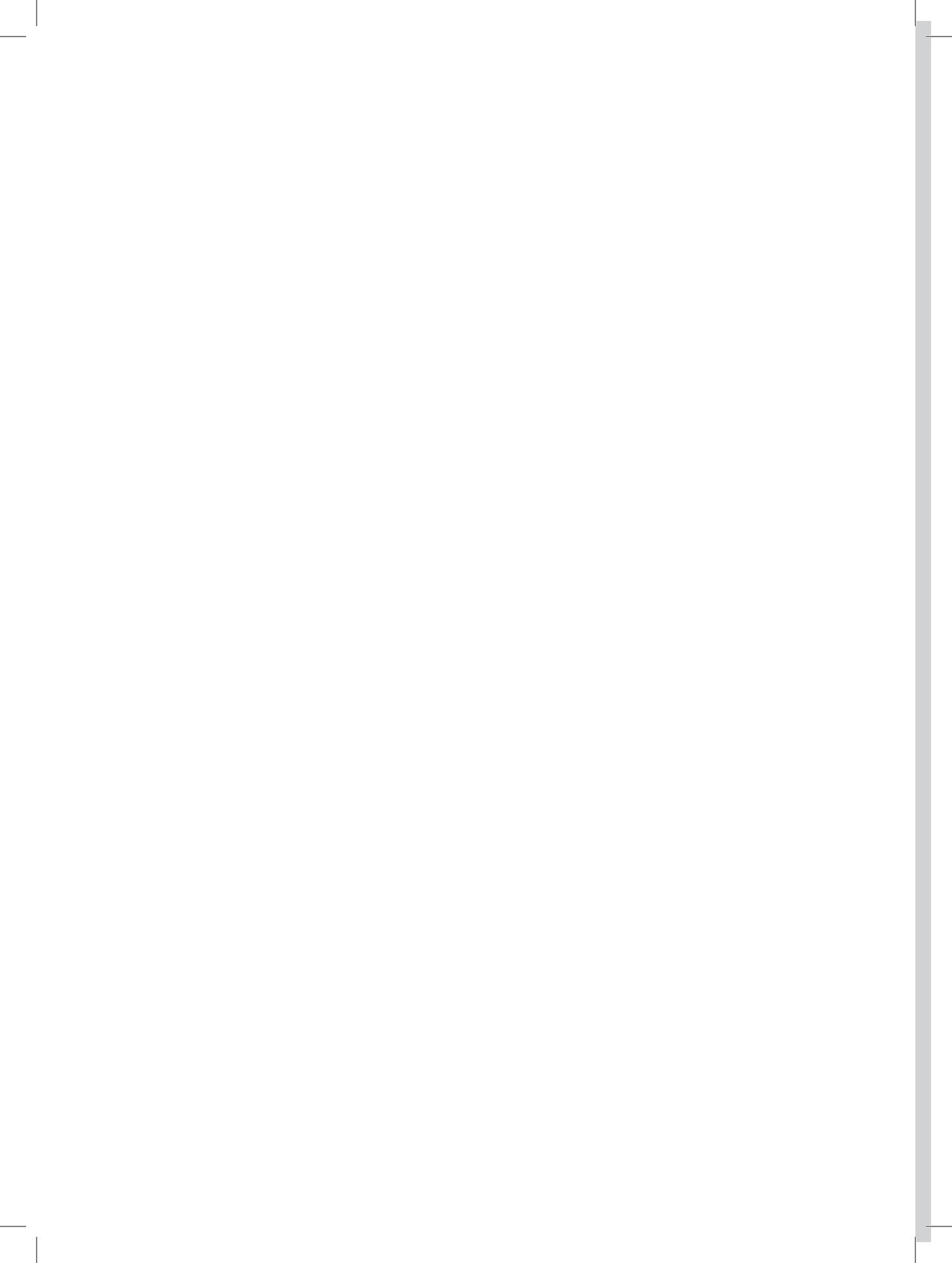
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Malnutrition is a big problem in the state of Maharashtra. Despite being an industrialised and developed state with a relatively high per capita income, Maharashtra has a malnutrition percentage higher than many other states and higher than the Indian average. Malnutrition is especially acute in the districts of Amravati, Gadchiroli, Nandurbar and Palghar which are tribal dominated districts and lack adequate sources of employment and income generation.

This study attempts to understand the pattern and status of malnutrition in Maharashtra. Different aspects of malnutrition like adult malnutrition, anaemia, malnutrition among children, stunting have been studied. For this, we have used secondary data mainly sourced from the National Family Health Survey (NFHS) for the period 1998-99 to 2019-20, and the Census.

We find that the malnutrition rate for Maharashtra is higher than that for India and it is a serious problem in the districts of Amravati, Gadchiroli, Nandurbar and Palghar. We find that children between the ages of 0 to 23 months do not get adequate food, children under the age of 5 have a stunted weight gain and women between the ages of 15 and 49 have a high incidence of anaemia for most of the years of the study. Although there is some improvement over the years in some of these indicators, the incidence of malnutrition is still quite high.

Several reasons for malnutrition being high could be put forth. Regional disparity in development could be one of the reasons. Some of the most backward regions and the tribal regions could be pulling down the average state performance in these indicators. Further the various schemes in operation to mitigate malnutrition like the Mid-day Meal Scheme, may not be reaching the targeted population; there could be problems of proper implementation of these schemes or the scope of these schemes needs to be widened. The lack of education in these regions, especially the tribal regions, could also be a reason for the non- effectiveness of these schemes.





Theme 2

Social and Economic Vulnerabilities of Migrant Workers with Focus on Covid-19 Pandemic

KEYNOTE PAPER

Vulnerable Migrants during the Pandemic: A Political Economy Perspective

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The mass exodus of migrant workers from several cities during the nation-wide lockdown in the early phase of the pandemic brought the social and economic vulnerability of migrant workers to the centre stage of public discussion. However, as the ‘crisis’ of livelihood faced by the migrant workers started to get some attention in the backdrop of an unprecedented pandemic, there is a danger of treating it as an isolated and transient phenomenon. The long-term factors that created such a widespread livelihoods vulnerability, however, need particular attention, particularly when designing policy alternatives to address the problem. The bottom line is that there is a large section of migrant workers who work and live under such a condition that, in the face of the lockdown, they could not simply survive such a sudden disruption of earnings. Rapid surveys indicate that a section of them did not have enough food to survive for the next few days. The vulnerability and precarious conditions of this section of the migrant workers were exposed by the pandemic. Its durability, however, defines the *normal* conditions of their existence.

In this context, this paper argues that a political economy approach that takes into account the broader, structural contexts of migration is better suited to explain the reasons behind the persistent vulnerability of a section of migrant workers. In particular, the paper attempts to link the literature on the political economy of agrarian change with the vulnerability of the circular migrants. Migrants’ vulnerabilities can be examined at three levels- at the origin, during the migration process, and at destinations. Based on multiple rounds of field surveys on migration and agrarian change in one of the ‘migration prone’ regions in interior Odisha, as well as a survey of circular migrant workers in Delhi, the paper examines the factors that create and perpetuate vulnerabilities of diverse kinds among the migrant workers. At a more general level, the paper examines the question of vulnerable migrant workers in relation to the nature of contemporary, global capitalism.

TECHNICAL SESSION 2.1

Scheme Specific Analysis of Social Protection in India

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Social protection in India, earlier restricted mainly to workers engaged in large industrial enterprises or to government employees in the form of social security, has over time spread to cover larger numbers in the populace. As of now, *Social Protection = Social Security + Social Insurance + Social Assistance*.

This paper attempts to assess various social security and protection measures at the all-India and state levels in select nine states, examining issues associated with their coverage, design and implementation. It provides a broad overview of social protection schemes, following the four “life cycle” principles of social protection, i.e., affordable health care; children’s income security and care; adults’ income security; and old age pensions. It also traces the performance of the all-India and state level trends in social sector expenditure. The paper finds that there are a total of 44 central schemes and over 200 state-sponsored schemes, adding to more than 240 schemes aimed at improving social protection/social security. Overall, the social sector expenditure as a percentage of GDP was around 8% in 2020-21, but the actual expenditure on social protection would be less. These proportions are much lower than those in developed countries. The basic messages of this paper are as follows: (i) There is multiplicity and duplication in programme-design; (ii) There is lack of coordination among different programmes, departments and states; (iii) There is discontinuity and frequent changes in programmes; (iv) There are problems in identification of beneficiaries; (v) Some schemes are launched without adequate baseline or financial information; and (vi) There is inadequate monitoring and evaluation of the schemes. The paper also provides some thoughts on how to improve efficiency and targeting in the social protection schemes.

Automation, Work and Job-Insecurity: A Case Study of India's IT-BPM Industry

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IT-BPM sector is the fastest growing sector not only in India but globally. The industry's impressive growth rate has contributed towards the rising income levels, high employment rates, and enhanced export levels and significantly towards the economy's Gross Domestic Product. The success of this industry has largely contributed towards the strong and dynamic skills of the workforce. The sectors combined have immense potential to boost an economy and its Gross Domestic Product. IT-BPM sector has played an influential role pertaining to the socio-economic parameters of the economy. The sector attracts maximum investments by the venture capitalists and has enabled many entrepreneurial ventures. Revenue generation by the IT-BPM sector has doubled over the past decade. (Occupational Analysis: Business Process Management, 2013). Majority of the IT Employees working in the IT hubs are not domicile. Evidence shows that they migrate for better job opportunities from different regions across the world.

The development of new markets with a higher quantity and range of products and services and potentially lower costs would benefit consumers, along with improving the quality of existing employment and improving customer service, leading to a rise in demand and consequently a rise in labour demand. In short, new technologies would contribute to reducing unemployment, combating poverty and improving the quality and prices of people's goods and services, thus enhancing the quality of their lives. A general conclusion, therefore, is that the Fourth Industrial Revolution would lead to the growth of poverty and hunger and the widening of wealth and social inequality with the benefit of technological advancement by rich and highly talented workers and low-paid and less skilled workers who suffer a significant decrease in their income. The widening of the wage gap between rich and poor countries (but also within countries) may also contribute to a rise in undocumented immigrants, leading to major political and cultural problems. The value of political action by the authorities is therefore necessary in order to reduce inequality and negative social effects.

This paper focuses on the impact of automation on jobs in IT-BPM industry and aims to identify tasks which are becoming redundant, consequently losing demand

within the industry. The purpose of identification of obsolete tasks is to highlight the skills that will not be in demand in the near future and so minimize the expenditure currently being incurred by stakeholders to impart/learn such skills. Findings also aim to understand the structural changes occurring in the industry over a period of time in order to understand the future of work.

Havoc of the Pandemic on the Migrant Workers in India

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The pandemic has wreaked havoc on several lives and livelihoods worldwide. It has led to loss of lives and livelihoods. Initially, governments used non-pharmaceutical methods to contain the virus, through lockdowns and isolation. These lockdowns led to shutdown of various production activities, leading to unemployment and loss of incomes. Uncertainty caused panic and vast migration of labour force back to their native villages and towns in India. With the invention of the vaccinations for the virus, governments ran to immunize their populations to reduce the pace of spread and the degree of impact on lives. Though, central and state governments have taken various steps to tackle the migrant worker problem in India, lessons need to be learned from the past to avoid such scenarios in the future. This study aims to look deeper into the problems of migrant labour and suggest measures that can be taken, in order to avoid such a problem in the future.

Section I describes how the coronavirus spread throughout the world. It also describes the true picture of the migrant worker problem that arose on part of lockdowns in India. Section- II deals with literature review on the impact of the pandemic on migrant workers. Section III enlists the objectives of this study. Section IV describes the data and methodology used in our paper to derive inferences. Section V describes the nature and trends of the migrant workers in India. It analyses the impact of the pandemic on migrant workers in India, with a focus on the socio-economic conditions of the migrant workers. Section VI enlists various measures undertaken by the government for tackling the migrant worker problem. Section VII provides recommendations which can help governments to be prepared to better tackle such problems in the future.

Clearly, policies and programmes are needed to resolve issues of housing facilities of migrant workers. Migrant workers should be included in the prevailing policies or new policies can be formulated and implemented in order to provide better housing and living conditions. Government can provide public hostel facilities to seasonal workers by construction of special hostels in the destination states. Investments need to be increased in poorer states of India, in terms of education, healthcare and in employment generating sectors. This can be done to prevent mass migration and over-burdening of the states they migrate to.

Impact of COVID-19 Pandemic on Distress Migration in India

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Migration is categorised into two types – benign and distress. Benign migration is always welcome, but distress migration is the real villain, leading to bondage, child labour and trafficking. Distress migration is poverty induced. The decision to migrate either individually or as a family is attributed to risk avoidance rather than risk loving/taking. It is a survival strategy of moving from starvation to subsistence. Despite their contribution to the economy by bridging the gap between demand and supply for certain categories of labour, distress migrants are subjected to miseries both at work place and family life. The problems associated with distress migration are known and States have been taking remedial measures. Various Central and State labour laws like the Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979 exists, but the implementation is tardy. Besides, this Act has been merged with the Occupational Safety, Health and Working Conditions Code, 2020 whose implementation is awaited. COVID-19 pandemic had adverse impact on all segments of the society. But it was more severe on distress migrants. Because of lockouts/shutdowns/curfews, their livelihood in terms of employment, wages, shelter, food and health was entirely lost. When public transport was shut down, in some cases, they had taken the extreme step of walking or cycling hundreds of kilometres to reach their native places, which is well chronicled. But lessons have been learnt that both COVID-19 pandemic and distress migration are to be and can be managed. Both life and livelihood are important. It requires formulation of pro-active policies and their effective implementation with the cooperation and support of all stakeholders. Some of the important steps which have been taken, their efficacy and which are required to be taken both during normal and abnormal (like COVID-19 pandemic) times to alleviate the sufferings of distress migrants have been indicated.

A Meta-Analysis of Covid and its Ramifications on Unemployment, Inequality, and State of Women

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COVID-19 was pronounced as a pandemic by World Health Organization (WHO) on 11 March 2020. Uncertainty, instability, and trepidation reigned. COVID-19 has disrupted the normal functioning of the society. The global gross domestic product (GDP) is expected to plunge by 5.2% which might get worsened with the virus still in circulation. Data hints at 10 million of people being pushed to the state of poverty and bare subsistence. Developing countries with larger informal sectors have been exposed to the market vagaries and vulnerabilities. The pandemic has pushed these technologically, economically backward countries to a situation of recession of indefinite depth. Quantum of economic fallout could not be compensated by any bailout due to the plummeting international trade and disruptions in the supply chain. A higher elasticity has been established between inequality with respect to GDP. The available data highlights the glaring gap between high income and low-income groups, which has a stronger correlation with the economic tremors like COVID.

Governments across the globe have been forced to clamp businesses and industries to contain the spread of the virus. This had a prejudicial impact on the labour market throwing many people out of the labour market. Centre for Monitoring Indian Economy (CMIE) has pointed out that the unemployment rate in urban areas has risen from 8.21% to 9.30%, and a similar trend has been observed in rural areas which has increased from 6.44% to 7.28%. It is projected that more than 40 crore informal workers in India would be impelled to live under dire circumstances and pushed below the poverty line due to the pandemic. The employment pattern has always paraded a higher unemployment rate for women than men. This gap has been flaring with the virus. The Standing Committee on Labour, April 2021, has found out that the pandemic has aggravated the situation further and has led to massive unemployment in case of female workers. The quantum of discouraged workers has also mounted due to various socio-economic conditions. As the marginal productivity of labour goes down, the real wages plummet accentuating the existing deplorable conditions of the labour market. Bottom 40% have been grappling to earn the bare subsistence. The paper intends to use meta-analysis to estimate the impact of COVID on unemployment, economic inequality and gender inequality

TECHNICAL SESSION 2.2

An assessment of Impact of COVID-19 Induced Lockdown on Informal Workers in Telangana State

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The immediate effect of stringent lockdown had resulted in the abrupt closure of many business and the job losses for many workers. Although, the adverse economic impact of lockdown was wide spread across the economy, the effect was believed to be more on the informal workers who witnessed a sudden loss of livelihood. The adverse impact of lockdown on informal workers is multi-dimensional ranging from loss of means of livelihood, housing related distress, indebtedness, food insecurity, irreversible loss of income, reduced quality of dietary intake, and psychological impact. The migrant workers heavily relied on outside support to meet daily food requirements. The migrant workers also experienced various negative psychological emotions such as stress, sense of being stuck, and changed behavioral pattern due to change in daily routine.

Economic Impacts of COVID-19 Induced Lockdown on Reversed Migrant Workers in North Bengal: A Case Study

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Migration is essentially a significant factor in the process of economic growth and development. Analysis of the nature and pattern of migration is important to

understand how the underlying social, economic, political and cultural factors impact labour mobility from one place to another. North Bengal has been known for outmigration to the informal sector predominantly construction sector and for its wide varieties of vulnerabilities. The COVID-19 pandemic induced lockdown has triggered a massive economic crisis. The situation has resulted in higher incidences of wage gap between the reversed immigrant and local labourers. The large inflow of workforce consequent to the unprecedented pandemic has created the nature and composition of the local labour market more vulnerable considering wage rate structure, employment opportunities and living conditions. The development perspective of a nation is determined not only by its resource endowments but also by the potential of its people to ensure quality lives.

This paper based on field survey data seeks to study the magnitude of reversed migrant workers to the region in the pandemic induced lockdown as well as the reasons for migration. It intends to make an assessment of major economic ramifications of reverse flows of internal migration in the wake of pandemic induced lockdown. The recent experiences of upsurge of reverse migration necessitates undertaking a detailed micro level case study on the emerged migration-employment-wage rate scenario in the unskilled local labour market, which remains an important area of research in the development discourse to understand the problems of a labour abundant economy like India. There has been a large body of literatures linking informal sector and incidence of poverty to various socio-economic explanatory variables with reference to India in the context of migration. However, there have so far been very few studies on the impact of pandemic induced lockdown on factors pertaining to reverse out-migrants and local non-migrant labourers. There is dearth of district-specific studies and official data sources in this area. The present study intends to bridge this critical research gap by undertaking a micro-level case study in this perspective. This research aims to provide enormous significant information on the impact of such large-scale migration on the well-being of workers in particular and on rural poverty in general both at the micro and macro level in the pandemic time to explore appropriate policy analysis to get an envisaged roadmap of planned rural development and inclusive growth. This paper attempts to examine the overall and differential impacts in the area of intersection of pandemic, poverty incidences, migration, unemployment, wage differentials, and inter-temporal disparity of economic well being in terms of policy prescriptions in the informal sector estimating characteristics effects, coefficients

effects and elasticities in terms of candidate and policy variables. The findings based on fieldwork data empirically indicate that the extent of wage differences scenario on migrant workers is evident in the North Bengal labour market.

Covid-19 Lockdown, Family Migration and Unemployment in a Gendered Society: A Theoretical Analysis

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COVID-19 has posed severe challenges not only to researchers in the field of medicines and natural sciences but also to policymakers. Almost all nations of the world lockdown have been chosen as an immediate response to this pandemic crisis. The labour market in developing economies continues to be gendered with gender-based wage differentials besides occupational segregation. Women who are the marginalised section in the society, bore the brunt of the unprecedented COVID- 19 lockdown. Against this backdrop, a micro-theoretic dualistic general equilibrium model has been constructed for a distortion ridden developing economy in the presence of capital market imperfection, open unemployment of male and female unskilled labour and unskilled male migration with family and without family. This paper attempts to fill the theoretical space in the literature by providing an analytically tractable model that can explain the gendered effect of the pandemic in presence of family ties and migration. The regional (rural-urban) migration equilibrium has been obtained as a solution to the intra-household bargaining problem between the male and female members of the family. Migration of the male member accompanied by the female member of the unskilled household is classified as “migration with family”, whereas, migration of the male member leaving behind the female member in the rural region is classified as “migration without family”. The distinguishing feature of the migration equilibrium is that it generalises the usual

The most severely affected sectors owing to COVID-19 induced lockdown are those which are “contact-intensive” in nature that can be classified as sectors in which physical interaction of people is imperative in both the production and consumption process. Besides the usual factor-intensity, we classify the sectors in terms of relative

contact-intensity. Lockdown has been conceptualised as a government-controlled exogenous policy instrument to restrict human mobility in the contact-intensive economic activities which has multi-dimensional effects in the form of adverse-supply shock (high transaction cost) in the contact-intensive production sector, reduced labour supply, adverse demand shock and high psychological cost on unskilled labour which caused distress among the urban migrant workers. The effect of the pandemic inflicted shocks is heterogenous for workers migrating with families and those without families, for instance, an imposition of partial lockdown in terms of physical restriction on labour gathering leads to a lower female labour force participation in the rural region for those staying with families while it might increase for those staying without families. The results of the paper reflect the contradictions that persist in an emerging economy and the heterogeneous effects that were obtained which are conditional on the nature of family migration.

Precarious Condition of Children of Workers at Construction Industry: A Case of District Gandhinagar, Gujarat

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Care of children is a challenge for working parents especially for working women. It particularly becomes difficult if the parents are migrant workers and are working in harsh conditions. Construction sector is one such sector where uncertain working condition of the parents put their children in the vulnerable condition. Most of women working on these sites are between the age group of 15-30 which is their reproductive age. Thus, most of the women come at the construction site with their young children who require more care. It is observed that the condition of children on the construction site is generally very poor. The construction sites are as it is dusty, noisy and risky environments which has adverse effect on their health. The temporary nature of the work effects their growth, vaccination and education. It is observed from the previous studies that the children who moved with their mother from one site to another site, lives in the worst condition as it effected their health, education, safety and development. The present study analyses the condition of children of these working women on the construction sector. We further inquired about the incidence of

injury and diseases, education, basic amenities like crèches, nutritious food, healthcare facilities, and support from the co-workers. We also tried to understand the difference in condition of children on the public construction sites. With the help of structured questionnaire and interviews, data have been gathered from primary field survey and focus group discussion from various sites in Gandhinagar, Gujarat. The information for the study has been collected from 100 female construction workers from 14 different construction sites from 6 locations. In our sample, maximum women were 15-30-year-old which is the peak period of reproduction for women. Therefore, almost all women in our sample had young children and brought them to workplace. Among them, some children are very small like 1 month, 3 months, or 1 year old. This was also reported that one child (2-year-old) died due to fever. There is discontinuation in the several nutrition and vaccination programmes. And severe lack of awareness about the child care programme at the construction sites.

Nationwide Lockdown and its Impact on Employment in India: An Empirical Study

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COVID-19 spread almost all over the world after its outbreak in China on 12 December 2019. India recorded the first case of COVID-19 on 30 January 2020 and since then the cases have increased gradually. At ground level, labourers working in informal employment have borne the congestion caused by COVID-19 as lockdowns have made them both jobless and homeless. An International Labour Organisation's (ILO) report stated that 200 crore people working in the informal sector worldwide are particularly at risk. Workers and businesses are facing catastrophe, in both developed and developing economies. The ILO has also warned about expected wipe out of 19.5 crore full-time jobs and denoted the immediate effects of COVID-19 as "catastrophic consequences". In India, almost 40 per cent working in the informal sector (nearly 90 per cent of the overall employment) are at the risk of deepening poverty during the current crisis. According to the Centre for Indian Monitoring (CMIE) statistics, the rate of unemployment in India was 23 per cent on 29 March 2020 up from 6.7

percent on 15 March, 2020. The COVID-19 crisis is so profound that in short and medium term it will not only profoundly influence labour markets, but also significantly modified the way work is structured. In this context, it becomes important to examine the immediate impact of lockdown 1.0 on employment in Indian economy and the present study attempts in this regard.

The present study has been initiated for mapping the impacts of lockdown 1.0 on employment in north Indian states mainly Punjab, Haryana, Himachal Pradesh, Chandigarh. However, responses from other parts of India have also been registered. The present work is entirely based on primary data collected using well-structured survey schedule. The data comprise of 510 responses of rural and urban households received mainly from North India. The survey was conducted online among rural and urban household. Of all the survey distributed, 510 responses were received comprising 50 rural and 200 urban households' responses. Number of rural household responses is low due to the fact the rural population particularly workers and farmers could not access online survey being less educated. Also, manual field survey could not be conducted as data is collected during lockdown period. Our sample of 250 rural and urban households comprises of both in public and private sector.

Findings of the study reveal that the devastation caused by COVID-19 pandemic, both human and economic, is gigantic in size. However, this damage in India, is less severely experienced during lockdown 1.0, but its long run socio-economic impact is far-reaching and potentially long-lasting. The series of lockdowns declared by Indian government for managing this pandemic have resulted in deep economic recession. Consequently, employment in India has been hit hardest by this crisis. Results of the study depict that 22 per cent labourers lost their employment and 31 per cent having to face partial-employment due to lockdown 1.0. In overall, employment of 54 per cent workers in the surveyed states have been heavily affected by the nationwide lockdown 1.0. Lockdown 1.0 has resulted in the unemployment of 30 per cent of rural workers against 19 per cent of urban workers. However, urban areas have registered the highest rate of partial unemployment (32%). In the informal sector, 80 per cent of workers were unemployed in some way, out those 51 per cent of workers lost their jobs, while 30 per cent experienced partial unemployment. In the formal sector, 10 per cent unemployment and 30 per cent partial unemployment was noticed. In this way, the informal sector is the hardest hit by job losses. Within this sector, casual workers (62%) and self-employed people (48%) suffered the highest unemployment rates

and were the hardest hit. Farmers, on the other hand, experienced the highest degree of partial employment (38%). Workers in the private sector had the greatest rates of full (33%) and partial (31%) unemployment against workers in the government sector workers (5%). As compared to older workers, younger workers have lost more jobs. Male workers have a higher rate of full-time and part-time unemployment than female workers. Married workers had the highest rates of both full and partial unemployment. Full unemployment is highest among Sikhs followed by Others and Hindus. Partial unemployment is highest among Others followed by Hindus and Sikhs. Full unemployment is highest among backward classes (BCs) followed by Schedules Castes/Schedules Tribes (SCs/STs) and Generals. Partial unemployment is highest among SCs/STs followed by BCs and Generals. The findings of the study can be utilised to take directions for government intervention to save the employment in the economy and to provide appropriate support to the affected workers for their sustainable livelihood.

Socio-Economic Development of the Eastern Uttar Pradesh: Evidences from the Secondary Data

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This paper attempts to analyse the socio-economic development and backwardness in four aspirational districts of Eastern Uttar Pradesh which have been placed at the bottom of the aspirational districts list released by NITI Aayog in 2018 because understanding causes of backwardness and intra-regional inequalities are prerequisites of effective policy interventions. To understand the development divide in better way, the socio-economic progress of the selected districts along with the eastern region and Uttar Pradesh has been charted-out in this paper.

Utilising the secondary data, a composite index of development for all the districts (28) of Eastern Uttar Pradesh with special focus on selected aspirational districts has been constructed. We have followed the z-transformation approach to construct composite index of development. The study has also applied the multivariate regression analysis to understand degree of impact of infrastructure development, agricultural development, industrial development and employment on overall socio-economic development.

High pace of population growth with poor economic growth has created double burden on these districts. A big push of public investment in industries, education and health is required to break the low equilibrium trap. Special focus is required for rejuvenating agriculture sector in the region as more than 75 percent people are directly dependent upon this sector. Public investment in irrigation, application of modern methods of agriculture, availability of information about product, price and procurement and marketing infrastructure are the immediate needs of the region. The analysis suggests that public investment in irrigation, application of modern methods of agriculture, availability of information about product, price and procurement and marketing infrastructure are the immediate needs of the region. Since aspirational districts is a new nomenclature given by NITI Aayog in 2018, this is a pioneer study to understand the causes of backwardness of aspirational districts of Eastern Uttar Pradesh.

TECHNICAL SESSION 2.3

A Glimpse to The Pattern of Unemployment Rates: Factors & Causes

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Unemployment is one of the pressing problems of modern India. In fact, the issue has plagued our planners ever since the Second Five Year Plan. It became increasingly clear to the planners that it is not possible for the economy to absorb all its available labour force. However, the problem took a new turn since 1990s. The concept of jobless growth became very pervasive in the society. There has been a huge amount of hue and cry with the publication of Labour survey Report of 2017-18. In this report it is observed that for rural male unemployment rate increased from 1.7% to 5.8%, and for rural female it increased from 1.7% to 3.8%; for urban male it raised from 3.0% to 7.1% and for urban female it raised from 5.2% to 10.8% according to the Usual Status Approach. According to Current Weekly Status (CWS) approach, it increased from 3.3% to 8.8% for rural male and for rural female it increased from 3.5% to 7.7%; for urban male it raised from 3.8% to 8.8% and for urban female from 6.7% to 12.8%. Thus, under both the approaches, it showed a hike in the unemployment rate in both the sectors and genders.

In order to get appropriate results, it is very important to choose a good data set. Since National Sample Survey Office (NSSO) data is regarded as a very rich secondary data source for the analysis of structural features of Indian economy, therefore for the purpose of this paper we have considered NSSO Employment-Unemployment Survey (EUS): 2011-12 (68th round) data and Periodic Labour Force Survey (PLFS): 2017-18 data. These two data sets are used in our study to make a comparative

analysis of employment-unemployment situation of the country. Here it should be noted that this study is based on employment-unemployment data measured on CWS approach as we want to observe not only the employment-unemployment situation of the country as per different socio-economic perspective but also the quarterly variations of the employment situation of the rural and urban areas of the country. These quarterly variations of employment cannot be measured as per the Usual Status approach. According to the CWS approach, a person is considered as employed if he/she is gainfully engaged for at least one hour of a day of the reference week. So, this definition of employment is very liberal in nature, as it is based on priority-cum-major-time criterion. This means it considers 'working' has priority over the criterion of 'not working but seeking or available for job', which in turn get priority over 'out of labour force'.

In this study we have made a rigorous statistical analysis to understand the extent of unemployment rate among several socio-economic variables by using unit level data. It is noticed from our study that the unemployment rate has increased for all social groups and religious groups. But for the casual wage-based households, it is highest in both the rural and urban areas in both the time points, followed by the regular wage-based households. Again the socially vulnerable sections (SCs & STs) and Christian population shows the highest rates of unemployment in both the time points. There is a huge increase in unemployment rates among the educated people and females also possess a very high level of unemployment. Again, among the different agricultural seasons it is seen that the Q4 (April- June) has a very high rate of unemployment for urban India for PLFS: 2017-18 data. The result was just opposite in case of EUS: 2011-12 data. So, it may be possible that the temporary migrants' workers in agriculturally lean season (April-June) come to the urban cities but remains involuntarily unemployed now-a-days due to a declining absorption capacity of urban sectors. Thus, a lot of change in the employment unemployment situation of the country is noticed from EUS: 2011-12 data to PLFS: 2017-18 data. However, further study is needed to come to any concrete conclusion.

Circularity and Vulnerability of Migrant Workers in India Post-COVID

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The famous economist J.S. Mill called human beings, homo-economicus instead of homo sapiens because according to him the human beings are capable of taking very complex decisions very rationally and would be able to optimise their returns in all circumstances. To migrate is one of the toughest decisions for an individual or family as one has to move from a completely known atmosphere (geographical, cultural, social and ethnic) to a completely unknown atmosphere. But migration is as old as history of human beings. Aryans moved from Middle East to all parts of South and South East Asia. Europeans migrated to whole of Soviet Union, Australia and over the USA in the days when the travelling itself was very difficult. Since the 20th century, migration has increased manifold. Migration takes place because of variety of reasons but the most important reason has been and still is, economic. Although war and natural calamities are also important reasons. Most social and economic thinkers believe that basic cause of migration is economic opportunities, be it real or imaginary. The migration can be of various types rural-urban, urban-urban, rural-rural, within a country, outside the country etc. But migration should not be confused with refugee problem or women migration post-marriage. In real sense, migration is a conscious choice of an individual/family to move from their original place of birth/living to a new place for a particular reason/period and could be temporary/permanent. Economists also discuss migration with voting with feet where people move to other place for better government facilities i.e., education, health etc., but migration in real sense is moving out to a new place by choice for better economic opportunities, a rational decision by a homo economicus.

COVID 19 pandemic like a black swan created a very tough, unknown, unheard situation where long lockdowns in most industries, construction, manufacturing and even domestic supports, forced migrants to sit back at their respective situations without income and food support. All migrants follow capitalists like behaviour i.e., at the time of danger and uncertainty they go back to their dens. So, migrants in India moved back to their native places in very large numbers. But hardly the first and second wave of COVID had passed, that those who migrated to native places started

migrating back to places from where they had migrated to or such similar places. Within a year, more than 80% had migrated back to from where they had migrated. The circularity of migration is difficult to explain because of the vulnerability, these migrants faced at the time of COVID — no food, no security, no transport and no hope of employment and income at other places. Theories of migration do not promise any sensible explanation where the migration takes place without any imaginable betterment. In this paper, the main focus is on circular migration in the first and second phase of COVID which seems totally unexplainable without special reference to domestic states to states migration of rural unskilled/semiskilled wage labour from rural/semi urban areas to metros of some specific states.

Socio-Economic Vulnerabilities and Coping Mechanism: The Case of Migrants in Bihar

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Pandemic crisis-led lockdown perpetuated unprecedented vulnerabilities of the out-migrant workforce at destinations, where they lost their earnings, faced survival-problem, identity crisis, and left deeply insecure, with a sense of ‘being nowhere’ at the places they worked for years! While, destination states did nothing to protect their ‘development carriers’, the source states miserably failed to negotiate with the former to defend their ‘GDP-contributors’! The government of Bihar, amid this, exasperated the aggrieved people with a cruel statement that migrants should stay wherever they were; the state will reach out to them for help! Caught up in such a precarious situation, hundreds of thousands Bihari migrants began ‘long march’ to ‘home’. The official sources claimed that finally, 28 lakh Bihari migrants had reached home state by early June 2020.

This was historic ‘reverse migration’ and next historic moment came within next couple of month, when majority of the ‘returnees’ returned to destinations! They were called back with promises of higher remunerations, incentives and perks including travel arrangements! Within two-month time, agriculture and manufacturing sectors felt starved of skilled & unskilled labour to continue their stalled activities! Pandemic exposed their ‘vulnerabilities’ and ‘dependence’ *vis-a-vis* those, whom they had mercilessly expelled out! And, between these two historic moments, migrant communities had learnt some lessons; the foremost of these was the ‘recognition’ that

their ‘bargaining power’ at destinations had increased! The findings are substantiated through a Case Study, based on a survey conducted during late-July 2020, in 10 districts across the state.

This paper is about how were the vulnerabilities and crises, the returnees faced, addressed by the state and the family – two prime actors, who constituted the most effective ‘coping mechanism’. Family is also seen from a household perspective. The state government, instead of devising short to mid-term strategies for rehabilitation of the returnees, utilized MNREGS, as the immediate ‘relief-provider’. The main strategy, however, was to create ‘sustainable employment’ avenues, based on their skill-mapping. The administration, with this perspective was engaged in setting up small-scale industrial units in all districts.

The aggrieved received warm welcome by family; seen as an ‘opportunity’ to stay at home, especially, for those, who had their family ‘left behind’! Fortunately, countryside remained least infected during pandemic; therefore constant fear of getting infected was over. This is well established through researches that a migrant’ household is economically stronger than a non-migrant’s; gender relations are relaxed in a migrant’s HH than a non-migrant’s; saving and consumption levels are better in migrant’s HH, which is upward-mobile and culturally, progressive than non-migrant’s. The migrant’ family, to a greater extent, is ‘expanded’ to ‘female-headed’, in all practical sense of the term; expanded, because women, in absence of migrant men assume men’s responsibility, including taking care of elders and aging, at home. The household is supported by women’s earnings obtained from farm and non-farm both types of locally available work. Their small savings compensated for returnee’s income-loss. With dependable family safety-net, material deprivation mitigated; and emotional-psychological pains were over by the time they went back.

Migration through Movies: Understanding the Creation of Migrant Identities and Linking their Narrative with the Development of Cities through Indian Cinema

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Comprising of the world’s largest emigrant population and having witnessed inordinate large scale internal migration, India’s development trajectory has been interlinked with

migration at every step. While industries like railways and construction have been heavily reliant on migrant labour, remittances earned by them have been the backbone of various state economies. Historically, migration has acted as a tool in shaping up societal and economic interactions, especially to the creation of cities as ‘urban centres’. And this paper would attempt to establish the link between migration and its aid in the development of cities. Migration has shaped and differentiated interactions, aiding in the development of urban centres, but it’s much more than the attached notions of mobility and modernity. The paper seeks to unveil the creation of migrant narratives through individual perception and socio-spatial perspectives in the urban context.

The construction of cities has been well captured in the depths of Indian cinema, proving useful to decode the socio-economic and spatial arrangements in the proximity in contrast to the rural settings. The paper would interpret the portrayal of the ‘migrant narrative’ through analysis of popular cinema and would illustrate their sense of displacement, idea of social cohesion and identity creation. This paper also attempts to establish the link between migration and how it aided the development of cities. The construction of cities has been well captured in the depths of Indian cinema, proving useful to decode the space in terms of an advancement from their rural counterparts. Thus, the paper would present the migrant narrative through analysis of popular cinema and would illustrate the findings regarding the context of their social positions and labour relations are presented in the films, mirroring our society.

Migrants can be termed as key players in development, and growth of a city as well as cater to its ability to sustain itself. They could be called the architects of growing cities, who also are the service providers, through various socioeconomic linkages and provision of humanitarian aid and support. The diversification of migration processes opens up different opportunities and access to a flexible migration governance that can result in change and transition. The effectiveness of the rural–urban migration can be viewed in terms of poverty reduction, institutional arrangements leading to better social services and benefits. The need for recognition of the significant contribution through the insecure informal economy by policymakers could help harness policy frameworks aimed at promoting local development.

Circulating and Ecological Sphere Approach for Bridging Urban-Rural Gaps through Rural Revitalisation: A Policy Framework for COVID-19 Induced Reverse Migration in India

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Migration has been one of the highly debated and discussed issue in development economics. The issue is multi-disciplinary in nature. The causes, processes and outcomes of migration are widely discussed in the mainstream economics literature. The literature has categorised these factors into two major categories of push and pull factors. These factors in combination determine the process of migration as well as the choice of final destination. However, during COVID-19, the world witnessed mobility of a completely different dimension especially in the developing economies.

A large proportion of the migrant population was seen returning to their origin, mostly in rural areas. This occurred due to many reasons such as the threat to livelihood following lockdowns to contain the pandemic, dwindling savings to ensure consumption in the absence of income, job loss, unaffordable lifestyle in the cities, absence of social safety nets, limited financial security, unavailability of coping mechanisms and non-existent facilitation for the outsiders in the cities and urban areas. Further, a chaotic period emerged as a large number of migrant workers moved back to their villages walking hundreds of miles from their workplace to their native villages and towns due to a nationwide lockdown impacting transportation services. This crisis aggravated the situation of the migrant labourers in general and in particular those, who were engaged in the informal sector. The situation highlighted a new dimension for “reverse migration”, an emerging phenomenon that economists were less prepared for. The concept of reverse migration was so far relevant for seasonal migrants as they generally moved back to their origin in the low seasons of work at the destination. Agriculture is a sector dependent on seasonal labourers and therefore workers from surplus regions have traditionally moved to agriculturally prosperous regions. For example, labourers from Bihar and Uttar Pradesh migrate to Punjab and Haryana. Studies have identified reverse migration as rural-repopulation, rural-centric move, and so on. The pandemic shifted the focus of mainstream literature towards

understanding the issues of reverse migration in greater depth. In the discussions, the finding is that the main causes behind reverse migration were economic reasons and security issues. Therefore, this paper explores the inter-linkages between social security schemes provisioning, rural-revitalisation and the process of migration and reverse migration. Further, it presents a discussion on the number of policies/plans and schemes targeting the rural-rejuvenation with reference to India. In addition, the impact of rural rejuvenation on the future migratory processes is touched upon briefly. The primary question addressed here is to understand how returning migrants may contribute to the process of rural-rejuvenation. The paper highlights the ways and mechanisms to achieve rural-rejuvenation from a policy perspective. It concludes that reverse migration induced policy changes may be helpful in rural revitalisation and is important in achieving balanced regional growth across rural and urban sectors.

TECHNICAL SESSION 2.4

Neither Here nor There? The Plight of Overseas Migrant Workers from Sri Lanka during the COVID-19 Pandemic

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The overseas migrant workers (OMWs) from Sri Lanka constitute roughly about one fourth of the work force in the country. They range from highly skilled to unskilled. Included are categories such as engineers, doctors, accountants as well as automobile drivers, factory workers, construction workers, domestic servants. Nearly 50% of all migrant workers are women who outnumber men in unskilled categories such as domestic workers and garment factory workers. With the opening of overseas employment opportunities following the introduction of “open economic policy” of 1977, the middle east countries including Saudi Arabia, Dubai and Qatar became the primary destination of migrant workers from Sri Lanka, but lately migrant workers from Sri Lanka have moved to new destinations such as Singapore, South Korea, Hongkong and Italy. They have been a major source of foreign exchange earning in Sri Lanka displacing products such as tea, rubber and coconut, the leading sources of foreign exchange during the colonial and early part of the post-colonial period. Remittances from migrant workers overseas have been an important source of income for the poorer family members of OMWs helping them overcome their vulnerabilities and income instability in the process. Against this background, this paper examines the impact of COVID-19 pandemic on OMWs and their families, using a literature review, a secondary data analysis and some case histories of affected individuals and their families. The impacts examined include the loss of employment, reduction of income, stigma, and discrimination overseas and back in Sri Lanka and exclusion from social protection programmes in host countries as well as in the home country. Finally, policy measures introduced by host countries, home country and international players such

as International Labour Organization (ILO), International Organization of Migration (IOM) to address the vulnerabilities of OMWs are critically assessed from the angle of mitigating the adverse impact of the pandemic on these clearly identifiable group of victims of globalisation.

Impact of Job-displacement during COVID-19 on Earnings: Evidence from Indian Labour Market

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This study aims to measure the extent of job displacement in India during the COVID-19 pandemic. We use widely accepted event study regression to estimate the effect of job displacement on workers' earnings. We use the nationally representative panel data, Consumer Pyramid Household Survey (CPHS), which is available in every four month and most effectively captures the short-term changes in the labour market. We find that large-scale job displacement of workers took place (approx. 58% of the workers lost their job during pandemic) and most of them went back in to the informal sector as a fall-back option after displacement. Displacement resulted in enormous loss of earnings and this continued to be below the expected level till September-December 2021. Engaging in self-employment to some extent moderates the loss of earning vis-à-vis earning loss faced by the workers who reverted back into the informal wage employment.

There was a large disparity in the way households were affected by shock and their mechanism to withstand the effect of shock. In this study, we found that female workers were less likely to get displaced. However, conditional of displacement, they are more likely to remain unemployed or leave the labour market rather than engaging in informal sector. They also experience more fall in their earnings compared to male counterparts. Young workers are more likely to get displaced and shifted to informal wage employment. However, they also quickly recovered their base earning level. Owing to the possession of capital and skill required to start micro-enterprises, older workers are relatively more likely to engage in self-employment after separation from their previous permanent salaried job. Workers with high education and working in skilled industry are less likely to lose their jobs but conditional on losing their job, they faced

severe drop in their earnings compared to low educated ones. Their earnings remain below their expected level by more than 25 per cent till the September-December 2021. These skilled and well-trained workers are trapped in the low productive jobs of informal sector. This requires attention from the policymakers to create more conducive environment in job-market where lucrative and well-paid jobs should be available.

This study finds that entry into the self-employment do provide some cushion to the workers against the earning loss compared to the workers who are forced into the informal wage-employment. If entry into the self-employment has implication for the wellbeing of household, then it becomes an imperative exercise to analyse the various demographic and household factors, that may perhaps affect the transition of workers into self-employment. We find that due to the entry cost associated with self-employment, workers from better off households are more likely to enter the self-employment while the poor workers remain vulnerable to the shock. This suggests the need for special attention towards poor households in policymaking.

Impact of COVID-19 and its Implications for the Gulf Return Migrants: The Indian Experiences

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There are presently more than 281 million migrant workers across the world. They constitute about 3.5 per cent of the World population. Women constitute about 48 per cent of total migrants. India figures amongst the top 10 migrant countries in the World. India has been sending a huge number of migrants especially to the Gulf region. In terms of the receipt of the remittances, India stands the first country. More than 25 million migrants are living in the Gulf Cooperation Council (GCC) countries. There are about 8.5 million Indian workers. Remittances sent by migrant workers contribute significantly in foreign exchange earnings and gross domestic product (GDP) growth of nations. They also enhance economic betterment of migrants' families. They are considered to be the engine of economic growth for many developing countries like India. Remittances sent through informal channels are considerable in many developing

countries such as India, Pakistan, Bangladesh, the Philippines and Sudan, etc. The true value of remittances is likely to be much higher as only a portion of total remittance flow through official channels. The United States remained the top remittance-sending country (USD 68.0 billion) followed by the United Arab Emirates (USD 44.4 billion) and Saudi Arabia (USD 36.1 billion). A severe widespread of coronavirus pandemic has been occurring in the world since December 2019.

The COVID-19 has brought about numerous current challenges, including health, transport, finance, employment and unemployment, prices, emigration and transfer, economic situation and so on in different sectors of the society. The main aim of this paper is to examine the emerging trends of migration from India to the Gulf, and its effects on migrants' households in India. An attempt has been made to examine the annual trends of Indian labour outflow as well as the volume of Indian migrants present in this region during the last three decades. How has it affected the Indian economy and society as well as the Gulf has been dealt with in this paper briefly. The working and living conditions of migrant workers in the Gulf countries has also been examined. However, the overall effects of the Gulf migration have been the focus of attention in this paper. As the Gulf migration plays an important role in benefiting India as well as the Gulf in many ways, COVID-19 has had a huge effect on Gulf migrants who move to developing countries like India. Because of the high pay and growing need for physical labour tasks, it seems like migrant workers are working in every part of the Gulf economy. It also looks into and tries to figure out how the government handled the COVID-19 crisis. India's response to the pandemic has been both creative and remarkable. Even so, a lot of immigrants work in the Gulf in the informal or unorganised sector.

The returning migrants, who used to be an important part of Kerala's economy, are now on the outside. Because they are not organised, they still can't speak up for their rights or better working conditions. After leaving the Gulf, it is hard for people to live a normal life without the help of their extended families or the government. Many of these migrant workers face the same social and economic problems after they stop being the main breadwinners for their families. This study examines the social and economic lives of these migrants, who have been left by the government and society, and are no longer a part of its socio-cultural framework. The major findings of this study will help formulate new and appropriate rules that will help Gulf workers (Saudi Arabia, Bahrain, Kuwait, Oman, Qatar, and the UAE) who come back home. It is

found that still a huge number of migrants who have returned home are from the state of Kerala. The study gives a more optimistic outlook for the lives of Kerala's return migrants, especially in the COVID-19 situation.

Impact of Lockdown on Migrants: Evidences from Uttar Pradesh and Bihar

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Apart from morbidities and mortalities, one of the most important issues that has received attention in relation to COVID-19 lockdown fallouts in India is the plight of poor migrant workers, whose job and livelihood vanished overnight at their 'destination' and were set to walk hundreds and thousands of miles towards their 'source' native villages, particularly in the states of Bihar and Uttar Pradesh (UP). The migration was 'reversed'. Against this backdrop, the study was planned to undertake a systematic assessment to understand the impact of COVID-19 on migrant labourers and their families in Bihar and UP, and exploring the imperatives to act and propose recommendations to the state in addressing the ensuing challenges. The study collected primary data of those migrants through telephonic survey to understand the impacts of lockdown on their lives and livelihoods. The study also uses qualitative information collected from different stakeholders, including experts from academia, media, NGOs, and government officials. The study tried to assemble the socio-economic, including psychological indicators to gauge the impacts of lockdown. The study also finds that most of the migrants, who were 'desperate' to come to their 'source' native place went back immediately after the 'unlocking' begins, showing the inevitability of the migration. The study constructs a simple logit model by clustering the migrants into two dichotomous groups: a treatment group of those migrants who are back to their

original destinations and a control group of those who couldn't at the time of the telephonic survey, and are still in the place where they came during lockdown.

The study proposes few recommendations for the policy makers. The study strongly advocates to identify 'invisibles', particularly the database related to migrants in India. This should include maintaining a database of vulnerable (potential) migrants as well. The study further recommends on the improving the accessibility of healthcare, schooling for children of migrant workers and improving overall wellbeing. The study also recommended the ways to augment employability, including rehabilitating informal settlements.

COVID-19 Lockdown: Protecting the Poor Means Keeping the Indian Economy Afloat

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The research paper on recognising the strong link between work and poverty, and the crucial role the working poor play in the functioning of the larger economy, it is imperative for the government to roll out adequate measures in order to mitigate the adverse impact of the unprecedented economic inactivity. The agriculture, food processing, transportation, and healthcare sectors are the critical ones where extreme restrictions will necessarily force a return to the erstwhile local economy. The employment statuses of all workers across India, close to 52% are in the self-employed category, which comes to 238 million, and those with casual labour status come to 24% or 112 million.

Fearing the community spread of COVID-19, many state governments had already taken, suo moto, several drastic steps. Overall, there could be good reasons for this nationwide lockdown, but what was missing from the Prime Minister's address was a sense of realism, and more notably, a sense of responsibility on the part of the Government of India towards its citizens in general and the working poor and

their families in particular. As of 2018, India had about 461 million workers (some estimates put it at 470 million), with 80% of them working in the informal sector, such as in agricultural work and in micro, small, and medium enterprises (MSMEs). Workers in repair shops and small workshops producing all kinds of cheap consumer articles and consumer durables that end up in corporate warehouses, roadside eatery workers and those in small hotels and restaurants, “security staff” who protect the middle class and the rich in their gated habitats, delivery workers who deliver food and e-commerce packages at the doorsteps of millions of homes and companies, and similar umpteen groups of workers are bracketed under the informal sector status. One of the corporate leaders went to the extent of suggesting that the government should immediately make a payment of Rs 5,000 to all those above the age of 25; a revolutionary suggestion from the neo-liberal corporate world, but understandable, indeed, from the sheer need to prevent a breakdown of the economy.

TECHNICAL SESSION 2.5

Pattern of Interstate Labour Migration in India: Findings from NSSO Data

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Contributions of migrant workers in urban areas is specially underestimated in spite of the fact that migrants give cheap labour to industrial sectors and to urban elites. During the worldwide lockdown due to COVID-19, the situation of the migrant workers was especially pathetic. The worldwide lockdown caused immense distress to migrant workers. Workers during the COVID-19 pandemic faced many complexities. With the closure of factories and workplaces due to the lockdown, millions of migrants had to deal with the loss of income, food shortages and uncertainty. Thousands of them, began walking back home, with no means of transport due to the lockdown in India.

Workforce manoeuvre from one place to another (for better employment opportunities) which helps them as a survival strategy. Survival strategies are diverse but migration is still an important factor for many poor people in developing countries. It has become a common livelihood strategy of poor households. This serves as a strategy for poverty reduction and development. In this paper, an attempt has been made to explore the various aspects of 'migration'. Present literature review has been categorised into two parts: i) global and ii) cross-country (local, community, district, provincial and regional). In this direction, various existing literature was studied to understand the migration related issues and how the scenario has changed in the COVID-19 lockdown situation.

A simple descriptive analysis is considered here with tables and charts to find out the pattern of migrant labour flows across India. In-migration and out-migration to and from each state of India has been calculated. The states have been ranked on

the basis of calculated 'In-Out ratio' and have been categorised as 'Sink' and 'Source' states depending on the values of 'In-Out ratio'. Where the in-out ratio is higher than 1, the state is noted as sink state because the number of in-migrants is higher than out-migrant population. On the other hand, if the value of in-out ratio is lower than 1, the state is noted as source state because the number of out-migrants is higher than in-migrant population. Within each category (Sink or Source), states are ranked according to their 'In-Out ratio'. The analysis is carried out in two parts - (i) including all states of India, (ii) considering only the eastern states (i.e., Odisha, Jharkhand, Bihar, West Bengal, Sikkim, Assam, Manipur, Mizoram, Nagaland, Tripura, Arunachal Pradesh and Meghalaya). Also, main reasons for migration, as covered by the codes in National Sample Survey Office (NSSO) survey, has been calculated. Out of the total sample population, only the workforce present in the migration population is identified which shows the economically active number of workers.

Women Migrants and their Vulnerabilities in the Shadow of Pandemic: Gender Dimension

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Individuals and communities have developed an increased interest in the lives of others during the COVID-19 pandemic, and there is widespread agreement among scholars, academics, and policymakers that the pandemic has had an unequal impact on various segments of society. There are numerous ways in which the COVID-19 pandemic has harmed women migrating, as well as ways in which gender disparities and migrant discrimination have been exacerbated. The use of a gender lens can help us to understand the unequal distribution of pandemic risk, as well as the lived experiences of migrant women workers during the pandemic and their narratives of gender inequality. Lockdowns, border closures, and increased policing have isolated women and children in migration from perpetrators of sexual and gender-based violence (SGBV), who frequently use COVID-19 as a coercive control measure. Women have been unable to seek assistance, report violence, or access shelters, justice, and other essential services as a result of discrimination against migrants in service provision and their inability to access them during lockdowns. The purpose of this manuscript is to investigate the migration patterns and reasons for female migrants in India. The study is based on

secondary data and employs a descriptive and analytical approach. The first section of the manuscript discusses the status of women migrant workers and various rights of migrant workers in India. The following section of the manuscript will examine how the global health crisis and policy of lockdown exacerbate existing gender dynamics, affecting women migrant workers disproportionately.

Women working in the informal sector, particularly migrant women, must be given priority in the organization's upgradation and skills programmes and it is necessary to reconsider the issue of migrant women workers and their requirements, which can then be institutionalised to make them less vulnerable during and after the pandemic. Inter-state and Centre-State coordination on migrant worker data, policy interventions that ease migrants' access to government social welfare programmes such as food security policies and a minimum safety net with a gender perspective, including minimum wage policies and social protection can all provide a much-needed starting point for their situation to improve. These policies need to move beyond the traditional utilitarian arguments that focus solely on consumption choices that women make for their households. Gender sensitive policies need to move a step further and adopt an approach that enhances women's autonomy, so they have equal opportunities to live safe, healthy, and productive lives.

Returning Migrant Workers During Covid 2019

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The privileged class view the migrant workers as outsiders who live in poverty and squalor. Termed as the "greatest spectacle on earth" was the exodus of migrant workers during the first lockdown of Covid-19. Huge masses of labourers walking with their meagre belongings packed in a sack, being carried over their heads, hands held by their tiny-tots, most of the men and women walking bare-feet, back to their homes in their villages, as State after State imposed restrictions on movement. The national lockdown imposed by the ruling government bore the heaviest marks on these migrant workers. They found themselves deprived of work and daily wage, and the monster realisation that they would be left with no food, and no shelter.

An immense quantity of misinformation floated around on social media that aggravated fear in the minds of migrant workers and made each step towards home all

the more important. However, returning back to the cities proved even harder as life in India was not ready to resume to its normal pace. The fear of the unknown quality CORONA would not allow people to engage in activities like before. Construction was at a halt, as was public entertainment. Shopkeepers and mall-owners were hit the hardest, as were manufacturers as loss of earning capacity resulted in loss of spending capacity of people and that was the last straw for the labourers who are employed as daily wagers in shops. Even agriculture was not spared; field labourers also found it extremely difficult to be able to return to work at the usual wage rate.

A vast majority of these workers belong to the lower castes (dalit and other backward classes), who are employed by the privileged class. Even without the effects of a once-in-a-century global pandemic, these labourers enjoy very few rights in the unregulated labour market; their negotiation power took a blow during the pandemic. Many were deprived of opportunities as they did not have access to information and communications technology facilities. Research carried out by civic society groups have revealed the lack of technology in the hands of migrant workers.

This paper will focus on the plight of the workers when they wanted to return home post Lockdown 1.0 in June-July, and their working conditions in general. Response of the State and Central Government in facilitating their return will also be analysed.

Health of Migrant Workers at Ship-recycling Industry, India

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The focus of the study is to analyse the dynamics of the work strategies at Alang and how their absence of execution influences the medical issues of labourers at Alang recycling yard and to recognise the different related variables with the soundness of the workers in that.

The study depends on the information gathered by the researcher from the labourers through structured questionnaires. Out of 30,000 skilled and unskilled workers working inside yards, 300 respondents were selected, which represents around 1% of the populace chosen for the study. These 300 respondents are from various states viz., Uttar Pradesh Odisha, Bihar, Jharkhand and Gujarat. The researcher directly reached the respondents at the site and at their residing place in Alang to gather the data.

The research shows that intestinal sickness is a typical illness outside the yard and 211 out of 300 labourers confronted medical conditions at Alang. It has additionally been observed that 9 out of 100 workers are helpless against ailment in the yard. This proportion is exceptionally high for an organised industry.

The survey was very hard to reach, where a lot of workers in the ship recycling industry refused to answer the questions.

The study led to the conclusion that Gujarat Maritime Board and the State Government need to step up to the plate and make a legitimate framework at Alang, as there is a complete shortfall of any metro conveniences for labourers. The better medical issue in the business will prompt an inflow of better-gifted work. Indeed, even neighbourhood workers who avoid working in this industry should communicate an inclination to be utilised in this industry. Some arrangement of clinical protection and life coverage for labourers utilised at Alang is of prime significance.

The social impact of occupational health was less apparent, particularly among formal sector workers compared with those in the informal sector. However, freelancers have reported some issues that may become more apparent through aggregated data.

The Affliction and Futility of Indian Economy in View of Recovery Mechanism

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The Indian economy faces the acute economic problems in the pre-pandemic period is too lesser than the pandemic period. The 80 percent of the informal work force is disrupted more in the unprecedented manner. The formal sector employees also got the salaries without productivity linked for the period of serial number of lock downs. It is huge set back in our formal sector economy.

During the pandemic period, the gig economy work force in India 200 million workers are lose their casual works. The following works are engaged namely, delivery work, home services beauty and wellness, project management, fin tech, pharma, education, technology.

Moreover, the Indian Agriculture Sector brings only 15 percent of GDP with about the 50 percent of the work force are engaged. This is are reverse (or) inverse situation on the work force and the GDP with regard to Indian Agriculture sector.

Interestingly income level increases whereas poverty ratio has been widened this is a contract dictionary situation in India. The global hunger Index, India has been occupied a position at 101 positions out of which 116 countries with regard to health scenario, the recent NFHS-5 survey reveals that the total fertility rate, or the average number of children born to each Woman, has reduced below replacement level to 2.0 from 2.2 in the year 2015 – 2016. The present generation of students do not get opportunity for equip themselves for quality of education.

Addressing Economic Vulnerabilities through Public Programmes: MGNREGA and the Pandemic Induced Retrograde Migration

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The need of welfare programmes like MGNREGA is strongly felt when market mechanisms fail to deliver in bridging the employment deficits. Similarly, the externalities of the recent health-induced recession had their network effects on the socio-economic fabric that caused strangling of hand-to-mouth immigrants residing in the urban area leading to their mass departure to their source villages. The present analysis aims to establish whether MGNREGA acted as a major “pull” factor for their retrograde migration and if so, then whether it was able to meet their expectations by provide them adequate livelihood security. The application of a set of non-parametric and parametric approaches including the Random-Effects Piece-wise linear regression models is used in order to evaluate the reliance of jobless countryside masses on the programme and supply-responsiveness of the work allocation in line with the upsurging demands. Both the demand and supply are found to be significantly rising for all the states during the extreme lockdown months of April-June, 2021. Demand for work grew by 1.12% and the allocation of work by 1.23% in the lockdown period when compared to that in the pre-lockdown phase. The results are particularly important for the immigration (reverse) states of Uttar Pradesh, Bihar, Madhya Pradesh and Rajasthan among others which have reported a substantial upsurge in demand during aforementioned months. Therefore, the results are indicative of the ability of MGNREGA in plugging the gap between demand and supply growth rates of employment for rural-unskilled masses and the programme has proved to be a crucial connecting link between the policy-makers and rural unskilled masses.

Although the study pictures a positive image for the programme during the period of evaluation, its reliability for a better test needs to be evaluated during future periods of predicament. What matters is not the regular evaluation of the reliance on the programme for employment, but its sensitivity to the periods when unemployment peaks and the market mechanisms fail to provide adequate employment. The externalities of the health-induced recession had their network effects on the socio-economic fabric that caused a significant market failure and had to be addressed by proactive public action. The authorities internalized these network effects through a mix of fiscal-support measures. Such fiscal measures usually reflect after multiple lags and the essence of MGNREGA can be seen from the fact that it was able to partially bridge the demand-supply employment gap during the cleavage between the market failure and remedial action periods.

Livelihood Condition of Stranded Migrant Labourers in COVID-19 Lockdown in India: A Study of Bengaluru

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The COVID-19 pandemic has left an intense and long-lasting impact on socio-economic conditions of people all over the world. In India, in order to curtail the spread of the coronavirus Government had announced a nationwide on 25 March, 2020, within four hours of notice period. The sudden announcement of lockdown, which continued till May 2020, halted all economic activities, was unexpected and led to supply and demand side shocks. It affected the livelihoods of a large section of society, particularly the informal sector migrant workers and thousands of them became stranded due to sudden, complete nationwide lockdown. During this period, megacity Bengaluru, the capital of the state of Karnataka, was in focus due to unimaginable misery of huge number of stranded migrant workers in this city. The city usually is home to about 42 lakh migrant laborers working in different informal sectors. During lockdown period, over 400,000 migrant construction workers lost their jobs in this city. Though exact data on them is not available, but it has been stated that when lockdown was lifted in the month of May 2020, 1,22,515 migrant laborers had left the city. A further group of over 1,700 workers were stranded and awaited opportunities to leave. 2.5 lakh garment workers continued to live at subsistence levels

without work across the city. Apart from that, there are migrant street vendors and domestic workers and other who largely remain unregistered to any government portal and therefore data on them is unavailable.

Though the city is the favourite destination of the migrant workers, insignificant research has been conducted on the condition of the stranded migrant workers in Bengaluru during first lockdown period and on the socio-economic condition of the informal sector migrant workers even after the provision of relief measures, its coverage and limitations. Therefore, this paper attempt to explore the welfare measures provided by the government and challenges faced by the stranded migrants all over India and also aims to shed light on the impact of nationwide lockdown on the stranded migrants with special reference to Bengaluru city.

This study is descriptive, based on both primary data, collected using convenience sampling by interviewing 100 stranded migrant workers in Bengaluru, who are working in informal sectors and secondary data, sources being working papers of the Centre for Sustainable Employment (CSE) study 2020-21, SWAN Team Data and Stranded Workers Action Network (SWAN) portal. Data analysis on government's welfare measures reveals the fact that two days after the announcement of lockdown, Central Government of India announced social welfare measures for the distress migrant workers under Pradhan Mantri Garib Kalyan Yojana (PMGKY) where cash was transferred to their Jan Dhan Yojana Accounts and to the pension beneficiaries. Apart from that, measures were also announced towards the Public Distribution System (PDS) beneficiaries, self-help group (SHG) members, Ujjwala Yojana beneficiaries. However, no specific facilities were announced for migrant workers. Apart from that, under the Pradhan Mantri Garib Kalyan Rozgar Abhiyan (PMGKRY) 125 days employment programme was announced and it was for the returnee migrants and other rural residents in 116 districts of six states. 1.5 lakh migrant workers were trained under Short Term Training (STT) programme and under Recognition of Prior Learning (RPL) scheme another 1.5 lakh migrant workers were scheduled to be certified. However, the scheme did not cover the urban migrants at all. Moreover, this scheme is only a temporary solution for the rural jobless returnees.

Secondary data analysis identified that, higher percentage of interstate migrants failed to afford essential items and consumed less food in lockdown than pre-lockdown period as compared to the non-migrant counterpart. A large percentage of interstate

and intrastate migrants could not access either ration (81.6%) or cooked food (63.7%) or pension transfer, cash transfer and Jan Dhan transfer which were provided by the Government. As a result, almost all the stranded workers had to take loan (91%) during this period. Whereas primary data analysis identified that a large percentage of stranded migrant workers in Bengaluru did not have cash to buy ration (80%), loss of job or money to pay rent (60%), no food and no shelter (40%). Government of India had provided a lot of relief funds and welfare measures for the distress migrant workers post announcement of lockdown, but it failed to reach a large section of the target group. Central Government, State Governments, civil society organisations, employers and general public, leave plenty of rooms for improvement; also, the need of the hour is a shift in macroeconomic strategies with improvement in public health sector, financial inclusion through bank. Efforts are needed to expand the coverage of social security schemes. On the other hand, special attention should be paid towards the most vulnerable migrant people like women, children and old, disabled persons who are mostly invisible from data base. Lastly, larger extent of Government intervention is needed in order to identify and solve various issues of distress migrant workers.



Theme 3

Governance of Public and Social Programmes (Food, Education, Health, Employment and Livelihoods)

KEYNOTE PAPER

Governance and Delivery of Public and Social Programmes: A Case Study in West Bengal

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Fundamental Rights and Directive Principles of State Policy, enshrined in Part III & IV of the Indian Constitution reflect that India is a welfare state. These rights ensure that the government safeguards economic and social well-being of its citizens. Keeping in mind the responsibility of the state in ensuring these rights, the GOI has been launching different welfare programmes from time to time under four major welfare categories, namely, wage employment, education, health and food security and nutrition as per demand of the hour. However, success of the schemes can be achieved only with proper governance. Nevertheless, indicators of governance do not pretense healthy trends. Currently, India ranks 102 among 132 countries on the Social Progress Index, a measure of human wellbeing that goes beyond traditional economic measures such as GDP or per capita income. India ranked at 131 on UN's human development index, in 2020. Further, on *Global Hunger Index*, India ranked 101 out of 116 countries in 2021 with a score of 27.5.

Given highly uneven performance demonstrated by the states in terms of improvement with regard to the above-mentioned social dimensions, four case studies have been showcased in this paper with study area as West Bengal, a state falling in the category of Medium Social Progress State-2017, during the year of 2021-22. The paper attempts to capture quality of governance of social welfare programmes pre pandemic and during the pandemic when the importance of such social welfare schemes had accentuated. Findings of the telephonic survey of the beneficiaries reveal that with regard to the wage employment scheme - MGNREGS, the prime operational public work programme (PWP) remained an important 'fall back' option of rural employment with average governance before pandemic but important governance concerns during and post pandemic. The issues include no gram sabha social audit meetings during

the pandemic year, instances of over reporting of the number of works conducted, and more importantly, in the post pandemic year of 2021-22, resurfacing of problem of perceptible delayed payment while second and third phase of pandemic was still ongoing.

Unfortunately, health schemes both centrally sponsored and state led schemes fared badly even during pandemic as the majority of beneficiary respondents grieved going for private hospitals and making greater out-of-pocket expenditure for treatment of their diseases, including Covid-19, despite having active health cards as they were not entertained by the empanelled hospitals. Pre pandemic Sarva Siksha Abhiyan (SSA) has been instrumental in raising literacy in West Bengal. However, during the pandemic SSA was a partial success because though students studying in primary and middle government schools continued to get teaching learning material free of cost on time but internet connectivity and irregular classes were the primary hindrances negatively impacting the flow of learning process. On positive note, the PDS scheme actually stands out to be the most effective during pandemic. The efficiency of the scheme actually got enhanced during the pandemic with improvement in the quality of governance to ensure the quantity of rice, wheat and pulses mandated by central government per person per family reaching on time in this trying period even if quality may not be always acceptable, as per information from the respondents.

TECHNICAL SESSION 3.1

Factor Affecting Maternal Health Care Utilisation in the Nalbari District of Assam: A Field-based Investigation

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In India, out-of-pocket expenditure for healthcare becomes high in the formal healthcare service not only in case of the private sector but also in the case of the public sector. Hidden charges like user charges, transportation, medicines, tests, diets and even bribes have made the public sector healthcare quite expensive in the case of maternal healthcare also. In this paper, an attempt has been made to identify the factors which are responsible for women's choice of healthcare institution for utilisation of maternal healthcare for both in-patient and out-patient treatment for both rural and urban areas in the Nalbari district of Assam, India. In undertaking the study related to the choice of healthcare service for in-patient and out-patient maternal healthcare, Grossman's model (1972) has been used. It is basically a behavioural model of utility maximisation, where utility depends on health, medical care and the consumption of other goods. On experiencing an illness, an individual is hypothesised to choose among various treatment alternatives so as to maximise total utility subject to her budget constraint. For this study, primary data has been collected from households selected through multi-stage sampling in which 317 cases were found where out-patient and in-patient maternal healthcare was utilised during the 365 days reference period. Multinomial Logit Model has been used to find the factors responsible for women's decision to use maternal healthcare. The study found that generally, in the case of in-patient and out-patient maternal healthcare among the economically well-off group, preference is lesser for rural primary healthcare and urban government

healthcare than urban private healthcare even in rural areas. Besides, a few non-economic factors like severity of the ailment, caste stratification, location of the healthcare facility also plays an important role in choosing between different kinds of in-patient and out-patient healthcare facilities for maternal healthcare in rural Nalbari. Further, it has been noticed that when the ailment is not serious or if the patient is from SC/ST category or when the rural primary healthcare is available at the nearest distance, there is a increasing possibility of using rural primary healthcare than the urban private healthcare services. Similar findings were noted in rural areas in case of the maternal healthcare services. Another important finding of the study is that in the case of choosing between urban government healthcare and urban private healthcare services, only two non-economic factors, viz., severity and the caste stratification plays an important role, while there is no importance of other non-economic factors. Thus, this study reveals that the government sector has become a choice only for those women who are socioeconomically in a disadvantageous position. So, government spending on healthcare specially on maternal healthcare needs to be increased in states like Assam where maternal mortality rate (MMR) is significantly higher.

An Exploratory Study Assessing the Current Scenario of the Health Insurance Policies in the Rural Parts of Assam, India

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India has been suffering because of unequal access to healthcare, and the high burden of healthcare costs for decades, like most developing and under-developed countries. The share of households' out-of-pocket (OOP) expenditure on health makes up about 48.8 per cent of the total healthcare expenditure of India, which is very high compared to the various developed countries. Researchers have often claimed that health insurance can increase access to healthcare and reduce catastrophic OOP expenses. According to the latest report by the NITI Aayog, although India already has multiple schemes in place that have the potential to cover 70% of the total population, the actual coverage is very low. Hence, in the light of limited coverage, this study aims to explore the people's viewpoint regarding the health insurance policies and identify

the underlying issues that need further deliberation to elevate the impact of these policies. Since the country's majority of the population hails from rural regions, the study focused on the rural parts of the state of Assam. The study has been carried out following the exploratory research approach. The study is based on a survey of 1,080 households in three rural districts of Assam. Basic frequency distribution tables were used to summarise the data. According to the study, the penetration level of health insurance policies is still quite low among the rural population, and the main reasons for this are lack of awareness and affordability. The study even showed that the only government-sponsored health policies are operating in the rural health protection scenario, the newly launched *Pradhan Mantri Jan Arogya Yojana* (PMJAY) holds the largest share of enrolled households. The utilisation rate as well as the overall awareness level is however, very low. The low awareness and the usage level among the rural enrolees have also impacted their satisfaction levels. They are mostly indifferent about the cost coverage, service coverage, the network of hospitals and doctors, and the quality of care delivered under these plans. According to the enrolees, these policies have not been able to bring any significant reduction in their regular healthcare burden and healthcare accessing process. Despite everything, both enrolees and non-enrolees share a similar and assertive view about the general concept of health insurance. They believe that health insurance is essential for both health and financial security in recent times. Although these policies are usually perceived to be complicated to understand, rural households agree that they can help in improving access to quality healthcare and reducing the burden of high healthcare costs. But according to these families, the pricing policy of the existing plans for the respective service coverage is not very appealing and is not affordable to all. The study has highlighted five key issues that policymakers need to address on a priority basis to improve the financial protection situation across the country. They are: (a) limited coverage of services, (b) limited coverage of population, (c) effectiveness of the existing policies, (d) awareness about health insurance, and (e) issue of affordability.

A Study of the Labour Directorate's Work in Odisha

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Despite its vast natural and human resources and substantial progress achieved during the last 50 years plan of development. Odisha continues to be one of the less developed

states in India. This study aims to know the effectiveness of the labour administration and inspection in improving labour compliance in Odisha and to evaluate whether labour law compliance is the source of labour disputes at workplaces or not? This study also examines the challenges facing labour officers in labour inspection and why employers in Tanzania mainland rarely comply with labour laws and employments standards. The empirical design was used in terms of research design to use data collection techniques such as interviews and surveys method. Primary data were collected using questionnaires from 144 and 292 from organised and unorganised sectors. The result of the study revealed that the labourers of unorganised sector are not been served by the employers according to the labour law provisions and they are largely affected by labour exploitation, wage related issues, discrimination at workplace, poor dispute settlement, non-availability of basic welfare facilities and benefits at work place. The findings also shows that the labours in the organised sector are somewhat at a better position compared to the labourers of unorganised sector but to some extent they are also affected the poor functioning of the labour directorate as well as due to the poor compliance of labour law by the employer. The study has also observed that the issues like lack of sufficient work force, limited resources, lack of proper record keeping, and skill gap of the labour officer significantly affect the functioning of the labour directorate. However, the challenges have no such impact on the department of labour's functioning.

Digital Divide Jeopardizing the Educational Outcomes in Third World: Challenges and Opportunities for E-inclusion

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The digital divide is a reflection of a society deeply embedded with socio-economic inequalities. In the light of the ongoing COVID-19 pandemic that has provoked the use of digital technologies in providing access to education due to school closure. The paper embarks upon a discussion on the criticality of a governance model for e-inclusion and envisions intersectoral integration of policies across education, health, child welfare and legal departments to create a resilient system for unforeseen crisis scenarios in future.

The paper examines the cumulative effect of various factors such as school closures, lack of social support and financial distress due to unemployment at the household

level. In this paper, the sociology of the education system has been scrutinised by analysing the dynamics of differential access in online home-schooling during the COVID-19 pandemic. The paper brings out facts that dissect the deepening of gaps in education equity and depicts a picturesque of the political economy of education. Theoretically, this issue has been analysed from the position of the conflict theory of educational stratification. Conflict theorists perceive that the education system perpetuates the status quo to maintain social inequality by dulling the lower classes. They argue that the education system is sorted along distinct class lines and call this role of education the hidden curriculum. The paper has conceptualised the denial of the right to education due to a lack of access to information technology which would transcend itself by exacerbating the gaps in education outcomes.

The paper attempts to plug the missing gaps in the existing body of literature on the socio-economic gradients in access to online education during the COVID-19 pandemic. The current paradigm of providing education every time the cases increase as a result of the new variant completely neglects the education needs of the poor children and depicts a classic picturesque of the political economy of the education system in India that favours the “have’s and discriminates against the have not’s”.

The extended school closures have widened the learning gap between children from lower and high-income groups primarily due to the lack of access to digital education on account of limited resources and technical skills of children whose parents are socio-economically deprived. Government schools are not equipped with the requisite infrastructure as they are under-resourced with audio-visual systems and skilled manpower to operate this equipment.

Taking an intersectional perspective, this paper highlights that patriarchy and poverty dynamics refrain the access of female children to access digital education as the burden of domestic responsibilities disproportionately falls on them, when they are physically bound to stay at home during school closures. The key findings in the paper reveal differential access to the internet, smartphones and computers from a gender lens, as lack of gender-inclusive approach in digital education has further accentuated male-female learning outcomes.

Moreover, the low technical competency to provide online learning classes along with the lack of availability of digital devices available to pupils in government schools, low internet connectivity, cost of internet connection, and extended power cuts are

barriers that restrain the access of children from underprivileged backgrounds to participate in online learning at the practical level. Neither the home environment nor the educational institutions (government schools) in rural and remote areas were equipped with the requisite infrastructure and technically skilled teachers to provide online learning in comparison to private schools.

In this light, the digital divide has left a severe negative impact on the educational outcomes of children from underprivileged backgrounds. The findings in the study highlight the glaring gaps in access to online learning between 'haves and have nots', and the figures are indicative of high school dropout rates and stagnation among underprivileged children. The paper further stresses how policymaking in an unequal world calls for an e-inclusion policy that follows a bottom-up approach in the post-pandemic era and advocates for stringent measures under the national education policy. The National Education Policy 2020 is devoid of this understanding and does not adequately address the issue of e-inclusion for equity in education in the form of an action plan. It merely promotes e-learning pedagogies for digital education, without providing practical solutions to address the crux issues of differential access in digital education. The paper builds upon this school of thought to embark on a discussion to adopt stringent policy action for e-inclusion in the education system. The paper closes by advocating policy recommendations for an inclusive approach to governance and affirmative policy action in developing countries.

MGNREGA Activities in the Post COVID 19 Era: Exploring the Inter-State Efficiency of Employment

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Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) has been one of the most prominent sources of income for the reverse migrants who returned to their native villages from the place of work/stay ` COVID-19 induced lockdown. It is true that MGNREGS has been the largest employment generation programme of the world since its inception in 2005. However, the nature of employment has varied across India and her states. It is in this background that the present study emerges. We attempt to find out the nature and extent of increase in the size and dimensions

of the scheme across the states of India and estimate the efficiency of employment generation across the Indian states using the Data Envelopment Analysis approach.

It was seen that the size of the scheme increased by more than 63% in nominal terms as total expenditure increased from Rs 68,000 crore (approx) in 2019-20 to Rs. 1,12,000 crores (approx) in 2020-21. During the same period, the increase on wage expenditure was almost 59 per cent. Similarly, the increase in employment in the form of total person-days generated was by more than 46 per cent. In 2019-20, the total person-days generated was 265.35 crore, while in 2020-21, the total person-days had a stupendous increase to Rs. 389.09 crores. This rise is further visible as the total number of workers in the scheme also increased by more than 3.3 crore from that of 7.88 crore in 2020-21. There was an increase in the average days of employment per household as well as in the average nominal wage rate from Rs. 182.09 to Rs. 200.71. At the state level, the proportional increase in total person-days generated was highest for Goa among the small states and Haryana among the bigger states. The average person-days generated has been highest in Mizoram. The number of workers in the scheme had increased at very high proportions in the states of Uttar Pradesh, Jharkhand, Haryana and Madhya Pradesh.

TECHNICAL SESSION 3.2

Karnataka's Unique 'Preventive Protocol' for Retention of Children in Schools

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Despite Supreme Court (SC) judgements, the 8th Constitutional Amendment and the Right to Education (RTE) Act of 2009, children continue to be out of school. As per statistics provided to the SC in a Public Interest Litigation (PIL) in 2018, 35 million children are still out of school in India. The pioneering work done in Karnataka through a suo moto PIL (WP 15768/2013) in the Karnataka High Court to shift the approach to 'prevention of drop-outs' and 'retention of children in school' from a curative rehabilitative approach of conducting bridge courses has brought unique changes. As a result of the submissions made before the Hon'ble High Court in the PIL, several orders were issued by it to the State government and several changes were brought about in the RTE Rules of the State.

The main changes in Rules brought about as a result of the PIL are: On the direction of the Karnataka High Court, State RTE Rules were amended to prescribe a 'preventive protocol', by inserting Rules 6A, 6B, 6C and 6D, to be followed by Attendance Authorities and Child Welfare Committees to ensure that families of vulnerable children are assisted to enable them to break the economic, social and cultural barriers that prevented them from sending their child to school. Rules 6A, 6B, 6C and 6D mandate Attendance Authorities to bring the child back to school within a time-frame. As a result of this amendment to the Rules, more than 1.5 lakh children were brought back to school and through continued monitoring by the Court the process is continuing to make Karnataka free of out-of-school children. For the first time in the country, these amendments to the Rules are incorporating several provisions of the United Nations Convention on the Rights of the Child (UNCRC) into the RTE Rules of the state.

Labour Market Transformations in the Era of the Fourth Industrial Revolution: A Comparative Analysis of General-Purpose Technology (GPT) versus the Specific-Purpose Technology (SPT)

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Given the nature of the fourth industrial revolution, which has a substantive reliance on automation based on artificial intelligence (AI) technology, in future, the skill endowment of a nation will play a crucial role in the distribution of its possible productivity gains. On the other hand, there are fears of job losses and monopsonization of the labour market due to automation. The net effect on employment will depend on the path and speed of labour market transformations to match the changing nature of the production of goods and services. Against this backdrop, the paper attempts to analytically explore the possible future consequences of production automation on a few main aspects of labour market transformations, namely, (i) skill formation and skill heterogeneity, (ii) emergence of the new informal labour and (iii) degree of digital slipover and wage disparity. In so doing, we build a “multi-sector multi-factor general equilibrium model” for a distortion ridden developing economy. The dual nature of automation has been compared in terms of General-purpose technology (GPT) and specific-purpose technology (SPT). The former has positive externalities that spill over to other sectors of the economy while the latter has industry-specific effects. Sectors which use AI induced automation are classified as the “AI exposed sectors” or “sectors on the air” and sectors which are dependent heavily on physical infrastructure and non-AI technology of production are classified as the “traditional sectors” or “sectors on the land”. Finally, the role of public skill development institutes has been analyzed which can capitalize on the benefits of automation only if it is accompanied by sustainable high-skill formation rather than low-skill training which would otherwise lead to the emergence of a new form of informal labour.

Segregation and Occupational Association: School Education System in India

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Education plays a vital role in the society and has been theorised in various ways. Under the human capital approach, education plays an instrumental role in raising productivity and earnings for an individual in the society. It can also ensure equality in labour market opportunities and income mobility. For the human development approach, education plays a central role in augmenting individual capabilities and freedoms. Thus, education not only plays an instrumental role in enhancing earnings, social participation and reducing exploitation, but also has an intrinsic value that individuals have reason to value. Education is viewed as a dynamic force that can reduce social inequalities and plays an important role in positive social transformation. In India, education is the responsibility of the state and the union government, however, poor government allocation and mushrooming private sector led to dualism in the education system. Numerous studies show that education has played an essential role in increasing productivity, earnings and economic growth in India; it was also positively associated with a decline in fertility, infant mortality and population growth. While the education level has continuously improved in India over the past two decades, it had little effect on the social inequalities.

Critical theories suggest that the dominant educational system plays a fundamentally important role of reproducing the existing economic, political and cultural processes, and maintaining the status quo. They argue that the schools reproduce the social hierarchy by excluding disadvantaged sections and privileging dominant/elite groups of the society. The period of high economic growth saw an improvement in education level that was accompanied by increased occupational segmentation. While it raises serious questions about the role of education in India, there is a dearth of empirical analysis that rigorously investigates the association between occupational hierarchy and educational segmentation in India. Since the socialisation that the students receive through the means of education affects their future outcomes, it becomes important to understand how these segmentations in the education sector have interacted with segmentations in occupational structure in India over the last decade. In this paper, we address this issue, particularly in the context of school education.

By hypothesising a hierarchy in educational institutions based on the ‘quality’ of education that they provide, we empirically investigate its association with occupational segmentation and its evolution over the last decade. While the ‘quality’ of education in government institutions have deteriorated, mainly due to poor infrastructure, that in private institutions improved significantly. Using National Sample Survey Office (NSSO) surveys for the period of 2007-18, we find that a significant and positive association exists between occupational hierarchy and educational institutions in India, which has persisted during the last decade. The households that belong to the well-off section of the society not only spent a considerable amount on school education but also had higher participation in better-quality educational institutions.

While the expenditure on education by the worse-off section of the society has increased significantly over the past decade, their participation in better-quality institutions not only remains low, but a considerable proportion of students from these households continue to attend poor-quality institutions. Using the multinomial logit regression, we find that the students from the well-off sections not only have a higher likelihood of attending top-quality private institutions but also have a lower likelihood of attending low-quality institutions. While those from the worse-off sections not only had a lower likelihood of attending top-quality institutions but were increasingly segregated into low-quality institutions. Even after controlling for various socio-economic characteristics, the differences (based on occupational position) remain significant and persistent over the last decade. The segmented accessibility of school education in India has ghettoised the poorer sections of the society in the government institutions. Though the richer sections have shifted towards the private institutions, the lack of willingness to improve government institutions has made the situation even worse. This has not only constrained the future opportunities and outcomes for the disadvantaged sections but also raises serious questions about the theoretical aims of education. On the other hand, it allows better-off sections to not only improve their potential outcomes but also reproduce their privilege. Therefore, by segregating individuals based on their household’s occupational position, the school education system has played a dominant role in maintaining occupation hierarchy in India over the past decade.

Spatial Disparities in Health Status and Access to Health-related Interventions in Madhya Pradesh

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The public health sector of India suffers from higher inequalities despite several interventions introduced from time to time. The most suffering groups are the population in Empowered Action Group (EAG) states, who possess limited access to health interventions and have high mortality and morbidity rates than those in developed states. Madhya Pradesh, one of the EAG states, is infamous for its low-level health status compared to other Indian states. This is attributed to the state's disparities in access to healthcare. This study aims to understand how access to healthcare differs spatially in the state and tries to identify the hotspots where urgent attention is required. The indicators related to health are selected from the association of Sustainable Development Goal (SDG) 3 (Good Health and Wellbeing) with SDGs 1 to 9. The health intervention indicators include access to basic facilities, affordability of healthcare, access to health information, reproductive healthcare, and health infrastructure, whereas health status is indicated by malnutrition and anaemia among women and children.

The health status indicators are simply averaged to construct a Health Status Index (HSI). In contrast, the Health Intervention Index (HII) is constructed by a weighted average of its sub-indicators: affordability of healthcare, access to health information, reproductive healthcare, healthcare infrastructure, and access to basic facilities. Using choropleth maps, the districts possessing low health interventions and those with high malnutrition are identified. Using Moran's, I statistic and LISA (Local Indicators of Spatial Association) cluster maps, the spatial distribution of the HSI and HII is assessed to identify the clusters where access to health interventions is less and high HII is present. The study found that districts like Hoshangabad, Rewa, Sheopur, Damoh, Chatarpur, Singrauli, and Sehore possess low access to health interventions. The low access is attributed to less affordability of healthcare owing to low health insurance coverage and high average out-of-pocket expenditure for delivery, limited

access to health infrastructure and reproductive health care like institutional births, immunisation of children, antenatal care (ANC), postnatal care (PNC), etc. The HIS denotes the district-wise distribution of malnutrition. Health status is high in Jhabua, Panna, Burhanpur, Sheopur, Barwani, Balaghat, Chatarpur, Katni, and Dindori. The study found that HSI and HII possess a random spatial distribution in Madhya Pradesh than a concentration in a few districts. The bivariate association between two indices is also found close to zero, indicating a very low association between coverage of health indicators and health status in districts of Madhya Pradesh. This study can find wide applications while targeting health interventions at the district level.

TECHNICAL SESSION 3.3

Women and Millets: Governance, Convergence and Food Sovereignty

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Millets form the staple diet and are a part of crop systems in Odisha, especially in communities belonging to the rain-fed region. However, all indicators regarding millets production, area under millets cultivation, and the number of farmers cultivating millets are declining in India. This paper studies the convergence and coordination amongst various actors and stakeholders of the “Special Programme for Promotion of Millets in Tribal Areas of Odisha” (Odisha Millets Mission) initiated by the Government of Odisha in 2016. The paper particularly focuses on the work of block and village-level actors and stakeholders in the implementation of Odisha Millets Mission in Odisha. Under the Mission programme, we then look at the engagement of women in millets through the lens of food sovereignty framework. Even though the objective of the programme is not explicitly to promote women as agents of change through millet intervention but through its policy components women millet farmers are benefitted in terms of increasing production, Minimum Support Price (MSP) for finger millet (ragi) and collectivisation through promotion of village institutions such as Farmer Producer Organisations (FPO) and Women Self-Help Groups (SHGs). Procurement of finger millet at a MSP of Rs. 3,377 per quintal in 2021-22 in Odisha has provided market support and a source of income to farmers. With the increase in production of millets due to application of improved agronomic practices, many farmers are still bound to sell millets in local markets at a low price because of low limit of surplus generation per acre by the government. It is also been found that farmers are moving away from intercropping culture of millets to mono-cropping pattern. Inclusion of millets in Integrated Child Development Services (ICDS) is still not in operation in many other

districts of Odisha apart from Keonjhar and Sundergarh. On the processing front, machines need to be made available at the village level to reduce women's drudgery of manual processing and cleaning. In order to conserve and promote millets as a biodiverse crop and for delivering improved nutritional outcomes, the Government of Odisha must also include other small millets in procurement. The Government of Odisha should also consider inclusion of other small millets such as little millets, proso millets, and foxtail millets in state nutrition programmes and their impacts on nutrition indicators.

Dual Burden of Disease and Disease-Specific Morbidity in Assam based on NSS 60th Round to 75th Round (2004 to 2017-18)

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Before the COVID-19 pandemic took the global health and economy discourse by storm, we were grappling with the epidemiological transition and the dual burden of diseases afflicting developing countries' populations. Globally there is an epidemiologic transition from communicable diseases to non-communicable diseases (NCDs). The epidemiologic transition of India, however, has a few paradoxes. The transition is towards the dual burden of diseases. Within India, the poorer states showed a much more significant burden of both communicable diseases and NCDs. So, while we witnessed an epidemiological transition, the rate and proportions of disease burdens differed across different regions. Rural-urban differences were particularly stark. Disease burdens inform the morbidity status of a population. Of the various indicators reflecting morbidity status, self-reported morbidity rates are widely accepted indicators of assessing disease burdens. Morbidity rates are seen to have a causal relationship with demographic characteristics, socio-economic factors, geographic location, social and environmental conditions, or any other pre-existing health conditions. We use unit level data of National Sample Survey (NSS) 60th, 71st and 75th rounds (Social Consumption for Health data) to understand the dual burden of disease in India at state level and in the state of Assam. Disease-specific morbidity studies at sub-national levels in a developing country like India are few. We have chosen to study Assam because studies on morbidity patterns of Assam are far and few. We look at the inter-state patterns of self-reported morbidity and disease-specific morbidity in India

and analyse it. Findings shows that dual burden of disease prevails across states in India and in Assam. The reporting rate is meagre in Assam. Assam shows a deficient level of reporting of any ailment in last 15 days and chronic ailment, when compared with the highest reporting state of Kerala. Disease-specific morbidity, shows uneven geographical spread within India. Most of the southern states, along with the northern states of Delhi and Punjab, show a higher burden of NCDs. In contrast, the north-eastern states, Rajasthan, Uttar Pradesh, Madhya Pradesh, Jharkhand, Odisha, and Chhattisgarh show a higher burden of infectious diseases. Within Assam too there is uneven spread across NSS regions and various demographic and socio-economic variables. The dual burden of disease is inevitable as in the case of India and Assam. It requires constant monitoring of the disease patterns and identifying the pockets where the dual burden is high and taking necessary policy measures and providing health care facilities and awareness at the local level to overcome this dual nature of the disease pattern.

Elementary Education Outcome Efficiency in Indian States

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Elementary education is a merit good and the State Governments in India allocate considerable public resources to provide universal elementary education. However elementary education outcomes and expenditures vary considerably across Indian States. This study uses panel data of 28 Indian States from 2012-13 to 2019-20, to estimate the technical efficiency of States in improving education outcome. Stochastic frontier estimation method developed by Battese and Coelli (1995) is used to simultaneously estimate the frontier production function and inefficiency effects function. Evidences indicate that while some States have lower outcomes due to a lack of resources, some States can improve outcomes without increasing expenditure. Empirical estimates show that 38% of inter-state disparity in elementary education outcome is due to inefficiency. The mean efficiency of States was estimated to be 81% and there has been a minor improvement in efficiency during the study period. Himachal Pradesh and Meghalaya were found to be the most efficient States whereas Goa and West Bengal were the least efficient. While technical efficiency has improved over time in States like Uttar Pradesh, Bihar, Chhattisgarh and Rajasthan, it has declined in West

Bengal, Punjab and Madhya Pradesh. Results also indicate that there is a scope to improve efficiency in urban areas and in States that have relatively lower literacy rates. The study identifies best practices and also helps in separating the resource poor States from the inefficient ones.

Role of MGNREGA in Augmenting Farmers' Income in India: Evidence from the Situation Assessment Survey, 2018-19

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The paper attempts to address the impact of the MGNREGA on the farming households, who are mainly comprised of small and marginal farmers. As per SAS, an average Indian farmer has four major sources of incomes: i) income from cultivation, ii) income from farming of animals, iii) wages and salaries, iv) income from non-farm work. Temporal income analysis reveals that share of income from wages and salaries has increased and currently constitute 40% of the total income. The contribution of wage income is higher for marginal (52%) and small farmers (32%) operating less than two hectares of land compared to the larger farmers. With shrinking landholding size, stagnating crop productivity, lack of storage facilities, and insufficient markets, farmers are confronted with highly volatile prices resulting in abysmally low level of income from crop cultivation. As income from crop cultivation in a meagre piece of land is not enough to maintain a healthy and respectable life, they are seen to diversify their source of income to backyard poultry, work as labourers on farms of bigger landholdings and so on.

In this background, the paper tests the statistical hypothesis that the contribution of wage income is significantly high for farming households across landholding classes against the alternative. The paper then examines the effectiveness of MGNREGA scheme in enabling farmers to receive a better income as part of the wage income. This study draws out regional disparity in the functioning of the scheme and benefit received by farmers across landholding classes. The paper also studies the impact of the scheme in augmenting farmers' income, taking into account the structural factors which could also affect farmers' income. The study has made some suggestions for improvements in the scheme to empower farmers to take more risks in terms of commercialisation and diversification in the farming operation.

TECHNICAL SESSION 3.4

Good Governance and Some Aspects of Development in Indian States: A Panel Vector Autoregression Analysis

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Governance can enhance development through its impact on human development, fiscal performance and equity. Good governance structures have been known to improve health, education and income levels, comprising the human development index (HDI). Efficiency of administrative functions can be linked to fiscal performance of the governments. Better governed states also have better fiscal management, as seen from their fiscal performance. But the governance-development nexus is incomplete without taking account of equity, which can be measured by levels of per capita income. The present study is an attempt to analyse the impact of good governance on development of 19 major Indian states for the period 2002-2016. An index of good governance is constructed using 75 variables categorised into 8 sub-dimensions of governance. The sub-dimensions are derived from principles of good governance as given by UNDP (1997). Using the computed governance index in a four-variable panel vector autoregression model along with HDI, gross fiscal deficit and per capita income, the results show that good governance can bring about significant improvements in development of Indian states. The signs of coefficients in panel VAR results are as expected based on the literature. Granger causality shows two bi-directional causalities among the variables, justifying the use of panel VAR. Impulse response graphs show positive contemporaneous effect of good governance on human development and per capita income, while the impact of governance on increasing fiscal deficit is gradual. The positive relation between governance and fiscal deficit in the long run highlights growing state activities and hence, public expenditure, as explained by Wagner's law.

Variance decomposition shows that good governance most explains variance in human development and per capita income, while human development most explains variance in gross fiscal deficit. Human development has a significant impact on all three variables, including governance, making it a pre-condition for developmental outcomes of governance. It is suggested that states with low levels of human development and per capita incomes frame policies for improving governance quality to improve their development, while states with fiscal stress bring about improvements in their human development and fiscal management at various administrative levels.

Appropriate Design: The Key to Successful and Effective Public and Social Programmes – Lessons from the Integrated Rural Development Programme (IRDP) and the Self-help Group (SHG) based Microfinance Programme

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India has several public and social programmes for the betterment of her people in the realms of health, education, food, nutrition, employment and livelihoods. However, most of these have not been very successful in achieving the desired outcomes. Lack of proper implementation has been cited as one of the major causes for this. However, in this paper we contend that it is the design of the programme which could be responsible in a major way for its success or the lack of it. To this end, we have examined how a sustainable and successful micro finance disbursement model evolved in India. This is done by critically examining the design and outcomes of the programmes aimed at credit disbursement for income and employment generation, namely, the IRDP, Development of Women and Children in Rural Areas (DWCRA) and the SHG microfinance programme.

The IRDP was launched in India as a programme for poverty alleviation through provision of micro credit to the rural poor in the late 1970s. However, it could not achieve much success either in terms of increase in incomes of the beneficiaries or even in terms of successful lending by banks to the rural poor. The banks were saddled with a lot of defaults rendering the programme unsustainable. It was only in the decade of the 1990s, with the launching of the SHG based microfinance programme, that micro lending to the rural poor met with success, wherein the default rates diminished and

transactions costs were lowered making micro lending viable for all the stakeholders. The SHG programme was also successful in increasing incomes of beneficiaries, aiding households in acquiring assets and amenities and empowering women.

Given the above, this paper attempts to find out why the SHG led microfinance model was successful as compared to the IRDP model. We find that the success of the SHG model vis-a-vis the IRDP model was due to the fact that the design of the SHG model incorporated important insights from the theories of Asymmetric Information and Peer Monitoring as also from the socio-cultural realities of India.

Impact of the COVID-19 Pandemic on Rural Sanitation Workers in India

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The COVID-19 pandemic has affected all domains of work across the globe, and the most impacted sections of workers are those who had few social security policies protecting them even in the pre-pandemic period. The pandemic exposed the already existing social and institutional apathy towards the profession of and the workforce engaged in sanitation work. Social security systems that should have protected the rights of sanitation workers failed to keep up with the new demands and needs of this workforce. This paper elaborates on the working conditions of sanitation workers during the pandemic. At the end, it provides social protection policy recommendations that are vital to safeguard the working conditions, as well as health and safety concerns of these Corona-Warriors.

Existing research on COVID-19 in India, being highly urban-centric, ignored the impact of the pandemic on frontline workers serving in rural areas. This historical neglect allowed for a lacuna in the existing research on the frontline workers employed in rural areas in general and in the areas of sanitation and hygiene in particular. This research studies the impact of the COVID-19 pandemic on rural sanitation workers in Haryana. The research was carried out through telephonic interviews with 40 respondents in July and August 2021. The study explores the challenges and risks faced by the sanitation workers in rural areas working as frontline workers, and the state's response to their health and protection. The survey reached out to sanitation workers in every district of Haryana. The responses received through the survey

were analysed to take a close look at work conditions and unpack the complexities of performing this labour. The survey results show how already overburdened sanitation workers were turned into multi-purpose workers during the coronavirus pandemic. They performed as many as 24 tasks in addition to their regular duties of cleaning and disposing garbage. These additional tasks included working on infection prevention, setting up health infrastructure, and enforcing compliance with COVID protocols. This increased their work hours significantly, and some of them reported working up to four hours extra during the second wave of the pandemic. Respondents were unable to measure extra hours of work as there was no fixed schedule for their work during the pandemic. They were summoned as and when there was a positive case in the village, during visit of doctors or other health workers or any other task which the sarpanch assigned to them. While they were made to work in COVID-related tasks, their usual cleaning work took a back seat, which then had to be completed by working extra hours or on Sundays. While being asked about any additional payment for the extra work, no one had received any extra payment.

The study finds that there was a manifold increase in the tasks of rural sanitation workers in this time, and hostile rural society and apathy of the state made the working conditions unsafe. In response to the question “Do you feel safe while carrying out your job?”, 26 participants said they did not feel safe. Respondents spoke about their fears and concerns about working during the pandemic, and these were organised and categorised through thematic analysis into four types: (i) fear of contracting coronavirus, (ii) increase in the amount of daily work, (iii) hostility from members of the public while performing duties, and (iv) apathy from the government. Regarding the role of the state, it emerged that the government did not institute any social protection and welfare measures. Our findings reveal that only three workers reported having required safety gears at the time of survey. Most workers reported receiving no safety gears or tools from the authorities and no training on how to safely handle infected material. Those who reported receiving some of these items, the quantity was meagre and highly inadequate.

Based on this study, we put forward a number of recommendations to safeguard the well-being and welfare of the concerned workforce. Our recommendations include: provision of sufficient safety and protection gear for workers against the coronavirus, adequate testing and vaccination of the workers along with their family members, doing away with the discriminatory compensation and life insurance policy

and ensuring one amount of compensation and life insurance cover across occupations involved in essential or frontline work during the pandemic, to strictly enforce the service norms and not using this workforce in tasks and duties beyond their service mandate, ensuring workers' consent before assigning any additional task and providing financial compensation for that work as per the norms.

Palliative Care and Quality of Life: A Case Study

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At present time, cost of treatment on life-threatening illness has sky-rocketed, particularly in developing countries including India. The disease burden of cancer, HIV, kidney failure, heart disease, blood and bone marrow disorder, end-stage liver disease, stroke, lung disease, etc., on middle class people is becoming heavier since they are not entitled to government subsidy. The public health infrastructure is neither sufficient nor advanced to tackle the large population in our country. The infrastructural gap invites expansion of market for private healthcare providers. But there is evidence of exploitation in private hospitals where patients are not released even if he/she is in last stage of a critical disease, and the doctors know well that they could be not saved, to earn money. Palliative care is an alternative answer to such deadly diseases which could minimise sufferings and pain, improves quality of life of the patients. It allows the patient to die peacefully at his desired place among the family member. At the same time, palliative care lowers the economic burden on the family. Palliative care is a type of specialised medical care that focuses on providing relief from pain to the patients suffering from very serious or life-threatening illness. It is an extra layer of support given to patients which complements the ongoing treatment. Palliative care is a team work comprising doctors, nurses and other specially trained people. The developed countries have well-designed palliative care system, but such type of service is rare in developing countries. The present study aims to analyse the relation between palliative care and quality of life vis-a-vis pain management and cost effectiveness. By taking a case study on 'Pratishruti Cancer and Palliative Trust', it is found that palliative care could reduce the out-of-pocket expenditure of cancer patient to 40 per cent, besides providing mental support, easy communication with doctors, and taking responsibility of treatment by linking with government schemes. Therefore, making it mandatory for each and every hospital to open a palliative care unit could be a good

policy implication. Community participation is a key factor of success of palliative care system in a society.

Understanding Gender Gap in Literacy and Education Dropouts among Tribals in India

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The Indian education system was traditionally highly constrained by the “class” and “caste” system and values of equality of education was stimulated by the British system and by the influence of the ideals of nationalist leaders. Since independence, efforts have been made to increase the literacy and educational attainment among the “marginalised communities” (schedule castes [SCs], schedule tribes [STs] and other vulnerable sections). The inclusion of vulnerable sections of the society in the mainstream education and specially in the higher education is an important aspect of National Education Policy (NEP) 2020 as well. Though India has achieved a lot in the educational attainment of STs during last three decades, still some bottlenecks do exist at the micro level, which creates gender gap in educational attainment especially in rural and remote areas and results in dropouts. All of these results in very less presence of tribal students, especially girls at higher education.

This paper makes a modest attempt in mapping the gender gap in tribal literacy in urban and rural India and how it has been evolved in last five decades. It also attempts to show the rural urban gap in dropouts at different stages of education for tribal students. Then it analyses the determinants of literacy gap between male and female for rural tribal population. It also aims to find out the determinants of dropout for tribal students at different stages of education. Bivariate and multivariate analysis of district level data on infrastructural gap in tribal villages and gender gap in tribal literacy as well as dropouts show infrastructural bottlenecks, like electricity

non-availability and/or less availability, non-availability of transport, absence of connecting road or bad road conditions may create constraint in bridging literacy gap and reduction in drop outs. The paper concludes less presence of tribals, especially girls in higher education, has its backward linkage in gender disparity at primary and subsequent levels as well as dropouts at different levels. Therefore, the focus of the policy should be the identification of backward areas and quantification of gender wise Gross Enrolment Ratio for those areas and bridging the infrastructural gap in tribal villages, which may reduce the gender disparity and dropouts.

Evaluating the Impact of Students' Perceptions of Classroom Environment and Teacher Beliefs & Attitudes on Student Outcome

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National Education Policy 2020 emphasises the importance of motivation and empowerment of teachers and their role in developing a caring and inclusive culture at their schools for effective learning. This is against the backdrop of a learning crisis in India, where a vast majority of students are below curriculum standards, and the average rate of learning is much lower than expected. Using Young Lives secondary school survey (2016-17), we study the impact of teachers' belief systems on their students' cognitive outcome i.e., math test scores. We measure three teacher beliefs using Exploratory and Confirmatory Factor Analysis: teacher biasness, job satisfaction, and self-efficacy. Five latent variables were created; one for biasness and two each representing job satisfaction and self-efficacy. We also looked at how students' perceptions of the teachers' instructional practices play a role in determining their cognitive outcome. Two latent variables were constructed for the same. First, OLS regression analysis was conducted which served as a benchmark model, which was followed by the school fixed effects model. Standard errors were clustered at the school level. None of the teacher beliefs significantly affected test scores in the fixed effects model, whereas perceptions of the classroom environment emerged as a significant determinant in all the models. We found that only 13% of the variance in classroom perceptions was accounted for by the class, indicating that student perceptions of teachers' instructional practices are not credible indicators of teacher quality. Consistent with other studies, this paper finds that the observed characteristics

explain little of the variability in teacher quality. Furthermore, unobserved teacher characteristics seem to have no effect on student outcomes either. The paper adds to literature by suggesting that it is the students' perception of their teachers' quality (rather than the teachers' quality per se) that significantly affects student outcome. There are two aspects to this. First, perceptions of students are determined by the teacher's actual behaviour, not by what the teacher believes. Even though what the teacher thinks may be consistent with the teacher's actual practice in school, what the teacher reports to the surveyor may be very different from what he/she thinks. Second, teacher subjects' students to differential behaviour, resulting in the observed low correlation among student perceptions scores in the class. These perceptions might also largely be a function of the student's socio-economic background contributing to the psychological makeup of the student. These results clearly indicate a non-linear process of knowledge impartation at work which necessitates looking at what takes place in the classroom more closely.

TECHNICAL SESSION 3.5

Public Health Expenditure, Infrastructure and Outcomes in EAG States

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Health is one of the cores, but at the same time multidimensional issue for tribal development and planning. The field survey in the selected districts of Uttar Pradesh revealed that access and availability of basic health services for tribal people as well as tribal region needs to be investigated with a differentiated approach from rest of the population. Perhaps, availability does not directly ensure the use of services as tribals are gradually adapting with the modern treatment and medical care system.

Public expenditure and budgetary allocations (such as, health, education, roads, water, electricity, housing, institutional support and many others) are the key instruments for effective public service delivery, and inclusive growth and balanced development at the bottom of the pyramid. At the bottom of pyramid lies income-poor population, women, girl child, old, disabled, minorities, backward and disadvantaged, Scheduled Tribes (STs) and several others. Deprived rural population are more dependent on the public expenditure not only for their livelihood but also for their socio-economic empowerment and development uncertainties.

Uttar Pradesh is positioned among the three most laggard states in terms of the Sustainable Development Goal (SDG)-3: Health and Human Well-being along with all other 16 goals. Further, tribal population in Uttar Pradesh is at the most disadvantageous position in terms of their socio-economic development indicators across the states. The pandemic shock has led to the widening and deepening of development disparities, although several policy measures have been adopted. It is important to recognise that this shock is not only a health shock but has affected all aspects of socio-economic development process.

Several studies based on tribal areas across the country as well this field survey in the tribal areas of Uttar Pradesh have in fact revealed a paradox of tribal development policy aiming at mainstreaming. The public provisions are leading to higher mobilisation and awareness among the social groups and thus higher demand for the health infrastructure and services. On the contrary standards and adequacy of service provisions are at abysmally low levels due to leakages in the expenditures and lack of accountability. One prominent factor behind the leakages and low accountability is characterised by the unavailability (randomly or systematically) of the information related to health parameters particularly, for tribal population and health provisions in general for Uttar Pradesh.

The present paper investigates the health status and benefit of public health provisions for the tribal population of EAG states in general and Uttar Pradesh in particular. The objective is to identify the health policy gaps and the determinants for the supply and demand side rigidities therein at work in the tribal region. The paper uses the Public Expenditure Tracking System (PETS) to assess the access and utilisation of public health provisions in the tribal areas in Uttar Pradesh. Lakhimpur Kheri and Sonbhadra districts have been selected as the sample area. The sample selection is based on purposive stratified sampling given the size and location of the tribal region. The field survey duration is one year before the pandemic onset in March 2020. The survey during the pandemic times is based on the brief telephonic interviews with the same set of selected tribal families.

Tribal villages of Lakhimpur Kheri and Sonbhadra district in Uttar Pradesh have inadequate and least utilised public health services in tribal areas and the population have to travel 50-55 kilometres every time to Palia Block Community Health Centre (CHC) for any small or big treatment. Moreover, availability of all-weather roads and public transport both are non-existent. Thus, health outcomes in the selected districts are not satisfactory in terms of immunisation, mortality rates and malnutrition. National Rural Health Mission (NRHM) allocations for Lakhimpur have been significantly higher than Sonbhadra but selected health outcomes show larger improvements in the latter, indicating towards the utilisation pattern of the expenditures.

In the context of COVID-19 pandemic, various dimensions of vulnerabilities and deprivations have surfaced. Compared to the urban and non-tribal population, tribal population has somehow remained least affected in terms of coronavirus

infection. Majority of the tribal population who are dependent on agriculture, have not experienced income losses or employment losses as agriculture sector was the only sector with positive growth for last two years. Another interesting fact to be added here is the non-market dependence of tribal population for food grains in at least 50 per cent regions. A brief survey and telephonic information gathering reveals that during pandemic Public Distribution System (PDS) and dietary distribution programmes have been functioning properly in the tribal areas. The pandemic has left the health vulnerabilities of the tribal households unchanged, rather they have experienced difficulties due to the lockdown and movement restrictions.

Quality of Healthcare: A Study of Perception of Patients of Bishnupur and Thoubal Districts of Manipur

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Quality of healthcare is important in ensuring good health of the people. It is ever increasingly becoming more and more important day by day due to the ever-increasing need of healthcare on account of the COVID-19 pandemic. In this backdrop, it is of outmost necessity to study quality of healthcare in the Community Health Centres (CHCs) of districts such as Bishnupur and Thoubal of Manipur where availability of healthcare is low along with high prevalence of acute illness as per District Level Household and Facility Survey (DLHS)-4 (2012-13) data. Availability of healthcare facilities does not necessarily mean availability of good quality healthcare services. Here, the perception of patients who have had some kind of access and utilisation of the healthcare services at the CHC becomes important. Also, it is crucial to study the perception of the patients who are living in the nearby areas of the CHC as they have more knowledge about the facilities, healthcare providers at the CHC and hence more can form an increasingly reliable perception than patients coming from far off areas for one or two visits. The quality of healthcare has been studied from the perspective of functional dimensions of healthcare as laid down by Gronroos (1984). It also adopts the framework of quality of healthcare laid down by Panchapakesan et al. (2009) such as reliability, responsiveness, assurance and empathy. The study aims at finding the quality of healthcare through the lens of patients who have utilised the healthcare services such as the availability of services, the maintenance of equipment, the image of the CHC and also the quality of human resources in the form of various

dimensions given by Panchapakesan et al. (2009). It also tries to find any association between quality of healthcare and the availability of healthcare in the two districts. It is found that the patients of Thoubal district and Lilong CHC in particular have a higher perception of quality of healthcare than that of Bishnupur district in terms of quality of availability of services, maintenance of equipment and image of the CHC and also the functional dimension of human resources. While CHC Yaripek also from Thoubal districts has the lowest quality of healthcare amongst the patients. The study also found that the CHCs are facing serious problem of delivery of quality healthcare services due to poor infrastructure, non-functioning equipment and shortage of staffs due to utilisation for COVID-19 duties and other factors. It also found that awareness on part of the patients about their rights, facilities that should be available at the CHC and the kind of services they should be getting influences the perception of the patients in all the CHCs. Lastly, there was some kind of association between perception of quality of healthcare and availability of healthcare in the CHCs of the two districts.

Reassessing Financial Incentives: Impact of Scholarships on Absenteeism in Schools of India

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According to the Annual States of Education Report 2016, one-fourth of the students enrolled in classes one to eight were absent on a random day on which the team visited the school. This indicates the importance of focusing on incentives that can improve attendance rates in schools. While scholarships serve as incentives to increase enrolment by reducing cost of schooling, there has been limited research that ascertains the impact such scholarships have on absenteeism in schools. Therefore, this paper attempts to assess the impact of providing scholarships on absenteeism in Indian schools. Data from the India Human Development Surveys I and II were employed to conduct Pooled and Panel Regressions using the Poisson and Negative Binomial Distribution Models. The results from the pooled Poisson and

Negative Binomial Models indicate that, on average, students with scholarships are less likely to be absent when compared to students without scholarships. On conducting the fixed-effects Poisson model, the results indicate that students with

scholarships are 24.1% less likely to be absent when compared to students without scholarships. In the panel negative binomial distribution model, results show that students with scholarships are 10.4% less likely to be absent. Since scholarships also lead to lower levels of absenteeism, the policy measure is successful, and should be encouraged and continued in the Indian context

Role of Oral Reading Fluency (Hindi) and Reading Comprehension in India: Evidence from Five Selected States

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Foundational literacy is a serious issue for policymakers as an estimated five crore children couldn't attain minimum foundational skills in India. The new National Education Policy (NEP) 2020 put a strong emphasis on children's fundamental literacy and numeracy skills. While recognising the severity of the children's learning crisis, Prime Minister Narendra Modi set the goal for the children of Oral Reading Fluency (ORF). This paper is an exploratory analysis of Early Grade Reading Assessment (EGRA) data in the Hindi language collected by Room to Read India Trust for five different states. A relatively unexplored field is what has been studied in the area of ORF in the Hindi language and reading comprehension in India. This paper aims to extend the form, intensity and degree of relationship between oral reading fluency (Hindi) and reading comprehension and understanding in five Indian states. There is a clear association between oral reading fluency and reading comprehension across the geographies. The differentiation between groups in the entire distribution is: 8 per cent of children scored zero, while 39 per cent of children scored more than 45 correct words per minute. 34 per cent of the total students were able to answer correctly more than 80 per cent. On the other hand, only 18 per cent of those surveyed were able to answer a single question. There is no direct proportion relationship between comprehension and fluency distribution. It is expected that the finding will shed new light on exploring the possible methods of understanding the relationship between the ORF and reading comprehension. In the aftermath of COVID-19 pandemics, the learning crisis among early grades children is very critical. The closure of schools for nearly two years has posed challenges to achieving the target of oral reading fluency and reading comprehension.

Water Sharing Dispute on River Brahmaputra and its Socio-economic Impact on the Stakeholders Living in the Char Areas of Assam

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This article is based on current literature to ascertain relationships among water scarcity, economic development, mutual understanding and social stability between two nations. Over the past few years, the world has observed many water conflicts. Among these, many of the conflicts are in South Asia. Both India and China are water-stressed for a variety of reasons. Tensions between the two countries are exacerbated by the lack of water. Tibet has been an underlying concern affecting Sino-Indian relations. China has built more dams than any other country in history. This paper basically studies water sharing dispute on the river Brahmaputra and its impact on the people living in the char areas of Assam. Assam is the land of river. Assam has beautiful fertile lands, splendid hills and valleys, vintage tea gardens, the equally beneficent and awe-inspiring mighty Brahmaputra River. The thesis aims to analyse the Sino-Indian bilateral interaction and dynamics on management of shared transboundary rivers, specifically focusing on the Yarlung Tsangpo-Brahmaputra River

Only a combination of two-sided cooperation, strong initiative, and flexible side administration can influence the future and reduce the risk of a Sino-Indian water war. The absence of a worldwide agreement between China and India does not rule out the possibility of conflict. Regardless, a settlement would serve to reduce the likelihood of conflict. Genuine communication and administrative agreements, despite being subject to more unpredictability and political abilities, are more likely to ensure peaceful water interactions.

Government of Public and Social Programmes (Employment, Education, Health, Food and Livelihoods)

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Recently India has completed 74 years of freedom and currently enters in 75th year of freedom. India celebrates the current year as “Azadi Ka Amrut Mahotsav” through out the year. During this period, India has witnessed various socio-economic, political problems. In last two years, World and India has faced Corona pandemic disease. India produced its own vaccines and given vaccines to most of the Indians. During these

period of Corona-19 pandemic disease, it has created multi-facet socio-economic and employment issues globally and India in particular. In this paper an attempt is made to analyse employment problems and out-migrants emerged thereafters. The problem of employment creation in India has emerged as a burning issues. In recent past, CMIE has issued data pertaining employment sector in India. According to CMIE reports, lakhs of Indian youths & women are jobless from labour markets in organised sector and unorganised sector that is informal sector. Renowned economist of Bengaluru Prof. Kunal Kundu has opined that this big class of disappointed labourers indicates that India can not earn benefits from these youth population. Indian economy remains und the er trap of middle income groups. K-shaped growth may increase disparities sizably in near future. Mackenzie Institute Reports suggest that upto 2030 year, 9 (Nine) Crores more job opportunities should be created in non-farm sector. According to Bloomberg Report during the year 2017 to 2022, the total labour partnership rate has decreased from 46 percent to 40 percent. It is estimated that 2.1 crores labourers disappear from workforce. After those 9 (Nine) percent remains as a job-seekers. In last two years, India & world has witnessed Corona Pandemic disease in its full swing. Now - a - days, the trends are declining globally due to vaccines. I and II, booster doses are provided to people. Consequently, cases of diseases has declined sizably. There is no negative effect for students going abroad for their masters or past-graduate studies. Most students prefer Canda, USA, Australia, UK, and Newzealand in particular. Table-1 clearly indicates that most students prefer Canada as “First Choice” followed by USA, Australia. The planners should focus on labour-intensive technique of production. Skill labourers should increase by training. To mitigate the problems of engineers and doctors more medical & engineering colleges should be established at district level, VRs schemes should be introduced in with more attractive conditions. Last but not least policy makers must find out various measures to eradicate disparities and find out an amicable solutions of the prevalent problems.

TECHNICAL SESSION 3.6

How Effective is Student Financial Aid Programmes in India? A Policy Evaluative Study of Post-Matric Scholarship Scheme

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The usefulness and necessity of student aid programmes in facilitating access to education, particularly higher education and as affirmative action for mainstreaming students from the backward sections is widely recognised but not extensively studied in India. It has recognised as an important tool for social development, upliftment and investment on it means long-term benefits. The current paper aims at evaluating the accessibility and effectiveness of the Post-Matric Scholarship scheme, one of the oldest merit-cum-means based student aid programme in India. This paper takes off from existing studies and explores the efficiency of the scheme in light of recent developments such as the adoption of ICT in application and disbursement of students' aid as a major policy intervention and its usefulness to the students of Odisha; a major tribal and scheduled caste populated state. the bottlenecks are multidimensional in nature, explained by the stakeholders as students, dealing non-teaching staffs and other welfare officers at various district level. The major findings reveals that the scheme has failed to reach out to its target groups (around 63% of students fall outside its purview) with the issues of much paper work, burden to travel, internet issues, electricity problems, computer knowledge, insufficiency of the amount, infrastructural facilities, shortage of manpower at government offices and colleges to deal with the scholarship, rural-urban disparity, lack of awareness etc. It further concludes that the adaptation of ICT tools, despite ensuring transparency, is still proving to be a stumbling block for many, especially for the rural disadvantaged

students. The mismatch between the demands of higher education and the financial status of the beneficiaries is glaringly visible and is only partially addressed by the scheme. The lack of availing infrastructural facilities and expertise to apply for the scholarship, irregular disbursement and reason of rejection was also not disclosed to the stakeholders as the major bottlenecks of the scheme lead to miss its target.

MGREGA and Financial Inclusion in Hoshiarpur District of Punjab

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The process of financial inclusion is a formidable task as it attempts to bring within the ambit of the organised financial system the weaker and vulnerable sections of the society. Financial inclusion can be understood in the light of financial exclusion. Financial exclusion can be broadly defined as the lack of access of certain sections of the society to basic banking services. The essence of financial inclusion is therefore to ensure that basic financial services are available to every individual in the society. Rangarajan Committee report 2008 defines financial inclusion as “the delivery of credit and other financial services at an affordable cost to the vast sections of the disadvantaged and low-income groups.” These various financial services include savings, credit, insurance and payment & remittance facilities. In line with the report, Reserve Bank of India (RBI) defines financial inclusion as “a process of ensuring access to appropriate financial products and services needed by all the sections of the society in general and vulnerable groups such as weaker sections and low-income groups in particular, at an affordable cost in a fair and transparent manner by the regulated mainstream financial institutional players.” With this view to facilitate the process of financial inclusion among the rural people, RBI launched the “No Frill Account” i.e. zero or minimum balance accounts in the year 2005 and Ministry of Rural Development (MoRD) issued a mandate in the year 2009 which made the transfer of wages of MGNREGA beneficiaries under the scheme only to a bank account compulsory. In this background, the present paper attempts to i) study the role of MGNREGA in financial inclusion, ii) ascertain the level of financial inclusion in the Hoshiarpur district of Punjab, iii) analyse the difficulties from the view point of financial agencies as well as the MGNREGA beneficiaries, and iv) to suggest remedial measures for accelerating the pace of financial inclusion. The study makes use of both primary as well as secondary data. A total of 200 beneficiaries have been interviewed in the said district across 10 blocks and 20 villages. In addition to it, the secondary data has been collected from the data portal of MGNREGA website. The paper makes

use of descriptive statistics to analyse the different dimensions of financial inclusion such as awareness level about the banking system, usage and behaviour of the banking staff, use of banking services etc., to study the extent of financial inclusion in the sample area. Evidence of positive but limited impact of mandatory wage distribution of MGREGA though bank/post office accounts has been found on the spread of financial inclusion.

Paraphrasing the Framework of Public Health in British India

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The concept of Social Darwinism nurtured the phenomena of British colonialism in Asia and Africa, and the emergence of Macaulayism calcified it on Indian soil. British sense of cultural superiority galvanised them to trample every icon of traditional Indian ethos and harmonised the sentiments of indigenous people with European culture. Public health and medical treatments in India before the advent of Europeans were solely based on Ayurveda and Unani way of treatment. Ayurvedic and allopathic procedure of treatment were greatly different from one another in their ideologies and methodologies of treating the ailing. Ayurveda, on one hand served the objective of prevention is better than cure, whereas European medicines aimed at eliminating the disease through heavy doses of chemical composition. Ayurveda usually focused on tackling the hormonal imbalances of human body in the form of Vata, Pitta and Kapha doshas. Unani Vaidyas used eight diagnosis methods for effective results such as: pulse, stool, urine, tongue, speech, vision, touch and appearance. Unlike these unsophisticated systems which focused on empowering the body with naturally-built immunity to fight diseases, sophisticated British way of medicinal treatment drew conclusions after punctilious technical examination of the source, proper recording and documentation of the symptoms and logical allopathic medication comprising suitable chemical composition after authentic diagnosis. Queen's Proclamation Act of 1858 gave Britishers an upper hand in Indian administration. They conducted several amendments through various acts to mould the thriving medical practices in India according to their personal preferences. The episode of vaccination drive promulgated by them played a prominent role in amelioration of the status of public health in India.

This research work is an attempt to sketch an honest parody of Public Health System of India during British rule. Meticulous dissection of historical documents available in National Archives, New Delhi, scrutiny of records of East India company

in British Library and rare documents on Medical History of British India from National Library of Scotland have facilitated the draft of this paper. Apart from the aforementioned primary sources, various secondary sources have been used in form of books, articles and newspaper reports. This qualitative research would intrude into the disguised territory of East India Company records in order to construct the ideological notions which weaved the policies of British governors and civil servants regarding the health and sanitation of Indian civilians.

Really! If There is a Will, there is a Way: Experimental Evidence from Indian States on Enrolment

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Universalisation of education from pre-school to secondary comes with several challenges for policymakers. In this study, we have tried to explore the factors affecting the enrolment of the girls and girls from the marginalised section. We have used raw data from the school report cards available as DISE (District Information System for Education). We have used the DID (Differences in Differences) estimation method for causal effect estimation. We have taken interaction terms of pre and post adaptation of cycle distribution programmes across states of India and availability of all-weather roads to school as our DID estimate. Along with that, we have used school quality and whether the school keeps and reports the ward's progress to its respective guardian as explanatory variables. The result suggests several uncovered findings: in Bihar, an average cycle distribution programme and the presence of all-weather roads implied a rise in the enrolment for repeaters. *Ceteris paribus*, as there is an increase in the number of facilities rendered by the school, it increases the enrolment of schedules tribe (ST) girls in Bihar on an average. Also, the combined effect shown by the interaction of the record of progress maintained by school and shared with the parents shows a positive relation with the enrolment of ST girls which is significant at 95 per cent level of significance. Keeping other things constant, in Jharkhand, the spill-over effect of perception about the cycle distribution programme and the all-weather roads together has a highly significant positive relation with the enrolment of the scheduled caste

(SC) girls. Interaction of school keeping the records of the student progress and being reported to family or parents are negatively related to the total passed girl students above 60 per cent and the joint effect of the perception about the distribution of cycle programme with the all-weather roads also has a negative relation with the difference between the total appeared and passed girl students at 99 per cent level of significance in Jharkhand.

Relationship between Revenue and Expenditure in India: An Econometric Analysis of Time Series

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This paper applies the Johansen cointegration technique and ARDL model to test the relationship between central government's revenue and expenditure in India over the period 1970-2022. The unit root test based on the ADF test shows that the variables are non-stationarity in level but stationarity in the first difference with the linear trend is accepted for all variables. Yashobant et al (2012) results reveal that the Johansen cointegration test identified one cointegrating vector between two variables and suggested there is a long-run relationship between central government's revenue and expenditure. But in this paper, that's not true and it is found that the Johansen cointegration test is not identified by any cointegrating vector between two variables and suggested there is no long-run relationship between central government's revenue and expenditure. It indicates the short-run relationship between central government's revenue and expenditure. Therefore, the study applied the ARDL model. For the total expenditure itself, the lagged period has a positive influence on the current period. Based on the Wald test, total expenditure lag can influence itself. Central government's total revenue is positively related to total expenditure. In the first lagged period, total revenue has a negative influence on total expenditure in the current period. Based on the Wald test, total revenue at level lag 1, can jointly influence the total expenditure. So, in the short term, the rising total revenue can increase the total expenditure.

Therefore, the government should be concerned about protecting the fiscal health and public expenditure management of the Indian Economy through the rules of the FRBM act and should spend on more necessary events and cut down on unnecessary

expenditures, and must be more spent on productive and investment activities. It saves the country from dependency, a high level of interest payments as well as a debt trap. If the economy achieves enhanced economic growth, it will be possible to raise revenue from domestic sources. Therefore, the study suggests that an efficient expenditure management strategy is significant for the sustainability of the budget, debt, and overall financial stability of the country.

Does Government Expenditure on Education Promote Economic Growth? An Empirical Evidence from Hilly States in Northern India

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Knowledge is a critical component in the progress and development of every global economy. Economists like Adam Smith emphasised about the need of knowledge and education. Today, a critical question arises regarding the importance of the educational system, to each country's economic growth and development. The educational system not only assists and contributes to empowering people to work in the economy, but it also contributes to technical advancement that allows the country's economy to flourish and gain a competitive advantage through the knowledge and resources they possess. Using balanced panel data from 2004 to 2017, this study investigated the dynamics of education spending and economic growth in selected hilly northern Indian states. The findings revealed a positive and significant relationship between public educational spending and economic growth. The results demonstrated that public spending on higher education has a favourable and considerable impact on the growth process of the specifically classified states, even at a disaggregated level. This research, therefore, signifies that education is a crucial component of economic growth in the country's northern states. Hence, optimal resource allocation to the education sector by policymakers/governments will have a favourable impact on these states' growth performance through improving knowledge output. Indeed, the government expenditure on various levels of education can be a vital factor for economic growth in the hilly states of India. States should develop policies that promote high-quality education for all citizens, which can only be done with increased government education investment. This would be one of the most sensible measures to reducing India's inter-state growth gaps and making "convergence" factors more fathomable.

TECHNICAL SESSION 3.7

Child Labour and Education in a Developing Economy: A Policy Analysis

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There was a historical prevalence of the problem of child labour all over the world especially in developing economies, and it still exists on a large scale in Sub-Saharan Africa, Central and Southern Asia, Northern Africa and Western Asia. Besides this, the pandemic resulted in an acute rise in poverty that intensified the risk of child labour. In many scholarly works, abject poverty and lack of educational facilities are often cited as the primary factors responsible for the incidence of child labour in developing nations. The traditional wisdom recommends a hike in educational opportunities to eradicate the problem of child labour. Given this backdrop, this paper explores how the alternative policies to promote children's education by the government can result in a counterproductive result in reducing child labour in the presence of a privatised education sector in a developing economy. The families/households decide the children's time distribution between education/schooling and wage-earning activities as child labour by intertemporal utility maximisation. From the household optimisation exercise, the total demand for education services has been derived. A micro-theoretic general equilibrium model has been constructed for a distortion ridden developing economy. A diagrammatic representation of the demand and supply curve for education services is provided to explain the simultaneous determination of the price

of education services and the incidence of child labour. Two government policies to combat the problem of child labour have been analysed. First, the traditional policy of education subsidy— per unit cost of education to the household—has been considered. Second, the government policy to support the infrastructure development of the private education sector in the form of capital subsidy has been analysed where it can be argued that the capital subsidy to the education sector can lower the cost of education which incentivises households to put their children in schools rather than the wage-earning activities as child labour. This paper shows that initially, education subsidy lowers the cost of education but ultimately it may fail to address the problem of child labour. Similarly, capital subsidy as a policy measure to lower the incidence of child labour may not be effective and in fact, it may aggravate it. Finally, it is shown how the characteristics of a developing economy play an important role in determining this kind of counterproductive result.

Educational Development Programmes in North-East India: Availability, Achievements and Challenges

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Education is necessary for the development of knowledge, skills, and well-being of an individual and the development of the social, economic, and welfare of a nation. Adequate availability, convenient accessibility and affordability of educational institutions are the primary requirements to improve educational status. The rough topography and scattered human settlement of India's north-eastern (NE) region create difficulties in the establishment of educational institutions in the proximity of their settlement thereby inducing inconvenience to access it. Nevertheless, the government of India has introduced and implemented educational development programmes such as SSA, RMSA, and RUSA to ensure equitable access to educational institutions and improve enrolment rates and pupil-teacher ratios. The present paper aims to analyse the achievements and challenges of educational development programmes in the region. It primarily, using secondary data, analyses the achievements and various challenges of educational development programmes in the region. The availability and accessibility of educational institutions are measured in relation to the population and geographical area examined to capture equitable educational development. The physical and financial

achievements against the targets of the implemented educational development programmes are also examined. These are comparatively examined between the NE states, region and country. Evidently, the availability of school and university institutions are better in the NE region as each of it has served a smaller population, although covered a larger geographical area, when compared to the national level, primarily due to the sparser distribution of the population in the region. However, the availability of colleges remains inadequate as it serves a larger population and geographical area in NE region than at the national level. Moreover, the physical achievements of SSA components in the region are at par with the national average (81%). Further, half of the RMSA components in the region have achieved less than half of their targets primarily due to the delays in funds transfer and submission of utilisation certificates and progress reports is a major challenge to accelerate the programme for full success. Despite the development in educational infrastructure and the increase in the pupil-teacher ratio, the enrolment rates have declined in government schools in which these programmes are implemented and is a matter of challenge to introspect the efficiency of implementation of such programmes. Furthermore, although RUSA has made a significant contribution to the infrastructural up-gradation of higher educational institutions, the availability of colleges remains inadequate in NE region which is a serious concern for higher education development. Thus, accelerated effective implementation of educational development programmes is necessary to overcome the challenges for achieving the goals of the programmes.

Are Contractual Employments Proving an Implementational Loophole for the Maternity Benefit Amendment Act 2017?

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International Labour Organisation (ILO) has recommended in its Convention No. 183 in 2000 that maternity benefits be given to women employees for not less than 14 weeks. It has further been recommended to countries to increase it to 18 weeks. In India, the Maternity Benefit Amendment Act (MBAA) 2017 provides for 26 weeks of paid maternity leave to every woman employee who has worked with the employer for a minimum period of 80 days in the 12 months immediately preceding the application for the maternity leave. It is undoubtedly progressive in nature in terms

of its duration. However, the amendments have not been able to fully address the issues associated with its implementation aspect, as shown through the jurisprudential analysis on maternity benefit related cases in this paper. Through this paper, it has been attempted to analyse how the categorisations of employees based on their employment contract, namely, the permanent (long-term contracts till retirement) and contractual (short fixed-term contract) with the employment status of regular, temporary, ad hoc or on daily wage basis and casual basis etc. have affected their claim to maternity benefit and often denial of maternity benefit if the employment type is contractual and employment status is temporary, ad hoc, daily wage basis or casual basis. The jurisprudential analysis has found that contrary to the general assumption that maternity benefit is provided in the public sector and not in the private sector, the study found that both the government and private employers are parties to the judgements analysed, and both have been denied maternity benefits on the ground of contractual employment. Primarily, through the analysis of the text of the judgements in which both petitioner's and respondent's arguments and the court's decision were given, it has been found that women employed on a contractual and temporary basis are denied paid maternity leave. The landmark judgement on contractual and temporary employment is discussed in the paper to argue that in the implementation of the MBAA 2017, contractual employment is proving to be a loophole through which the employers are sabotaging the maternity benefit rights of women. This paper also argues that it is not the sector that impacts the implementation of the MBAA 2017, but the employees' employment contract. It further argues that the denial has been made due to ambiguity in applying the statute in the particular case as there are multiple statutes which govern maternity benefits like The Employees State Insurance Act 1948; The Beedi Workers Welfare Fund Act, 1976; The Beedi and Cigar Workers (Conditions of Employment) Act, 1966; The Advocates' Welfare Fund Act, 2001; The Payment of Wages Act, 1936 (to name a few) in the organisation where the women are employed. This paper suggests a legislative amendment by the inclusion of a term clearly mentioned in section 3 (o) which defines "woman" as a woman employed in any establishment, irrespective of their employment contract and employment status are, eligible for the paid maternity leave of 26 weeks so that there is no scope of discretion on the applicability of the MBAA 2017 due to ambiguity in the textual reading of the act. It is found that the objective of providing dignified and healthy motherhood to the women and childhood to the children by protecting their health

rights through MBAA 1961 has been adversely impacted by the non-provision of paid maternity leave to contractual employment.

Corruption, Good Governance and Sustainable Development

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The present research is undertaken for Corruption, Good Governance and Sustainable Development specially in Nepal with the objectives to identify the factors that cause challenges to good governance and sustainable development. The study was carried out to obtain the secondary data using various literature reviews and reports on corruption such as Transparency International, Human Right Reports, UNDP, Research journals, Google scholar etc. The study reveals that corruption arises because agencies, institutions and the government can no longer control corruption effectively due to underpaid officials, which is a problem especially in the developing countries, where they do not have the sufficient tax revenue to properly reward the local officials. On studying forms of corruption in Nepal, CIAA reports (2010) reflects more than half (55 percent) of the corruption cases filed by CIAA at the Special Court are related to fake certificates, illegally issued in exchange for rewards. Corruption is linked to the level of GDP (the higher the GDP, the lower the rate of corruption). Corruption is related to the level of education (the higher the average level of education, the lower the level of corruption). Corruption Perceptions Index (CPI) placed Nepal 131st among 176 countries with a score of 29 out of 100. In 2015, it ranked 130th among 168 countries with a score of 27 out of 100. In order to protect the general citizens, purpose of the present research be very crucial to explore and examine the environment and system, and thereby create pathways that give citizens relevant tools to engage and participate in their governments – identify priorities, problems and find solutions.

Gynaecological Morbidity due to STI among the Women in India

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Gynaecological morbidity is the leading cause of ill health among the women of reproductive age group worldwide. Gynaecological morbidities affect women's

physical health, sexual function, social role, psychological life and religious life. This article presents an analysis of self-reported symptoms of gynaecological problems among the women who have ever done sexual intercourse of reproductive age group (15 to 49 years) and the utilization of health services among women of reproductive age group. The National Family Health Survey (NFHS-4) 2015-16 has been used with the sample of 699,686 women of age 15-49. The present analysis is based on a sample of women who have ever done sexual intercourse of age 15-49. It has been found that gynaecological morbidity is significantly related to marital status, caste/tribe, education, contraceptive use and the economic status of women. Almost 11.2% of women among who have ever done sexual intercourse have the prevalence of any gynaecological morbidity. The higher prevalence is of having genital sore/ulcer (9.2%) followed by having abnormal genital discharge (3%) and having STI is 2.5%. Of these, only 40% women seek treatment.

Land Alienation and Restoration in the Agency Region: A Reality Check

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Tribes are confined to low status and are often excluded from Hindu society instead of being absorbed in it. They are often deprived of education, health and empowerment (political, social and economic) which in turn they lose ownership rights on their own land in the agency region. On the one hand, the government acquired their land in order to use it for public purposes such as construction of dams, canal irrigation, and power projects, among other things. Non-tribals, on the other hand, grabbed agency lands by connivance with the government authorities. Furthermore, the forest department gradually controlled the agency regions, denying them access to the forest products that are their primary source of income. Obviously, agency lands are rich in terms of hydro geological and other resources. Because of both land alienation and land acquisition, marginal and small farmers who previously owned land have formed a separate category known as “land owners become landless.” Furthermore, the average size of landholdings of other landholding categories, such as medium and large farmers, has slowly reduced; resulting in a decrease in cultivable land in the agency region as well.

TECHNICAL SESSION 3.8

Saving Mothers and New-Borns through Reformed Healthcare: An Empirical Investigation of Janani Suraksha Yojana (JSY) in Uttarakhand

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About 67,000 women die in India every year due to pregnancy related complications. One out of every five child deaths occur in India. Finding ways to reduce new-born deaths is a critical part of achieving global goals on improving child survival. Launched in 2005, JSY benefits 10 million women every year. It integrates cash assistance with natal and post-natal care for woman in states with low institutional delivery rates including Uttarakhand. The cash incentives given to women in these 'low performing states' are higher than in other states. It cites a new approach to healthcare, placing for the first time, utmost emphasis on entitlements and exclusion of out-of-pocket expenses for both pregnant women and neonates. The initiative entitles all pregnant women delivering in public health institutions to entirely free and no-expense delivery. All entitlements and expenses relating to delivery in a public institution are borne by the government, ranging from free transport from home to government health facility. This empirical research study attempts to link health facilities, service providers and utilisation patterns of different levels of maternal healthcare, with particular focus on hills and plains in Uttarakhand and thus come out with both policy and programmatic recommendations. Both qualitative and quantitative techniques were used in selected districts of Almora and Haridwar, including, case studies, primary data with multi-stage sampling design, secondary data, and available literature.

The study revealed that a reasonably good number of mothers kept themselves away completely from accessing and utilising JSY. Analysis of access and utilisation of 313 selected respondent mothers in Haridwar and Almora markedly revealed a drastic

reduction in home delivery. Out of 313 respondents, 68 women all from Haridwar went for private maternal care and none out of 103 respondents in Almora went to private maternal care. A reasonable number of pregnant women had shown initial interest in JSY but for various reasons did not sustain and ended up either in home delivery or in private maternity care. Analysis of access and utilisation of JSY to a large extent revealed that out of 313 respondents only about 55.3 per cent accessed and utilised JSY in terms of prenatal care, delivery and post-natal care through JSY, this is a matter of great concern. Of this, prenatal care was more effectively utilised. Overall, 10.2 per cent experienced difficulty in terms of availing, accessing and affording the services. JSY is the principal programme of its manner, and its success has huge implications for global health policy. The study evaluated the JSY and reported that cash incentive to women who delivered their babies at health institutions lowered stillbirths and newborn deaths. The study explains that despite geographical distance pregnant mothers travel and access antenatal care but find it difficult to access delivery care and post-natal care. The success of JSY in this analysis, is very encouraging, but more work needs to be done to reach the poorest and most disadvantaged women, for instance, there were variations among the districts both in implementation and impact. It is a matter of concern that Uttarakhand faced challenges in providing consistent services to the pregnant women due to the state's hilly terrain with scattered settlements.

A Study on Determinants of Maternal Health Service Utilisation in India

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In spite a lot of precautionary measures the maternal mortality is still high in the world. India contributes around one-fourth of the world's total maternal deaths, approximately 1,20,000 women die in a year due to pregnancy related complications. Around 43 % of deliveries take place in rural health institutions in India (WHO Data) is evident that there is under utilization of maternal health services by woman of reproductive age group. The objective of the study is to find out the influence of socio-economic and demographic factors on utilization of MCH services, establish the facility- specific factors that influence the utilization of maternal health care services by Indian woman.

The study adopted survey method for collection of data. The survey focused on women of reproductive age group (18-49 years) in years) in Ganjam, Gajapati, Rayagada and Koraput Districts of Odisha part of Andhra Pradesh. The result reveals that mother's age at birth; marital status and parity strongly predict utilization of MCH services. It shows an insight that age; marital status, religious affiliation, education and parity or birth order is insignificant to take up MCH services by woman.

Government and Civil Society Organizations should make deliberate policies that will involve young women as role models to sensitize other women on the importance of required number of Anti natal care (ANC) visits. Policy provisions can also be developed by government to enhance utilization of maternal health care services by incentives and reward to those women who make the required ANC visits and deliver in government facility by SBA. Due to resource constraints, the study is limited to some nearby states of Odisha only. If we could include more states the utilization pattern and result may vary.

Commercialisation of Agriculture, Pricing Policy and Farmers' Welfare

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The Indian agricultural sector has been in a crisis since the pre-independence period. Although it is no longer the largest contributor to the national income, it still employs the majority of the Indian workforce. Over the years though India managed to be self-sufficient in terms of agricultural production and become the net exporter of agricultural products, but the food grains distribution system still lacks efficiency. The agricultural sector in India is highly regulated, starting from the ownership and use of land, access to factor inputs, access to output markets, product prices, etc. are directly or indirectly governed by a maze of laws. Presently, markets in agricultural products are regulated under the Agricultural Produce Market Committee (APMC) Act. Under the APMC Act, the states can establish agricultural markets, popularly known as mandis. The sale of agricultural commodities can occur only in the mandis through auction. The sales process in mandis is regulated through commission agents (CAs) who mediate between the farmers and traders. These markets exercise either monopoly/oligopoly or monopsony/oligopsony power in the appointed area and collect revenue, in terms of different "market fees" to develop the local agricultural infrastructure. It

is a popular belief among policymakers that the crisis in the Indian agriculture sector can be attributed to deficient marketing, supply and distribution chain, and not due to poor agricultural practices. Thus, policymakers resorted to privatising the agriculture sector at various levels from food procurement to food processing, which is expected to improve the bargaining position of the farmers and a more competitive price for farm output. The trading mechanism between farmers and traders is too complex to understand. In India, there has been a skewed distribution of landholdings. About 92% of farmers in India are either small or marginal farmers and only 6% of the Indian farmers are able to take the advantage of the Minimum Support Price (MSP) through APMCs. In our paper, we have shown that an increase in MSP may directly benefit middle and large groups of farmers. Though small or marginal farmers do not enjoy the direct benefit of higher MSP, they may enjoy higher pay-off indirectly. MSP might act as a discounted reservation price to the farmers. Also, MSP serves a better purpose as a government policy instrument in terms of benefitting small farmers when compared to per farmer's maximum selling quota. We also analyse in our paper how higher market concentration of the private traders will affect the incidence of oligopsonistic exploitation.

Estimating Inequality of Opportunity from Conditional Inferential Regression Tree

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India experienced an impressive growth rate (7 per cent) after the economic reforms during the 1990s. However, this high growth rate has been accompanied by increasing inequality as well. A sharp increase in income inequality along with slower pace of poverty reduction has almost become a distinct feature of Indian economy, especially in the last two decades. This debate on the relationship between income inequality and growth attracted the attention of economists and social scientist a long time ago. Classical economists believe there is a positive correlation (not causation) between inequality and growth, at least over the short period of time (Lewis, 1954; Kuznets, 1955). While some argue that inequality is not a prerequisite of economic growth (Kuznets, 1955), other contend that inequality is important for growth.

However, several cross-country studies in recent years show no conclusive

relationship between income inequality and economic growth. This has led to the intense debate on redistribution of income or distributive justice. In general, economic justice advocates distinguish between fair (justifiable) and unfair inequality. Under such reasoning inequalities are unfair, if they are rooted in factors beyond someone's control such as gender, place of birth, social group or ethnicity, parent's educational and occupations. People are more willing to accept income differences due to effort rather than outside circumstances (Rawls, 1971; Roemer, 1998). Inequality of Opportunity (IOp) captures this unfair part of inequality contributed by the factors beyond individual's control to income inequality. However, there are only few studies on IOp conducted on developing countries like India.

In this paper, we have used household and personal level information from the Periodic Labor Force Survey (PLFS) for the year 2019-20 to calculate IOp in India. We have estimated relative measure of IOp for earnings among working age people by using the methodology developed by Ferreira and Gignoux (2014). We conduct a Shapley decomposition of a log-linear regression model and use the conditional inference tree method to find out the relative contribution of each circumstance factor to IOp. The outcome variables we use are Marginal Per Capita Expenditure (MPCE), Per-capita household earnings (PCHE), regular earnings, self-employed earnings, and casual wages while the circumstance or independent variables are location of birth, gender, caste (social group), parent's education, and parent's occupation.

In the literature several scholars have used both parametric and non-parametric approaches to estimate IOp (Ferreira and Gignoux, 2008; Checchi et al., 2010; Brunori, 2016). However, there are drawbacks to both parametric and non-parametric methods approaches as they produce biased (Downward & Upward Bias) estimate of IOp (Brunori et al., 2016). The conditional inference regression tree, that belongs to class of supervised learning methods, is proposed as a solution to the shortcomings of traditional measures used for estimating IOp.

The results reveal that around one-fourth of total household earnings is accounted by IOp in India. Location of birth followed by social groups, and parent's education plays significant role in contributing to unequal opportunity in the labor market, while parent's education for regular salaried, and gender difference in case of self-employed workers and casual wage workers are important factors explaining unequal opportunity. We conclude by arguing that the welfare policies should focus more on bridging the

gap between economically poor and advance regions and parental background, apart from gender, and social groups.

Working Conditions of Rural Sanitation Workers in Haryana

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The proposed study aims to develop an understanding on the work of rural sanitation workers in the state of Haryana. There is a gap in the existing research on the working conditions of sanitation workers employed in rural areas of India. The paper demonstrates that though the practice of *Begar* (forced labour) and manual scavenging may have been outlawed, but in practice both continue till the present day. The research argues that the traditional caste-based occupational ties continue to govern the modern forms of employment and working conditions. Rural sanitation workers who come from Dalit castes find themselves subject to age old practice of caste-discrimination and in a disadvantaged position due to the historical caste-based stratification.

The research collates and investigates the tasks and duties performed by rural sanitation workers, and asks the question of whether all the tasks and duties fall within the official mandate of this profession. Based on a telephonic survey of sanitation workers, the research presents descriptions of challenges faced by the rural sanitation workers on a regular basis. Based on the survey responses, we draw a list of a wide range of tasks which are forced on this workforce by the village panchayats and local administration. Using thematic analysis of these responses, it has been shown that these workers perform 38 tasks which have been classified under seven different themes. The research presents a critique of the existing official service norms of population-worker ratio and shows how these norms fail to reflect the ground realities to maintain cleanliness in rural areas. The sanitation workers, albeit employed by the government, are used by dominant and influential social groups to extract *begar* from them. The analysis shows that the *begar* takes place not only at private places of individuals but also at official spaces making the local administration complicit in this practice.

Impact of COVID-19 on Employment and Livelihood: Insights from the Unorganised Coal Mines Women Workers Experience

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COVID-19 has emerged as a crisis that has affected all spheres of human life. The pandemic has especially affected the livelihood, employment and various aspects of the lives of the workers. The pandemic has exposed the agony of workers struggling to survive, find jobs, and get basic necessities, as we saw during the initial phase of the nationwide lockdown. Similarly, workers in coal mines are always ignored for the horrible conditions they endure. In this article, the purpose has been to throw light on the issues of employment, livelihood, and domestic violence cases in the unorganised women workers in coal mines during the pandemic. Furthermore, it examines the effects of domestic violence on women workers during the pandemic. In the COVID-19 study, interview schedules with 150 women respondents revealed that unorganised women and their families faced a dismal situation because of the unavailability of work, workers faced starvation conditions, which calls for urgent measures to remove poverty and strengthen social security for workers. These themes illustrated the impact of the pandemic on women, and how they coped with it. Women workers and their families have been adversely affected by the nationwide lockdown in terms of livelihoods, employment challenges and domestic violence. The lockdown strategy is an effective method for protecting people from coronavirus. This strategy however, was harder for women workers to get their basic needs; it also made survival difficult for unorganised workers. Majority of workers had lost their jobs due to the lockdown; they basically didn't have money to feed their families. It was not uncommon for women to use their savings or borrow money from money lenders during that time. Every day, they were struggling to provide for their family's basic needs. Nearly 94 per cent of the women work as unorganised workers. For this reason, the government has to consider the needs of working people, especially unorganised workers.

TECHNICAL SESSION 3.9

Health Workers' 'Everyday Work' in Integrated Health Programmes in Bihar, India: An Institutional Ethnography

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Deployment of health workers in low resource health setting is a common phenomenon to deliver health care services. Health workers' deployment can have unintended consequences on service provision and may affect overall organisation of service delivery. In this paper, I examined the issues of health workers' deployment and explored the institutional processes that shape health workers' work and work conditions at the district hospitals. I employed institutional ethnography as a method for inquiry to explore the social organisation of implementation of integrated NCDs programme. Interview, participant observation, review of documents was used as data collection method. Data analysis was conducted using social mapping, analytical writing, and textual analysis methods. The study suggests that because of staff shortage and lack of doctors, health workers are continuously subjected to deployment and often asked to undertake multiple tasks and responsibilities with no incentive or non-monetary benefits. Administrators perceive health workers, working in integrated programmes as additional human resource for utilisation at district hospitals. Removal of health worker from integrated programmes can have negative implications on service delivery and patients' health outcomes. This study suggests that administrators should improve staff recruitment process and pay attention grievances of health workers on timely manner to improve health care delivery.

Women's Self-health Care – Analysis using DHS V and VII India Data

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People's health statuses since the 1970s and 80s are evaluated not only based on medical determinants, but other factors such as cultural and socioeconomic determinants are also taken into consideration for health status (Rout, 2010). This paper has tried to understand the factors affecting women's self-health care using the secondary data from the Demography and Household survey for 2005 and 2015. To understand the causal effect relation, we have used the mother's age at first birth and the gap between the ideal number of children and actual numbers of children as explanatory variables, along with a few controls like the intention of contraceptive uses, residence type, education level. We have further used the ordinary least squares to estimate the coefficients for the causal effect relation over the series of eight outcome variables. This study has concluded many exciting results, such as the mother's age at first birth is negatively related to the perception of difficulties for self-health care. The explanatory variables gap between Actual numbers of children and Ideal numbers of children doesn't reflect a particular trend across a series of outcome variables. As there is an increase in education, results suggest a decline in the perceptions concerning difficulties for self-health care. There are higher levels of schooling, implying a higher decrease for the same. Hence, these research findings contribute to the existing literature by identifying possible factors to address the perception of difficulties accessing the primary health system in the Indian context.

Effectiveness of Teacher Training Programme on Quality Education: An Analysis of Primary Schools in Delhi NCR and Maharashtra

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Issues of education quality in general and teacher training programs, in particular, have remained a challenge for Indian Education system for the past few decades. The government introduced New Education Policy (NEP) for the holistic development of the new generation and society as well, alongwith other initiatives like Right to Education (RTI). As a result, there has been visible increase in the enrolment of students, but

quality of education system is still a problematic area, that needs immediate attention. Earlier research suggests that teacher training and capacity building have a positive impact on the quality of education. The education system needs to have well-trained and experienced teachers for quality output. There has been an increase in enrolment as well but the question arises whether enrolment is a parameter to study the impact or is it an outcome of the Right to Education (RTE) initiative by the government? Does 'one teacher training program' fit all teachers? What is the impact, and how can one access the impact of teacher training programs undertaken by these teachers? The objective of the study is to understand and try to analyse the above-stated questions and propose a feasible technique that can help in the evaluation and designing of the training program with visible results. Based on an extensive literature review the paper proposes to apply the Six Sigma approach in accessing the teacher training program and study the impact of teacher training on the quality of the education system. The study also involves the problems and suggestions of teachers undergoing this training and based on the response a framework is developed.

An Empirical Study on the Challenges Faced by the Elderly Women

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Feminization of ageing is a worldwide phenomenon. There are more older women worldwide than older men as women tend to live longer than men. The feminization of ageing has imperative implications for policy. Women and men vary on a number of issues that are relevant for ageing policies. Both older men and older women may face age discrimination. However, older women also face the cumulative effects of gender discrimination throughout their lives, contributing to their vulnerability in older age. The present research work required empirical study. The empirical work comprised of questionnaire designed to ascertain different aspects relating to elderly women. To collect empirical data for the analysis, a comprehensive empirical survey was conducted in the year 2022 of elderly women in Ludhiana, Punjab with age ranging from 60 to 95 years of age. This research paper makes a case for the increasing need to ensure social security for older people, especially women in India. It touches upon some problems in implementing social security legislation, locating elderly women - including widows - the deserted and the destitute women as a vulnerable group. The gender implications of the various international and national policies and schemes of assistance for older people are also discussed. The review of state and national initiatives for providing social security to older women points to the serious lack of

will to address the concerns of a silent yet vulnerable. In view of lack of core policies for older people and fast increasing elderly population, study was also focused to suggest or recommend some specific points to policy makers, planners and decision makers so that Madrid International Plan of Action on Ageing could be followed in future and a standard framework could be developed to ensure older persons friendly environment in the country.

Effect of Air Pollution on Cognitive Performance in India

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Sagnik Dey, Professor, Indian Institute of Technology, Delhi

The problem of air pollution in India is growing every year. There is a negative impact of pollution on different aspects of human capital. The objective of this study is to quantify the negative impact of air pollution on the educational outcomes of the children in India, which has received less attention as compared to health outcomes. This paper provides a causal estimate of the contemporaneous impact of outdoor air pollution on cognitive and academic performance of children aged 8-11 years in India by combining high-resolution satellite data on Particulate Matter (PM)_{2.5} with the two rounds of Indian Human Development Survey (IHDS). Our identification strategy relies on the use of instrumental variable approach in which we use episodes of night-time thermal inversions as an instrument that generates exogenous variation in the pollution levels. For a robust analysis, we control for weather variables as well.

The results of this paper show that exposure to average PM_{2.5} concentrations in the past 12 months prior to the month of test taken by the children has a significant detrimental impact on their cognitive ability in India. Specifically, a 1 $\mu\text{g}/\text{m}^3$ increase in average PM_{2.5} concentrations in the past 12 months decreases the math performance by 10-16 percentage points and the reading performance by 7-9 percentage points. We also introduce a new way to capture a combined cognitive score and find that due to higher pollution levels, there is a significant fall in the combined age-standardised cognitive score. The results imply that the cost of air pollution in India is much higher than estimated, and a narrow focus on mortality and health-related outcomes understate the magnitude of negative impact of pollution, as mental acuity is essential for higher

productivity of children. This study serves as a reminder to the policy makers of the criticality of a pollution-free environment as high levels of pollution may jeopardise the benefits of the projected demographic dividend and economic growth of the country.

Some Arguments on the Notion of ‘Cash Transfers as an Alternative to the Basic Public Healthcare Services in India

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Cash transfers involve a wide range of instruments but generally they are non-contributory direct cash payments to the beneficiaries at regular intervals. Households in India are mostly dependent on governments’ provisioning of public healthcare services through various schemes and programmes. However, these programmes and schemes are generally plagued with poor quality of services, high operational cost, misallocation of resources, exclusion of genuine beneficiaries and inclusion of richer households. Due to which, there is emergence of wide range of literature that argues for provisions of cash transfers in place of publicly funded services. The present study makes an attempt to guesstimate what happens if cash transfers replace public healthcare services in India by a comprehensive review of different literary evidences and various facts and figures in the context of India. The study mainly uses 75th round of National Sample Survey (NSS) on health (conducted in 2017-18) to make this guesstimate. The study finds that cash transfers can positively affect major dimensions of a person’s life but not in absence of public provisioning of key services such as healthcare and education. Although, they can increase the utilisation of different healthcare services but they would not be able to deliver significant improvements in health outcomes if there are shortages of quality healthcare services. If cash transfers replace the existing public healthcare services, there is possibility that the healthcare services would neither be available for all nor affordable to all. In other words, if cash transfers replace the existing public healthcare services, then, there would be availability and affordability crisis of these services. Healthcare is a merit good and there exists substantial information failure because people are often unaware about the benefits of adopting different healthy measures. So, in a case, when cash transfers replace existing public healthcare services, there would be under-consumption of these services especially among poor, little educated, and marginalised classes. Although, cash transfers are not a desirable alternative of public healthcare services but they can improve the utilisation of these services. Therefore, attempts should be made to work out how cash and services go together. Hence, the debate should be about ‘cash and services’ rather than ‘cash versus services.’