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61st Labour Economics Conference

THE INDIAN SOCIETY OF LABOUR ECONOMICS

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Summaries of Conference Papers

Conference Themes

◆ Technology, Globalisation and Work
◆ Labour Organisations and Labour Rights in the Changing World of Work
◆ Changing Pattern of Rural Labour Markets

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THEME 1
Technology, Globalisation and Work
KEYNOTE PAPER

Technological Change and Its Implication on Labour Market

Uma Rani, Senior Economist, Research Department, International Labour Office (ILO), Geneva.

Technological change and innovations are not new, but the pace and speed at which innovations are taking place are unprecedented. Recent innovations, such as automation, artificial intelligence, and robotics, are changing the employment landscape and forms of workplace organization. The emergence of the neutral, end-to-end architecture of the Internet has allowed for unbridled innovation, paving the way for subsequent evolutions such as the introduction of big data, the Internet of Things (IoT) and the development of Artificial Intelligence (AI). At the same time, especially the overabundant information available on the Internet, rather than fostering dis-intermediation, has led to a growing need for new intermediaries, such as digital platforms. These innovations are shifting the way firms’ think about their value creation process, how they interact with one another, and how they create value for the society, bringing about transformative changes in the economy and transforming diverse economic sectors and reshaping regional, national and international markets.

This keynote paper will begin with the broader ongoing debate on automation and robotization and the extent to which occupations and tasks may be automated and the impact that this might have on labour markets and productivity. It will then focus on the new wave of digital technologies enabled through information and communication technology (ICT), such as digital platforms, which has opened up new ways of organizing work and has transformed the production landscape, impacting firms, workers and society in myriad ways. In this context, it will discuss the penetration of digital platforms in different sectors of the economy, creating new opportunities to pursue sustainable business models and more decentralised, shared governance arrangements. It will also highlight the role of global finance, especially venture capitalists, softbank, sovereign funds, etc. in driving this technological innovation especially since the global economic crisis of 2008. And, how these platforms have also changed the way revenue is generated, giving rise to new models of monetisation of services and data such as i.e. fee-for service (online travel agencies, financial services); advertising-supported revenue (Google’s Youtube with free videos); and subscription for on-demand content (Netflix), which is quite different from the industrial era and led to concentration of monopoly power among IT giants, and rise of superstar firms.

The second part of the presentation will examine the business model of digital labour platforms, its design features and architecture, and why it appeals to firms, clients and consumers to utilise it. Using the cab aggregator model (Ola-Uber) as an illustration, it will show how the business model operates and how value is generated. It will also discuss how firms utilise digital platforms instead of subcontracting to firms to outsource a diverse range of activities (low-skilled (clerical tasks) to high-skilled activities (software development)) to a geographically dispersed crowd at a relatively low cost,
creating a new business model. This will be illustrated with examples of different types of tasks that are outsourced to different types platforms using a global workforce.

These digital platforms have also become very attractive to policy makers and governments, and embraced as a strategy for economic development as they have the potential to create income and employment opportunities. The final part of the presentation will focus on the implications of digital platforms on workers and their working conditions. Digital platforms create new challenges for labour markets and frequently undermine the standard employment relationships. In many instances they contribute to a rise in informal employment and diverse forms of work arrangements, and can worsen the conditions of labour if the platforms are not regulated. Digital platforms not only distance workers from the firm, but they create fragmented work places and can lead to erosion of firm boundaries, and encourages firms to shift employment risk and uncertainty, along with the costs of training and skilling onto workers. Finally, management practices are undergoing major transformations on digital platforms wherein algorithms, tracking devices, and metric based feedbacks are used to control and supervise workers.

These technological changes raise policy questions about how to ensure job quality and full employment, how to promote skill development to mitigate the risk of deskilling jobs and job polarization, and how to promote a fair distribution of productivity gains.
Globalisation, Technology and Employment: Looking Back

Rajarshi Majumdar, Professor, Department of Economics, University of Burdwan, West Bengal

Globalisation has been the buzzword across the world for a major part of the last 40 years or so. Starting at a creeping pace in the mid-1980s, it has advanced at an unprecedented pace over the last two and half decades. Trade barriers have come down, linkages have been formed and strengthened, and a plethora of economic activities have become intertwined, across countries and continents giving rise to the global value chain. Technological advancements across the globe have reinforced globalisation. However, after a quarter of a century, voices are being raised regarding inequalities and instabilities in the labour market. Against this backdrop, this paper attempts to explore global trends in the world of work and also examine how globalisation and technological changes have affected the labour market in different sets of countries over the last 25 years or so. Using Labour Market data from ILO, it has been shown that globalisation has been associated with a phenomenal rise in GDP coupled with low population growth & rising PCI in major parts of the globe in recent times. But this striking economic boom has not been reflected in the labour market, especially in the low- and many middle-income countries, which now have unemployment rates higher than what was in 1990, even though the LFPR itself has declined. There has been large-scale adoption of labour-saving technologies across the globe, as a result of which expansion and improvement of employment has not been up to the expected level. Instead of industrialisation, the share of industry in GDP has declined in the developing world accompanied by a tremendous increase in the share of services in GDP – a sure sign of missing middle phase of economic transformation. Globalisation indices used here are found to be significantly negatively associated with employment growth rates all throughout. The magnitude of the negative relation is stronger for middle-income countries than the high-income countries, indicating that the post-globalisation shock to the labour market has been higher in developing countries rather than developed countries. In India, a similar story has unfolded – economic boom has been accompanied by a steady fall in LFPR and WPR and the absolute number of unemployed persons has grown at a rate higher than that of workers during this period. Vulnerable employment has remained above 75% even after two decades of globalisation and economic flourish. The sectoral composition of GDP does not show any remarkable improvement, and the share of Manufacturing has remained around a pathetic 16-18% mark. Rising GDP has depended mostly on induction of a more capital-intensive forms of technology, as the Fixed Capital-Labour Ratio has more than trebled during this period. Faced with rising relative labour cost and falling capital cost, manufacturing entrepreneurs are substituting labour by capital. Employment is decoupled from economic growth not only in India but across the globe in the period of rapid globalisation. It is time to pay heed to saner academic voices and give a boost to domestic demand through larger government expenditure, rather than stick to a neo-liberal supply-side fetish.
Technology and Challenges to the World of Work in Contemporary India
Some Reflections from the Field

Praveen Jha, Professor of Economics, School of Social Sciences, Jawaharlal Nehru University, Delhi

Debates on impacts of technology on the world of work, through multiple linkages and channels, have been among the oldest themes in political economy/economics. As the relevant literature shows, technological changes themselves, and the socio-economic outcomes associated with them, generate multiple trajectories on a broad canvas and any rigid deterministic framework is best avoided. However, it is also quite clear that the economic/property relations, along with the overall architecture of an economic regime, are critical in the diverse outcomes associated with technological changes. For instance, under contemporary capitalism, neo-liberalism shuns efforts at regulation and ensures centrality for spontaneity, which, as Marx had argued, results in incessant assaults on labour absorption and the overall working conditions.

As is well acknowledged, contemporary global economic system is very much functioning under the hegemony of neo-liberalism generating a whole range of pressures on the world of work including what many have described as ‘jobless’ growth. Such a situation has come about for a variety of reasons including the above noted ascendancy of neo-liberalism which has also facilitated accelerated applications of the dramatic changes through the ‘ICT Revolution’ during the last half century or so. There has been a huge literature on the so-called ‘future of work’ in academic and policy discourses. For instance the recent Global Commission on the Future of Work, (ILO 2019) states that new work arrangements have redefined challenges which are marked by the need to have a ‘human centred social contract’ in the world of work. In essence such a contract ought to be defined in terms of four core areas of interventions. First, tackling the question of time sovereignty which increases the autonomy of the worker through flexible work arrangements; second there should be a framework for providing a lifelong system of education and capability enhancement in order to reduce skill mismatches. Third, there should be investments in institutions which ensure sustainable development of work and fourth, a clear agenda to address gender gaps. Social policies in these areas would lead to measures like universal social security and reduce the vulnerabilities that have developed with new arrangements of work. Fundamentally, the thrust of the above mentioned ILO report, like many other studies in the recent period, is an attempt to address the challenges which are organically connected with the working of neo-liberalism on a global scale.

This article basically draws on a field study of young workers employed in different segments of the ICT industry and seeks to understand their context and prospects. However, before coming to the findings of the emerging from the primary survey, the paper provides a sketch of the world of work in contemporary India with a focus on youth in the ICT/ITeS sector. The primary survey on which this study is based counters the understanding that digitisation and development of ICTs will help in the formalisation of work. Rather it shows that there has been a deepening of informality through flexible
work arrangements and growing job insecurity. It maps the vulnerabilities of full time employees, part-
time and freelance workers, and of those working through digital platforms.

The first section provides a brief overview of the overall employment/unemployment trends in India with a focus on youth employment in the ICT sector. The second section elaborates upon the labour process within the ICT sector and the third section elucidates the diverse character of labour relations within the sector on the basis of primary survey data. The last section outlines the main challenges and conclusions on the basis of these findings.

Automation and the Future of Garment Sector Jobs in India

Pankaj Vashisht, Senior Fellow, Indian Council for Research on International Economic Relations, Delhi

Robotics has been redefining the production process across manufacturing industries, raising serious concern about the future of manufacturing jobs. The garment sector is also not isolated from the ongoing wave of the digital revolution. The recent innovations such as ‘Sewbot’ along with other CNC machines have increased the potential of automation in the garment sector, which was unthinkable until a few years back. In fact, few garment manufacturers have already started experimenting with robotics in garment production. If the experiments with robotics turned out to be successful, they can have serious implications for developing countries like India where the garment sector continues to be one of the largest employers. Against this backdrop, this paper examined the likely impact of technology on garment sector jobs in India. Based on secondary data analysis and key informant interviews, the paper highlighted that around 80% of jobs in the Indian garment sector are routine jobs and therefore can, technically, be automated. However, given the prevailing unit labour cost of production, complete automation is economically not viable for Indian garment manufacturers. Specifically, Indian manufacturers are not expected to go for automation in the sewing and packaging processes in the near future. Technology at best is expected to disturb only 15-25% of existing jobs in the foreseeable future as automation is expected to be restricted to fabric spreading and cutting and finishing processes only. We also examine the indirect impact of technology on garment sector jobs through a technology-induced reduction in exports. We found that even the adoption of robotics in western countries is not going to have any major impact on garment sector jobs because the majority of Indian garment exports to western countries are consists of high end-fashion wears, a segment expected to be least affected by robotics. Finally, forecasting the domestic garment demand, we argue that despite the adoption of labour-saving technology for certain garment production processes along with some reduction in exports of basic apparels, Indian garment sector will not shed jobs. In fact, garment sector will create a couple of million additional jobs in next ten to fifteen years as domestic demand for apparels is set to zoom which will be more than sufficient to offset the labour-saving impact of technology.
Globalisation and Worker Composition in Indian Formal Manufacturing:
New Evidence on Product Market Competition Channel

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This paper examines the effect of trade-adjusted market concentration on the intensity of the usage of contract workers (pertaining to the quality of employment) in the Indian manufacturing sector. We have aggregated firm-level and factory level panel data to a 3-digit industrial database consisting of 46 industries for a period of 16 years (1998-2014). Using dynamic panel estimation, the study shows that trade-adjusted industrial concentration positively affects both profitability and contract workers intensity. Robustness checks have been done using the traditional measure of concentration ratio. The paper provides evidence of the age-old concentration and profitability hypothesis but in a dynamic context, and also lays down the significance of industrial concentration on the labour market in an emerging economy.

Globalisation, it is now widely accepted, has been the key factor underlying the observed pressure on labour markets in both developed and developing countries. A variety of mechanisms linking globalisation and margins of adjustment in the labour markets have been empirically tested in the trade and development literature. The focus of empirical research has been essentially on measuring the direct effects of trade liberalisation and globalisation on employment, wages and wage inequality (relative wages of skilled and unskilled workers. Much less attention has been paid to the indirect ways in which trade openness could affect the quality of jobs through worker composition within the formal sector or the so-called covered sector, consequently worker welfare in developing countries. We have drawn attention to one possible indirect mechanism wherein the effect of globalisation is mediated through changes in product market competition. In our set up, globalisation affects the product market competition (the intermediate factor) and in turn, affects the workforce composition (the labour market outcome). In empirical studies of globalisation and labour, the changes in product market competition are not explicitly measured and shown to affect the labour market. A departure in the present paper is that we study the effect of product market competition changes on one key margin of adjustment, which is the workforce composition of industries. The workforce composition is defined in terms of the share of regular and contract workers in a manufacturing firm. Growth and access to good jobs have been an important issue in the context of globalisation and labour. We have attempted to estimate the impact of product market competition on workforce composition in Indian formal manufacturing. Our paper is perhaps among the first to demonstrate the empirical link between measures of product market competition and the intensity of contract labour usage in a globalising developing country. Using CMIE Prowess firm-level data for the product market and Annual Survey of Industries data for the labour market, for a time period of 1998-2014, we find a negative and significant relation between market concentration and contract intensity. We have employed a dynamic panel model where we allow that the contract intensity of one-year lagged period can affect the current contract intensity and we estimate the model using Arellano-Bond estimation approach.
THE TECHNICAL SESSION 1.2

The Journey Towards Innovation: What Influences the Decisions of Firms

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Selim Raihan, Professor, Department of Economics, University of Dhaka and Executive Director, South Asian Network on Economic Modelling, Dhaka
Mahtab Uddin, Lecturer, University of Dhaka

Innovation plays a vital role in the growth of firms. A number of factors influence a firm’s decision to innovate ranging from, exposure to foreign competition to access to external sources of financing. Furthermore, innovation choices may be affected by the form of ownership, the sector (manufacturing/services), whether the firm is an exporter, manager’s level of education, worker’s level of education and if the firm is male/female-headed. In this backdrop, this paper attempts to determine the factors that govern a firm’s decision to innovate in the context of Bangladesh. For this purpose, this paper uses a micro-econometric approach and employs logit and probit estimators. As a standard practice, the study also incorporates OLS (that is LPM) estimates. For carrying out the econometric analysis, we have used data from the World Bank, Bangladesh Enterprise Survey 2013. The database includes public and private firms and small and medium-sized enterprises. The innovation of new process in manufacturing products or offering services has been considered as the dependent variable. As a proxy for innovation, it incorporates the variable – whether the firm has undertaken any new production process in manufacturing or approach for service delivery. The dependent variable is a dummy taking unity if the firm has introduced a new technique and zero otherwise. The study includes a set of explanatory variables. Gender of the top manager, Training of the employees, if the firm provides time for its employees to develop new ideas, Log of total sales revenues in the preceding year, whether the firm is in the manufacturing sector or not, whether the firm is an exporter or not, does the firm have a foreign share in its ownership, number of years the firm has been in operation and the capital utilisation rate (percentage of total capacity) have been considered.

From all the sets of logit estimates, we find that the gender dimension of the managerial post does not have any influence over the firm’s decision to innovate a new process. Instead, we see that firm’s decision to train-up workers, has a significant influence over being innovative. On average, a firm which provides training to its employees is 60% more likely to be innovative compared to firms which do not provide any training. Moreover, as is evident from the results, higher sales growth has a positive impact on the firm’s decision to be innovative. A 10% increase in a firms’ total sales revenue would increase the probability of introducing new production process by 14%. Moreover, being an RMG firm in Bangladesh has a higher probability to be innovative compared to non-RMG firms. Since most of the RMG factories under the survey are export oriented, the push for being innovative could be sourced from foreign buyers. Since the variables RMG and exporter dummy are highly collinear, we incorporate them in separate regressions. As the regressions suggest, an export-oriented firm might have more
probability to be innovative compared to a non-exporting country. However, the significance of the exporter parameter is weaker compared to the RMG coefficient.

Compared to domestically owned companies, firms with foreign ownerships have a higher probability to be innovative than others. Another motivation for a firm to be more innovative might stem from how efficient the firm currently is. One approach for estimating the efficiency of the firm could be using the utilisation rate of its capital. As evident, firms with higher capital utilisation rate have a higher probability to be innovative than others.

The findings of this study have important implications for policymakers as well as for firms. The outcomes of the econometric analysis suggest that firms can raise innovative capacity by arranging for on-the-job training, which in turn which will help raise the skill level and technical know-how of employees. Training facilities at the workplace will also make it easier for employees to adapt to the introduction of new technologies. In addition, organising brainstorming sessions will allow employees to contribute their ideas and thus raise firm innovativeness. Furthermore, policymakers and governments need to work on ensuring favourable conditions to encourage the inflow of Foreign Direct Investment in the country. Since foreign ownership has a positive impact on firm innovation.

Do Innovation Activities Enhance Labour Productivity?
A Comparison of Chinese and Indian Manufacturing Firms

Poulomi Bhattacharya, Associate Professor, Tata Institute of Social Sciences, Hyderabad Off-Campus, Hyderabad
Badri Narayan Rath, Associate Professor, IIT, Hyderabad

The aim of this paper is to investigate the impact of innovation activities on labour productivity by using firm-level data on the manufacturing sector of China and India. The paper also examines whether and how the firm-specific characteristics like the age of the firm, education of the employees, wages and other infrastructural provisions affect labour productivity in small, medium and large manufacturing units of China and India respectively. This study is inspired by the debates revolving around the manufacturing sector in China and India on the following notes. Some scholars have tried to reflect on the question of why the manufacturing sector in India is lagging behind China in terms of productivity and employment generation, despite substantial government intervention. The nexus between innovation and productivity has been examined by various studies. Theoretically, according to neo-classical growth models labour productivity (output per unit of labour) depends on the growth of total factor productivity (TFP) and capital deepening. Subsequently, endogenous growth models suggest that production per unit of labour depends on the human capital including training, education and investment in research and development. The empirical studies examining the linkage between labour productivity and innovation are largely found to be positive. The paper contributes to the existing literature in two ways. First, though there exist comparative studies of Indian and Chinese manufacturing sector, they largely cover issues of total factor productivity, the
role of institutions on TFP growth and labour productivity. However, to the best of our knowledge, none of the existing studies investigates the impact of innovation along with other factors on labour productivity. Our study examines this research issue using Enterprise Surveys data of Chinese and Indian manufacturing firms conducted by the World Bank. Second, few studies examine the linkage between labour productivity and innovation in manufacturing industries with a breakdown by firm size classes. The present study analyses the linkage between innovation and labour productivity across small, medium and large manufacturing firms by comparing China and India. The examination of this research issue will eventually help the government and policymakers for targeting those firms based on size and providing incentives for enhancing innovation activities which would further boost the firm-level productivity.

The paper uses cross-section data based on two surveys that were conducted by the World Bank in 2012 and 2014 for China and India, respectively. By employing a simple OLS regression technique, we find that innovation affects the labour productivity positively for Chinese as well as Indian manufacturing firms, but its impact on firm productivity is relatively weak in the case of India compared to China. Second, other factors such as average wage of the workers, education of production workers and training do significantly boost the labour productivity of Chinese manufacturing firms as well as for Indian firms. Third, our results based on firm size also indicate that the impact of innovation activities on labour productivity is higher in the case of large firms compared to medium firms. However, innovation does not affect the labour productivity of small manufacturing firms for both China and India. From the policy front, it is important for both Chinese and Indian manufacturing firms to keep pursuing innovation activities in order to spur productivity, which would strengthen firms’ growth. As our results find that education of the production workers, training for the workers and managers experience do matter for increasing productivity, therefore, decision-makers of these manufacturing firms need to promote such activities at the firm-level. The small size firms may not able to either come up with new products or new ways of processing their products or spending on Research and Development activities. Therefore, it is imperative of the respective governments to provide incentives to these small firms and encourage them to engage with innovation activities.

**Firm Size and Employment Growth in India’s Manufacturing Sector; 2000-01 to 2015-16**

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This paper is a contribution to the debates on the relationship between firm size and employment growth in India’s manufacturing sector which started in the 1970s and continues to date. Distribution of employment in the manufacturing sector of India was identified with a “missing middle” in the 1970s, i.e. a large proportion of employment was concentrated in very small and very large firms. This dualism with large productivity and wage gaps was recognised as one reason for the stagnation
of the manufacturing sector. This, in turn, was a hindrance to the process of absorbing excess labour from agriculture and thereby facilitated a smooth structural transformation of the economy. But, with the share of employment in the large factories declining throughout the 1990s, there was no consensus on whether “missing middle” continued to be a problematic feature of the Indian manufacturing sector. Using data from the Annual Survey of Industries and the National Sample Survey for four years (2000-01, 2005-06, 2010-11, 2015-16), this paper shows that starting from the mid-2000s there is a reinforcement of the bimodal distribution with most of the employment growth taking place in large factories in this period. The rise of big factory-based capital-intensive industries like Automobiles and Chemical Products and the declining share of more evenly distributed labour-intensive industries such as Garments and Non-Metallic Mineral Products are partly responsible for this. However, this new phase of intensified dualism is not only different from the “missing middle” in Indian manufacturing observed in the 1970s but some of the features of this new dualism also challenge the theoretical concepts earlier associated with the bimodal distribution of employment. While dualism in theories of firm size and employment growth was associated with stagnation, this new phase of dualism ironically overlaps the phase of unprecedented employment growth in the organised manufacturing sector. At the same time, inequality in wages of workers at the two ends was a prominent feature of the bimodal distribution which has reduced during this period thereby nullifying the difference in the quality of employment between very large and very small factories. However, this reduction in wage inequality has occurred at the cost of declining average real wages in the largest firms. A major reason for this is the predominance of low wage contractual employment in total incremental employment, especially in large firms. This has also led to rising gaps between profit and wage shares, particularly in large factories. On the other hand, there is increasing divergence between labour productivity and workers’ wages. These results show that despite unprecedented employment growth in the organised manufacturing sector from the mid-2000s, the rising inequality in distribution can have a more adverse impact on demand and thereby on consistent employment growth in the manufacturing sector than is apparent from the favourable employment growth rates. The findings of this paper, thus, shed light on the recent dynamics of employment growth in India’s manufacturing sector, a detailed understanding of which is crucial to policymaking associated with meaningful employment creation in the economy.

**Working Futures: The ILO, Automation and Digital Work in India**

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With access to data communication networks and the prevalence of informal work, workers in the global South are rapidly inching closer to confronting the impact of automated or digitally-enabled non-standard employment. What are the social and political responses required to face this shifting
engagement with the means of automated production and the experience of digital work mediated through privately owned global technology platforms? By examining India’s job market, with a focus on the information technology (IT) industry, this chapter assesses whether the International Labour Organisation’s (ILO) focus on labour rights and social protection is suited to address the potential for capital-labour substitution and the new ecosystem of software-mediated work. The chapter suggests a new engagement with digital labour, closer scrutiny of unregulated working conditions, and democratic control over tech-enabled digital platforms.

The world faces today a new challenge posed by the combination of jobless economic growth, rising human productivity, and an increase in the available labour pool. In developing economies, in particular, the future may not even hold enough jobs for everyone. It is estimated that by 2030, the global labour force will increase by 428 million workers, the majority of whom will be in low- and middle-income countries in Africa and South/East Asia. India’s population, for example, is expected to surpass China’s within a decade, reaching 1.66 billion by 2050 and ten countries alone are expected to contribute collectively to more than half of the world’s expected population increase from 2017 to 2050. This challenge is further exacerbated by the job replacement potential of recent developments in artificial intelligence. Aside from an emergent critique in the digital studies literature concerned with relations of exploitation and marginalisation in the digital economy, the exposure of the global South’s workers to automation has been largely overlooked, as have the lessons it may offer with regard to addressing changing conceptions of production in an internet-enabled and increasingly interconnected economy. Rather adopting these contradicting visions of the future, the fundamental question we seek to address hinges on the institutional division of labour and the social and political conditions enabling the adoption of technology: what working future awaits the next generation of workers? And if robots are replacing human labour, is a new social contract needed to compensate for the loss of taxable (human) income, rising income inequality, and the unprecedented power of large multinational corporations?

**Global Recession and the Informal Sector in a Developing Economy: A Theoretical Analysis**

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The economic recession that was observed in the advanced economies had affected the EMEs and other LDCs through varied channels. As a consequence, migrant workers who were employed in the developed nations, lost their jobs, thus causing huge reverse migration push to the developing nations. On the other hand, global trade volume plummeted thus reducing the exports of the developing economies. The financial sector contracted that constrained formal sector lending to the domestic industries. In this backdrop, this paper examined the implications of the global downturn through the channels mentioned above on the informal sector workers those are the most vulnerable to such crisis.
It was empirically observed that due to the advent of such crisis the informal sector in developing economies were affected in a non-monotonous way. In some nations, the informal sector employment expanded while in other it contracted. The paper explored theoretically some of the possible reasons behind such astonishing response of the informal sector to such economic crises. In so doing, we segregated the effect of the crisis on workers employed in the traded informal sector and those employed in the non-traded informal sector by constructing two General Equilibrium models under two different scenarios. In the first model, implications for the traded-informal sector were obtained in the presence of labour market imperfection. In the second model, implications for the non-traded (local) informal sector were obtained in the presence of both the credit market and labour market distortion.

In the analysis it was obtained that reverse international migration of either type of labour, or a decline in foreign direct investment hurts the unskilled workers employed in the traded informal sector by lowering their wage rate, aggravating the skilled-unskilled wage disparity and pushes the economy towards a higher level of informalisation, however, from the later model opposite observations were made. Both the effect of reverse international migration and lower foreign investment favours the unskilled workers employed in the local informal sector and lowers informalisation. On the other hand, due to the skilled sector recession, the traded informal sector contracts and the local informal sector expand, thus workers are pulled out from the formal sector to engage themselves in the informal sector. This non-uniform effect arises for the traded and the local informal sector due to the following two reasons. First, in case of the traded informal sector, any endogenous price effect is absent since the commodity price of this sector is exogenously determined in the world market, thus only wage-cost effect and factor linkage effect operates. Therefore, any crisis that hits the other sectors directly will produce an only one-way effect on the traded informal sector. Second, the local informal sector along with wage-cost effect and factor linkage effect also responds to price effect since its prices are determined domestically, here, an increase in the wage rate of labour does not only implies an increase in the cost of production but also it raises demand for output produced in this sector thus escalating its prices through demand (consumption) linkage. In this scenario crisis that hits the other sectors will produce both positive and negative effect on the informal sector, thus it depends on the magnitude of both the effect that determines the net effect on informalisation of the workforce. The analysis thus brings out the most reliable explanation behind the differences in the effect of the crisis that was observed in the informal sector of various developing economies. Thus, it can be concluded that developing nations where the informal sector is mostly exposed to the world (open) market suffered higher due to reverse migration and credit crunch than those nations where the informal sector was mostly non-traded in nature. The exact opposite result holds for the effect of the recession in the skilled specific export sector. However, the present paper could be extended in several directions. First, the effect on the non-traded informal intermediate good producing sector is left untouched, that is a hub to the majority of casual workers. Second, the fall in imports of the developing nations also needs to be looked upon. Third, on the macroeconomic front effect on national income and unemployment of skilled labour must also be crucially analysed.
Chinese Import Competition and Contract Labor: Evidence from India

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This paper documents the causal impact of Chinese import competition on contract labor in manufacturing firms in India. We combine firm level data from Annual Survey of Industries with industry level changes in Chinese import competition between 1998 and 2007. To address potential endogeneity concerns arising from technology shocks and domestic-demand driving the rise in both Chinese imports and contract labor, we instrument for Chinese imports to India with Chinese imports to a set of developing countries. Results indicate that a 10 percentage point increase in Chinese import penetration ratio induces a 9.69 percent increase in contract workers usage, and increases contract worker ratio by 1.63 percentage points at the industry level. These results imply that Chinese import competition accounted for almost 9 percent of the overall change in contract workers in the manufacturing sector between 1998-2007. The within firm effects are driven by larger and productive firms which face stronger firm level unions, and this effect is further amplified in states with stronger unions. Firms hire contract workers to reduce labor cost and to counter the bargaining power of regular workers in response to Chinese import competition. We also provide evidence of a composition effect, where contract share in employment increases as employment shifts toward high productive high contract share firms in response to Chinese import competition.
TECHNICAL SESSION 1.3

Technology, Globalisation and Work: Is Production Going North?

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Technological changes, such as automation and digitization, changes in logistic costs and the growing importance of demand-focused value chains are all likely to restructure Global Value Chains (GVCs). How will GVCs be impacted by these technology and economic trends? Is there likely to be a shift of production, whether of manufacturing or services, to the North? Or, is there likely to be near-shoring, rather than on-shoring in place of off-shoring? Is there already a reversal of the declaration by the Prada designer in 2010, ‘Made in Italy? Who Cares!’

Given that the shift of manufacturing to the Global South has been a major component of industrialisation and services growth, it is important to understand the likely impacts of technological changes, pressures to reduce emissions and the growing importance of consumers in various value chains in the likely trajectory of employment in GVCs, particularly in developing Asia, which is the focus of the paper.

When technological change reduces cost of unit production, the technology is likely to be adopted, depending on the capital costs involved. Unit costs here must also include the costs of management or governance of the supply chain and associated logistics costs. Where management costs are high relative to manufacturing costs, as in design-intensive products which require frequent interaction between designer and manufacturer, one can expect a relatively quick shift of production to consumer centres, i.e. to onshoring in the North. In addition, governments in the North, concerned about the political implications of low employment, may well provide subsidies to capital investment in order to promote such employment. New brands, which do not have established supply chains, involving the developing countries, are more likely to set up onshore chains than established brands. The established brands will disrupt their own supply chains, only when they face price competition, or when they look to increase market share.

In mass production where there are dedicated production lines involving the South, the pace of change is likely to be slower. But the shifts are happening, as with the Adidas automated factory in Germany and the USA, and the Chinese-owned Sewbot T-shirt factory in the USA. Why were these factories not set up in the South, where wage rates are lower?

The need for highly skilled labour, with knowledge of operating 3-D or AI systems, would be a big factor in determining location. If the South is to the location of such automated factories, they must have a sufficient supply of labour with the required capabilities. GE’s decision to set up a 3-D factory in India is a case in point of automated production being located in the South. Chinese companies are themselves setting up such 3-D printing and other automated, robotized facilities in China.
The lesson from these locations of automated manufacturing is that if countries in the South wish to secure some of these units, they will have to have a ready supply of workers with the required capabilities. This had happened in the case of IT software services, which is why part of the supply chains were located in India and, later, in other countries of the South.

When unit costs of production of automated production go down below unit costs of labour-intensive production, it is no longer possible to compete on the basis of cheap labour. The Indian producer of radiator caps found this out to its cost when it lost the market to automated production in a high-wage country, Austria. This also means that countries of the South will have to accept that the employment content of formerly labour-intensive production will go down. The speed at which this will occur will vary, but the trend is clear.

Globalisation, Technological Progress and Nature of Work: An Introspection

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Globalisation in the sense of opening up of domestic economies to international trade and factor mobility has led to the acceleration of the growth profile of many countries including the developing ones. But such growth acceleration has been accompanied by falling employment elasticities in many of the developing countries and there is greater flexibilization of the labour market behaviour and increasing informalisation of employment, which is a serious consequence of the globalisation process unleashed in the world economy. Recently, increasing robotization and digitisation of the economies in developed nations and the increasing use of artificial intelligence in the production process have raised concerns for job loss and changes in the nature of work in the context of globalisation induced linkages in the world economy. The present paper provides an analytical review of such employment contraction and labour market flexibilization in developing countries in terms of technological advancements that the world economy has been experiencing. Section II discusses the labour market impacts of the globalisation process and the threats of jobless growth in the world economy. In section III, we focus on the nature of technological shocks of increasing robotization and artificial intelligence and their impacts on job losses and changes in the nature of work.

The Shifting Dynamics of Work, Technology and Skills: A Case Study of the Automobile Industry in the National Capital Region (NCR) of India

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In the post-liberalisation phase of the Indian economy, the resolution to the problem of high unemployment and low productivity has been sought in the upgradation of workers’ skills. It has been argued that the changing nature of production processes due the shifts in technology, industrial restructuring and the integration of the economy with the global market has had a significant impact
on workforce requirements as demanded by Capital. New technologies have rendered redundant several old skills and have led to calls for a new array of skills both hard and soft. It is the lack of such relevant skills that are proving to be a barrier for India in taking advantage of its demographic dividend.

Policy discourse, as a consequence, has primarily centred on issues related to skill formation and its linkages to employment growth. Modern sectors such as the automobile industry have been particularly earmarked for the potential, they carry in terms of creating decent work subject to the presence of a suitably trained workforce to exploit the same.

Drawing results from (i) secondary data on the automobile industry provided by the NSSO, ASI, SIAM and UNCTAD and (ii) a field survey of seven automotive firms located in the National Capital Region - each differentiated on account of their relative positioning along the value chain - the following paper makes an attempt to establish both the conceptual as well as the methodological shortcomings of the aforementioned ‘skill gap’ discourse. Our results show that the quality of jobs available to a ‘skilled worker’ in this sector has been rapidly deteriorating. While the quality of employment is seen to be falling across the board, the greatest deterioration has been observed for the most skilled section of automobile workers. Moreover, contrary to what the Skill Bias Technological Change (SBTC) hypothesis would argue, it is observed that skill premiums have actually come down in the post-reform period. Furthermore, there exists no correlation between the growth of skill profile and employment growth.

Results from the field highlight how the seemingly fixed understanding of what constitutes ‘skill’ is a complex eventuality, shaped by capital and labour interactions taking place at a given place and point in time. Juxtaposed alongside the most modern forms of automation, we ironically have the most archaic forms of labour practices. The automobile industry, hailed as an avenue for quality employment, is seen dragging the workforce towards the low road development.

The paper thus argues that the human-capital-based approach that currently defines India’s policy discourse on the skill, technology and employment is severely limited, given the very theoretical foundations on which it is premised. The skill-gap debate is dependent upon a narrow form of methodological individualism that fails to take into account the dynamic interactions between labour and capital. Perceiving skill generation in isolation of the above amounts to a technologically deterministic reading where socio-economic realities have little role to play in the manner in which production is shaped. Using skill as the pivot of analysis, the paper tries to explore the new organisational principle of labour that empowers capital to dominate a stratum of the workforce that is cheap, unorganised and footloose. ‘Skill requirements’ emerging as a result of this interaction, are not constrained by any supply-side bottlenecks but are in perfect conformity with this logic of control.

Collective Bargaining in the Era of 4th Industrial Revolution:
Evidence from Manufacturing and IT/ITES in India

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The 4th industrial revolution (IR henceforth) has been built upon the advancement of digitisation or automation, which is increasingly common in industrial productions and services. The use of digital
revolution is so overwhelming that the differences among the physical, digital and biological spheres have been increasingly disappearing. While this digital revolution leads to economic growth and a higher level of comfort of living, it has also caused inequalities in the labour market to a greater extent.

In this era of automation skill and technological know-how are the critical factors of production. A country like India with a large share of the population in their working age-group combined with a lack of education and the required set of skills is likely to face intensified inequality in the labour market segregated into ‘low-skill’/'low-pay’ and ‘high-skill’/'high-pay’ groups of workers. One of the main consequences of fourth IR remains with the increased demand for highly skilled workers versus the declining demand for workers with less education and skills (Schwab, 2016).

Having recognised the emergence of automation and its multi-dimensional impact on the future of work around the globe, there is an increasing need to understand the global narratives in localised context depending on the local socio-economic and demographic factors. For instance, it is important to remember that the unorganised work-space in India is so overwhelming that it can outweigh the demand for skilled workers even in sectors such as telecommunication and IT/ITES. However, the employment data for the past few years show that the hiring has already been slowed down in the IT & ITES industries leading to a decline in the employment growth in this sector from 7% in 2014-15 to 2.7% in 2017-18. Although capital-intensive manufacturing units are likely to adopt 4-IR technologies to a great extent, the other manufacturing industries will also not be far behind. For example, there are a number of manufacturing industries such as paper and paper products, textile, basic metal and machinery and equipment that used to depend largely on semi-skilled and/or unskilled labour have now started requiring individuals with a set of new skills. It is estimated that the automobile sector alone in India would procure 60% of all industrial robots in India leading to further shrinkage of workers in an already shrunk work-force in manufacturing.

Thus, the workers are expected to experience diluted bargaining power in the industrial production process. Even the repetitive low-skilled tasks also have the potential to be replaced by automation pushing the low-skilled workers further to the unorganised sector. The constant goal of industries to earn profit emphasises the reduction of costs of production. With the availability and accessibility of new technologies and automation, the production units require lesser number of workers leading to declined dependence on labour and more instances of casualisation in the work-spaces. The process of casualisation within the organised manufacturing and services reduces the collective voices of workers.

Given this background, the paper discusses how collective bargaining that has been diluted in the recent past may regain its importance particularly in the context of manufacturing and IT industries in India. Citing examples from the manufacturing sector in Ahmedabad and IT sector in Kolkata the paper focuses on the working conditions including safety and security within the work-spaces. The process of casualisation even within the organised sector is argued to enhance the insecurity of employment reinforcing the need for collective bargaining in the manufacturing and IT/ITES industries.

The paper uses data from various secondary and primary sources in understanding the potential of collective bargaining to address issues such as conditions of service, terms of employment, wages,
productivity etc. IT industry is characterised by almost a total absence of trade unions. IT industry in India witnessed a severe downturn during the last one decade and experienced large-scale retrenchment of middle-level executives, lay-off, termination of services, etc. Absence of collective bargaining made the situation more precarious. Contrary to the experiences in the IT industry, blue-collar workers in the Ahmedabad industrial cluster set-up a scenario wherein the role of outsourcing agencies (contractors and sub-contractors) determine the nature of contracts and subsequent employer-employee relationships in the absence of organised collective voices.

These cases illustrate and critically discuss the potential of collective bargaining that may be strengthened further to address the issues of labour welfare going beyond wages and working hours or some legally mandated process. There has been a historical lineage to such a development in this context. Ahmedabad has played a key role in the trade union movement in Gujarat during the early 1900s. The Textile Labourer’s Association (TLA), established in 1920, paid much attention to the welfare and social development of its members in Ahmedabad textile mills corresponding to Gandhian ideals. However, over time, as the Gandhian ideals faded away through the process of economic liberalisation, the coverage of labour unions in various industries has started declining owing to many factors including the changing composition of the workforce, nature of work, increasing informalisation, and globalisation of the economic activities. The recent experiences exhibit that the union membership has declined and collective bargaining has lost its effectiveness to a great extent.

The paper further argues that for collective bargaining to reach its full innovative potential it must go beyond the formal contract negotiations by forming labour-management partnerships, aiming for a new social contract which explores new ways to address the needs of the vulnerable sections of the workforce such as for non-regular and migrant workers. Within the emerging collective bargaining framework, innovative means are discussed in this paper to address contemporary labour market challenges such as increasing employment insecurity and rising inequality.

**Skilling India: A Challenge**

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This paper investigates the problem of skilling India that has now become a challenge for the government because of its incapability in providing jobs to the trained youth. It is argued here that the Indian Economy is going through a phase of demographic dividend which seems to be an asset for the economy only if the youth of the country is trained properly. Despite the implementation of a huge number of skill training and various employment programs and large amount of funds as well as sufficient resources expended on such schemes, proper evaluations of their impact on the generation of employment and their assessment as to whether such schemes are really reaching the intended youth, are almost limited. The main innovation of “Skill India” consisted in integrating “vocational training classes linked to the local economy” with formal education from class nine onwards in at least 25 per cent of the schools and higher education bodies. The idea of Skill India is really admirable, but the scheme is lacking its incentive objectives. The scheme laid the target to reach out to around 300
milli√on young people of the country by the year 2022, but it could train only 25 million people under
the scheme by the end of 2018. PLF survey mentioned that merely 16 per cent of the youth received
a formal training funded by the government in 2018. India at present is facing acute employment crisis
and the current slowdown of the economy has further penetrated the problem. The study is based
on the secondary data collected from published articles in various newspapers, research papers and
various reports on Skill India Scheme. The critical issues identified are: The increase in unemployment
rate despite the implementation of skill India scheme, Is Skill India scheme benefiting the youth for
placement?, Whether the youth is properly trained?, What went wrong with the scheme?, Whether the
funds meant for the scheme were properly allocated?, other reasons for the rise in unemployment,
Implications of current slowdown on the economy, Future of the youth. The paper discusses the
policy directions that emerge from the analysis and the challenges for the government. The review of
the literature explored the serious implications of Skilling India. Number of studies done so far only
presented the positive impact of the scheme. No comprehensive, systematic research study has been
conducted to analyze the serious implications of skilling India at present as well as for future, if proper
planning and strategy is not adopted by the government. The main findings of the study are that
India’s current and rising employment crisis poses various challenges for the government, especially to
generate more employment opportunities for the skilled and trained youth, government need to spend
more on education, proper training and a systematic evaluation of the scheme is need of the hour. If
not corrected in time then the present and future of the young and skilled people will be in dark and
India will not be in a position to reap the benefits of the demographic window.

Ergonomic Design Management and Industry 4.0:
Moderating Effect of Upper Echelon Theory

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Ergonomics is a methodical discipline devoted towards the acceptance of interfaces between humans
and various constituents of a structure, the professional attributes of applying theory, standards,
statistics and techniques to construct a platform, which can elevate human welfare and augment system
performance comprehensively. The ultimate target of ergonomics is to achieve maximum output
with minimal expenditure. The expenditure is denoted as the cost an employee pays in terms of its
health and psychological disorders. One of the key drivers of South Africa’s economic growth is
the automobile and auto-component manufacturing industry (National Association of Automobile
Manufacturers of South Africa). Ergonomics (human factors) can enhance automobile industry
performance in multiple ways. It can be useful for enhancing the quality and performance of products,
prevent vehicle accidents and improve the comfort level of drivers. The authors opine that in the
contemporary set-up of factories, also referred as the digital factories or Industry 4.0 oriented set-ups,
the focus is to provide effective services with a high amount of profit creation, that too, in the lowest possible price and with a minimum investment of time. Industry 4.0 set is highly dependent on the availability of data and its effective utilisation, and in this entire process, the aspect of ergonomics goes for a toss, because it is all about data, not humans. The existing literature confirms limited focus on the concept of ergonomics and its principles while designing the automated technology in digital factories. Business losses resulting from human errors are a genuine business problem for the automobile and auto component manufacturers. Due to accidents, both direct and indirect costs increase, which eat away the company profits. The research study needs to investigate the role of Industry 4.0 in designing ergonomic solutions to reduce human errors and further to build organisational capability. The support received from top management plays a critical role in ergonomics performance improvement. It will definitely strengthen the relationship between Industry 4.0 ergonomics by filling the created gap and extending the existing knowledge base. Hence, given the above background and objectives to be explored, the research team proceeds with certain prepositions:

Preposition I: In the present era of the digital factory and smart manufacturing, the availability of information makes the engineering of ergonomics possible by avoiding business losses. The focus on artificial intelligence and machine learning, vertical and horizontal communication and human-machine interaction can provide key information to design ergonomics (physical ergonomics, cognitive economics, and organisational ergonomics) in smart factory, right from shop floor to top floor. Thus, the research team proposes to explore that Industry 4.0 (information processing capability) positively influences the ergonomic design (information processing requirement).

Preposition II: Human being act as building blocks in every organisation. The well-being of human beings (employees) is the biggest need and responsibility of organisational management. Prior literature reveals that human factors can aid in building organisation capability and significantly improve the safety and comfort level of workers/employees in a smart factory. The correct ergonomic design can increase a company’s profitability levels largely. Hence, it is presumed that ergonomic design positively influences the organisation performance (organisation capability).

Preposition III: The acceptance of automation or digitalisation in any organisation is majorly dependent upon the topmost actors. It is the first belief of top management to introduce a big change (manual to automation) in the organisation. The reason towards the same is power dynamics in the hands of top management. This will enable the flow of key information, which shall be helpful to engineer ergonomics, further improve the safety, and comfort level of workers/employees. Therefore, firms with more (less) top management support have a greater (lower) level of ergonomic design solutions for a given level of Industry 4.0 enablement.

Everything revolves around technology and automobile sector is not an exception to it. A factory is no more called as factory, rather a smart factory, which sincerely calls for redesigning and rebuilding the working environment. A special set of skills allow completing the activities without any accidents and operational breakdowns in a smart manufacturing environment. The capability to process information and the information-processing requirement are two key dimensions as per Organisation Information Processing theory (OIP), which can be exploited to build organisation capability using Industry 4.0.
Further, the research teams use Upper Echelon Theory (UET) to support the role of top management support in the adoption of Industry 4.0 tools in improving the ergonomic design. The managers of the automobile sector must understand the involvement of technology in their domain. Application of technology is genuinely contributing towards advancements but it becomes very important to realise how these enhancements are really contributing towards the betterment of a nation. The management must focus on recruiting senior levels executives having knowledge and work experience of digital factory operations and ergonomics for better outcomes. The selected variables of the study and their combinations in itself is a unique contribution by the research team. In addition, the proposed theoretical framework is another exclusive contribution by the authors. The research team proposes that statistical validation of the research framework may provide new insights, which may be helpful for managers and audience.

**Returns to Skills in India: The Role of Digital Access and Usage**

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In the Indian context, many studies estimate returns to education at the national level using NSSO data, India Human Development Survey (IHDS) of 1993, National Data Survey on Savings Patterns of India and IHDS –I survey data. However, few studies investigate the labour-market returns to skills. The present paper makes an effort to fill this gap and investigates the labour-market returns to skills where ICT skills have emerged as one of the prominent factors by controlling for different educational levels and age cohorts, besides other socio-economic factors. In this endeavour, skill levels are classified into four groups adopting the International Standard Classification of Occupations (ISCO). The paper uses the data collected by People Research on India’s Consumer Economy (PRICE). The PRICE provides ICE360 degree survey (2016) data on occupation by details up to 71 categories, which are regrouped as four skill levels following ISCO-08 of ILO (2012). Digital technologies include as noted by the World Development Report (2016); the internet, mobile phones, and all the other tools to collect, store, analyse, and share information digitally. In the case of ICT skills, PRICE has collected information on various access and frequency of use of ICT in all spheres of life. The present paper makes an attempt to use this information as ICT skills are developed further through learning-by-doing. This is facilitated by internet access and its use. The paper adopts the standard Mincerian earnings function in estimating the returns to skills. The log of annual earnings is regressed on skill levels, schooling, experience, and ICT access, besides a set of control on family and socio-economic factors. The approach adopted here provides an alternative perspective on the quality of labour force, which depends on skill levels, education and technology.

The analysis reveals that the Indian labour markets depict a clear dichotomy between the higher skill levels being dominated largely by the high skilled workers, while the manual jobs with lower
skill levels for the low skilled workers. Technology and digital usage have further accentuated these earnings differentials. Also, higher skill levels in India tend to have both higher average earnings and education levels compared to their lower skill counterparts and leading to widening the earning inequality. Further, this analysis provides important insights into the low skill levels of the vast Indian labour force, which would require re-qualification and re-specialisation of the labour force in order to compete in fast-changing globalised India. Thus, it becomes critical for Indian policymakers to relook the skill formation and education system to be able to swiftly and effectively respond to constantly evolving skill demand in the local, national and global market.

**Industry 4.0 Developments in South Africa: An Uncharted Synoptic**

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Science and technology are essential elements to ensure innovation. Innovative developments significantly contribute to strategic growth initiatives in every nation. The Government in South Africa is sincerely considering science and technology from a strategic perspective. Other segments including the higher education sector, non-profit organisations and political set-ups also realise the requirement of the mentioned strategic initiative. The adoption of Industry 4.0 by South Africa has provided a huge possibility of academic as well as industrial research across sectors (aerospace, construction, defence, infrastructure, logistics, manufacturing, mining, petrochemical-oil and gas, pharmaceutical, public sector, software technology, and telecommunication). The concept of Industry 4.0 (I4) constitutes an integral part of science, technology, and innovation in South Africa. The upcoming of I4 developments have touched almost every essential sector (aerospace, construction, defence, infrastructure, logistics, manufacturing, mining, petrochemical-oil and gas, pharmaceutical, public sector, software technology, and telecommunication) flourishing in South Africa. I4 was first defined in Germany with extensions to other parts of the globe. The enhancements in the field of science and technology have uplifted the virtual developments in the manufacturing concerns. The concept of I4 sounds complete when combined with the internet of things, cloud computing, and cyber physical systems. In fact, a notable aspect is that technological developments in the area of information and communication technology (ICT), cyber physical systems, and internet of things have worked as an ignition towards fourth industrial revolution. In the digital context, a new word for manufacturing organisations is smart manufacturing. Cyber physical systems contribute and monitor all the physical operations while producing an electronic version of the performed activity to provide rationalised decisions. Internet of things, when combined with cyber physical systems, produce real-time benefits.

The present work provides a systematic review of Industry 4.0 developments (past, present, and future) in South Africa. The research approach focuses towards the existence of Industry 4.0 in combination with different primary keywords (Industry 4.0, internet of things, digitisation, and cyber physical systems) and secondary keywords (industrial internet of things, business integration,
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cloud computing, virtual reality, mobility, standards, architecture). The study considered 19,101 articles extracted from the Scopus database over the past 10 years. The use of citation analysis through provides PageRank provides the most acceptable information on this area. The statistical tools such as Bib Excel and Gephi are used to draw inferences in the form of top contributing authors, keywords, countries followed by cluster analyses. The first cluster explains that the major focus of the contributing authors is on Industry 4.0 or fourth industrial revolution and information technology and security. The conceptual part of the Industry 4.0 and fourth industrial revolution are discussed by the researchers, followed by the discussion on the relationship between I4, information technology and security. The base of every kind of technology is highly dependent upon the reliable security systems, which is missing as per the results received from cluster analysis. The incorporation of the security aspect is suggested. In the second cluster, the focus is on the internet of things and innovative standards. This cluster discusses the involvement of innovative standards in business integration and architecture. Industry 4.0 is mainly about manufacturing activities and innovation is the core of gaining a competitive edge. The articles in this cluster explain standards to an initial stage, and an in-depth contribution is recommended. Cluster three talks about I4 combined with manufacturing and security. It provides a larger context related to manufacturing and security and misses the essential aspects like architecture and standards. The fourth cluster is based on supply chain and technological forecasting. Contemporary supply chain management or logistics is revolving around technology. The adoption of technology by every business is of paramount importance, and supply chain management is no exception to it. The author suggests the digitisation of the logistics process. The fifth cluster covers the aspect of information technology and decision-making. This cluster serves a very important dimension, especially in the technology-driven society. The technology-driven decision-making is taking a crucial stage. The decision-making must be effective especially in the context of policy makers. In all, the last cluster is the most important amongst all clusters.

Overall, the present study has contributed significantly to the existing body of knowledge and literature. It extends great knowledge and understanding for the considered topic of research towards the people working in the similar domain. The selected keywords and tools for analysis provides and meaningful insights for the selected topic. The interpretation of results provides insight about who is contributing towards the selected area of research. The present work by the author towards I4 developments, architecture shares the popularity of this topic and the scope of future research.

Impact of Macro-Economic Variables on Employment Elasticity of Indian Manufacturing Sector

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The aim of this paper is to analyse the long run and short relationship of macro-economic variables and employment elasticity of the manufacturing sector in India. The paper utilises time series data on macro-economic variables from the World Bank database, whereas data related to employment
elasticity has been used from the Annual Survey of Industries, Ministry of Statistics and Program Implementation, Government of India.

To find the relationship between macro-economic variables and employment elasticity of the manufacturing sector, the study employs Autoregressive Distributed Lag (ARDL) bounds testing approach. This method is used because it has several advantages over Engel and Granger and Johansen co-integration tests. For example, Engel and Granger cannot be used to show multiple long-run relationships. Similarly, the Johansen co-integration test is used with the condition that all the variables should be non-stationary and integrated with the same order. The ARDL can be used whether the variables are I (0) or I (1) or a mixture of both and are statistically more robust technique to show the co-integration in a sample size of 30 to 80 observations.

The key finding of the study are summarised as: (1) over the period, the output of the manufacturing sector has grown with a very high rate and employment grown with a smaller rate. The resultant employment elasticity value, which explains the relationship between employment and output, has grown with a lower rate. However, between the sub-periods, we find that there is a large variation in the growth rate of employment, output and employment elasticity. For example, in the recent period, all three indicators have shown impressive performance. This implies that the manufacturing sector has generated additional employment to the growing labour force. The labour reform undertaken may be the one important cause for increasing employment during the recent time. (2) The co-integration results suggest that there is a positive and statistically significant relationship between macro-economic variables (i.e. export, inflation, and per-capita GDP) and employment elasticity of the manufacturing sector. It shows that a 1% growth in inflation would on an average increase the employment elasticity by 0.32% in the long run. Per-capita GDP is the second important factor that influences the employment elasticity of growth and it is significant at the 5% level of significance. It indicates that a 1% increase in per-capita GDP leads to an increase in the employment elasticity by 0.76% in the long run. Similarly, export is a third significant factor which influences the employment elasticity. It is significant at the 10% level of significance. It shows that with a 1% increase in export, on an average employment elasticity will increase by 0.31%. For FDI, we observed a negative and statistically significant relation with employment elasticity at 10% level of significance. This finding shows that with 1% growth in FDI, employment elasticity will decline by 2.48%. It can be due to the fact that FDI can allow manufacturing industries to access more productive goods and superior technology, which lead to a reduction in the demand for labour.

The estimated results of short-run coefficients of the ARDL model show a negative and statistically insignificant coefficient of ECT, indicating the relationship between the variables. The coefficient of ECT is 1.173, which shows that adjustment is corrected by 117.3% per annum from the short run to long run. A higher value of ECT means, faster the economies correct to the equilibrium rate of growth.

Therefore, based on our empirical results, we conclude that inflation, per-capita GDP and export have wider importance for improving the level of employment elasticity of growth in the manufacturing sector. It is also the need of the hour to identify the root of FDI, which would be
further helpful to explain the negative relation of FDI with employment elasticity of growth. The policymakers should formulate and implement such policies in the manufacturing sector which would be helpful for increasing the level of employment. The “Make in India” an initiative of the government to transform the Indian economy into a manufacturing hub appears to a suitable step in this direction. But apart from this step, we need more policy so that the people working in poor activities where they get low wages without any social security should shift to the upper activities.

Youth Labour Market Transition and Work Satisfaction through Small and Micro Enterprises in Jammu and Kashmir

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Successful harnessing of demographic dividend of youth depends significantly on levels of education and market-oriented skills they attain. Youth in Jammu and Kashmir have indeed made progress in terms of educational and vocational skills attainment in recent past. Yet, it is not clear that youth particularly women in conflict zones of Kashmir are prepared for challenges they will face in a globalised world. With above backdrop, the paper probes the following questions: To what extent are gender gaps in vocational educational attainment narrowing? Are opportunities available to youth that enable them to complete vocational education, increasingly a pre-requisite to participation in the labour market in the context of globalisation? Are opportunities available that enable youth to overcome skill mismatches through vocational skills training? Are youth in conflict zones succeeding in finding productive employment and becoming integrated into labour market? Are they transitioning into work roles at appropriate ages and with adequate skills? And are opportunities available that enable youth to overcome skill mismatches through vocational skills training? Are youth in conflict zones succeeding in finding productive employment and becoming integrated into labour market? Are they transitioning into work roles at appropriate ages and with adequate skills? And are opportunities available that enable youth to make most of their productive potential? The study has been confined to a sample of 796 pass outs of industrial training institutes across conflict zones of Jammu and Kashmir. Structured questionnaire based field survey method has been used to collect primary data and information and data analysis has been done using simple descriptive statistics.

The transition of young technically trained and skilled personnel was very high in the SMEs compared to unskilled and other workers. The potential for further transition of these workers was high, with improvement in political scenario followed by large infrastructural investment in the SMEs by the government and private sector. Manufacturing is dominant activity of the SMEs followed by food products, hosiery and garments, beverages, plastic products and wool and silk products in the proprietary firms and manufacturing of plastic products and hosiery and garments products are dominant activities in partnership firms. Technology level of the SMEs was mixed as they used simple hand tools, machine-driven tools, powered hand tools and automatic machineries. Machine-driven tools were used by all the SMEs engaged in manufacturing food products, beverages, paper products and printing, plastic products and machinery parts. All SMEs engaged in beverages, plastic products, chemical products, and machinery parts were using automatic machinery. Besides, they also used simple hand tools and powered hand tools.

The study reveals that self-employment has been comparatively more lucrative avenues for technical graduates. The paper argues that significant investments in terms of appropriate policies
and programmes are required to achieve higher employment rates and elimination of gender disparity in vocational education, harness its demographic dividend and enable youth to participate in and benefit from global development. Alternative methods of delivering vocational training need to be explored. Good vocational training practices for youth in conflict zones are innovative approaches to skills acquisition, employment and income generation, which include procedures for systematically identifying employment- and income-generating opportunities at local level, designing and delivering appropriate training programmes, and providing necessary post-training support services, including credit, technical assistance and market information.

**Women, Care-work and Gig Economy in India: A Review**

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In recent decades, digitalisation and technological change have brought a structural shift in the occupational structure, the place and timing of work and putting further strain on the labour market in India. The major problem witnessed by the Indian labour market in the past few decades is the downward trend in female labour force participation rate. Among many other reasons for the sinking female labour force participation rate, one of the major reasons is the burden of unpaid care work on women which is, by and large, not being addressed properly in India. Women are facing the disproportionate burden of unpaid care work and furthermore, it casts a ‘double burden’ on those women who are in the labour force. The future of work is changing. The traditional 9 to 5 jobs are diminishing and the new task-based work is emerging. Gig economy, which is the coordination of labour market activities via digital platforms—is at the core of the future of work. This study tries to explore the distinctive characteristics of work (care work) through a digital platform—‘gig economy’. Supported by empirical illustrations from existing research, this article discusses the mechanisms by which ‘gig economy’ can be an alternative for improving female labour force participation rate in India. This article argues that digital platforms are instruments of a fundamental shift in the Indian labour market and can increase the female labour force participation rate in two ways. One way, on-demand ‘gig work’ via app-based digital platform can help the working women with care responsibilities to outsource task substitutes for unpaid care and domestic work. If the emerging on-demand app-based digital platform in the gig economy can provide childcare, elderly care, nursing for sick, special care for differently-abled and domestic workers then care burden of earned carers can be reduced, which may increase their labour hour and increase the participation rate. The other way, care jobs will be created in the market, where new entrants and women outside the workforce will get into the paid work because of the short-termism and the flexible nature of ‘gig work’. On-demand platforms can generate employment for the non-working labour force which leads to income generation and employment saving for unpaid earners. On the other hand, digital labour platforms can be an option for those women who are out of the labour force due to care burden. Digital labour platforms provide the ability to work from home and flexible working schedule which helps in maintaining a work-life balance by combining paid work with care responsibilities. However,
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‘gig economy’ does not promise remedies for all the problems of the labour market. It has its own limitations as well. There is a lack of employment security and social protection, instability of income, weaker workers collective bargaining, in existing legal protection and automation threat. Therefore, in order to optimise the full employment potential of India, it is necessary to take women on board with state intervention and adequate labour market policies to increase female labour force participation. Appropriate labour market policies will be required to amplify the potential benefits and reduce the threats so that, ‘gig work’ in ‘gig economy’ emerges as decent work.
TECHNICAL SESSION 1.4

Informal Work in New Formal Spaces: Segmentation, Mobility and Future of Work in the Age of Globalisation

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The age of globalisation has been leading to the rapidly changing nature of informal work in urban spaces. This can be observed through indirect informal employment linkages created by new formal work spaces related to IT, communication and software realm in urban spaces, which are in the form of heavy rise buildings and allied cyber towers in cities. These sectors demand several of informal work activities from the workforce, such as cleaning, maintenance staff, drivers, security guards, cook, and so on. In the same lines, the new software classes have been emerging in cities as a result of the spread of IT and technology sectors, who are now the new ‘software upper middle class’ occupying huge residential townships. They, in turn, create demand for several informal works in the domestic realm as well, including domestic help, caretaker, domestic driver and cook, and so on. Catering to the requirements and demands at these new work spaces are informal workforce, who are often migrants from nearby rural areas, looking for work in cities and are sucked into these work nodes. Given the changing nature of rural labour markets, household conditions, and economic shocks taking place within the household, the workers migrate to cities with the help of close networks who are already operating in an urban area. They are easily grasped inside this circuit of informal employment in the city, especially with growing new work spaces and demand for informal works at these realms.

In this context, the paper attempts to examine the dynamics of the changing nature of informal work processes in the urban cities of India. Taking the case of Hyderabad, the paper attempts to understand the nature of informal work and the worlds of informal labour in the new work spaces, given the constant and rapid change in an urban setup. This is done through conducting in-depth interviews and surveys with informal workers in a slum in Hyderabad, which is located near to the IT hub and Cyberabad region. While the paper focuses explicitly on informal work in emerging software and IT offices, along with the heavy residential townships, it examines and understands the factors leading to segmentation of informal workforce to go to different kinds of informal work segments within the city. Further, the paper tries to question if there exists any social and economic mobility for this workforce who are in different segments of informal occupations all across the city. Within this realm, the paper looks into the nature of networks operating strongly helping informal workforce grab work chances in the city. Looking into informal work in the age of technology and globalisation, the paper attempts to dwell on the rapid development of such new formal work spaces vis-à-vis no significant mobility in the lives of informal workers. Further, the study also questions if there exists a future for informal work in the urban spaces, given the uncertainty.
Employment Effects of Digitalisation in Rural Areas: 
A Study on Selected Villages of Gujarat

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The present-day economic activities are largely driven by digital technologies. Increasing connectivity is allowing people even from remote locations to actively participate in the nation’s mainstream economy as income earners and consumers. Integration of the economic activities is facilitating the producers to join the global value chain, thus providing access to markets even to the isolated and remotely located firms. Easy access to knowledge helps people to generate new ideas and establish new businesses. The recently introduced online platform – gig economy -- is providing income-earning opportunities to the millions irrespective of their geographical location and time factor. In a way, on the one side, digital technology is helping firms to revive their existing production activity, find new markets, outsourcing of tasks to geographically dispersed people and earn a profit. On the other side, it is helping the labour force to explore employment opportunities according to their knowledge and skill. The digital technology thus has a stimulating effect on the demand-side and supply-side factors of the labour market.

In India, a recent development is in terms of expansion of digital technologies to the rural area, including the digital initiatives in connecting the gram panchayats under Digital India Programme, e-governance, information kiosks, specific applications for agriculture and rural development, etc. With the decrease in the price of mobile phones and internet services, mobile technologies have become highly popular for internet access in rural areas; internet users in rural areas are likely to outnumber internet users in urban areas in one or two years. As a whole, digital technology is helping both the skilled, unskilled and illiterate rural citizens to gain access to information. This should have a positive effect on reducing rural poverty, decreasing rural-urban gaps and controlling distress migration. Agriculture is the dominating sector in rural area and employment in the agriculture sector is not affected by digital technologies. Rather, the timely available information on weather, fertilizers, pesticides and prices increases productivity and encourages employment in the agricultural sector.

With this background, the present study is an attempt to determine the impact of digitalisation on rural employment taking the case of Gujarat. The study is based upon primary data collected from 20 villages of Gujarat. The selected villages belong to five districts, namely Gandhinagar, Kachchh, Porbandar, Rajkot and Surat. The total sample size is 500. With the help of basic statistics and simple econometric techniques, change in income and employment is recorded for the last five years for both agriculture (including dairy) and the non-agriculture sector. The change in agricultural and non-agricultural employment is explained with the help of variables namely gender, age of respondent, education status of the respondent, education status of respondent’s family, internet connection, ownership of internet access device, basic services, social backwardness, autonomy in using the device and the distance of the village from the highway.
The results show that during the past five years (2014-15 to 2018-19), income in agriculture has increased by 10%, in dairy activity by 21% and in non-agriculture by 16%. The total employment generated is 22982 man-days whose value is nearly Rs. 1.5 lakhs. As a whole, the selected villages have experienced an overall increase in income by 34%. However, the employment scenario explains a different situation with respect to digital connectivity. It is found to be highly favourable for rural non-farm employment than farm employment. The coefficient of employment of educated workforce is strongly positive for the non-farm sector. In contrast, the coefficient of employment of workforce from socially backward class is strongly positive in the farm sector. In the non-farm sector, male employment is benefitted by 3% over female employment. Education status of the respondent’s family significantly drives the workforce towards the non-farm sector. Ownership of mobile phones also enhances the employment in non-farm sector than the farm sector.

The study concludes that digital connectivity has both forward and backward linkages for rural employment. On the one side, it shifts the educated and resourceful workforce to the non-farm sector. On the other side, it creates employment opportunities for the workforce from socially backward categories and women in the farm sector. Since people from socially backward class and women are less educated/illiterate having fewer resources and less access to information, digital technology is not optimally utilised to raise agricultural productivity.

Innovation, Jobs and Fourth Industrial Revolution: A Review of Classification Techniques

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As technology becomes the main paradigm to define the shift in capitalism, it is utmost important that the older classifications that persist with the capitalist economy change as well. Thus, with a view to change such structure, Keith Pavitt, in 1984, devised a new classification whereby industries were not determined by their status as manufacturing, services or agriculture sector, but with the level of technology they have been able to incorporate. Though Pavitt attained an exemplary status as far as taxonomy is concerned, the exclusion of services from the study and a typecast based on developed economies makes it impervious to change. Moreover, as studies by Pianta (2001) and Bogliacino and Pianta (2008) confirm the existence of such classification, they have also attempted to revise the taxonomy based on the current literature, including the data on services, which are, one, a growing field, two, is very important in terms of classification. The studies focus on four technological classes each for manufacturing and services, based on innovation indices and proxies. The industries smoothly fit in each of these classes and have no issues in displaying the difference from one to another; the data seems a good fit for European economies. Similar studies for the United States show a comparable trend with some tweaking on classes, but a large-scale approach has not been adhered to in any of the papers to our knowledge. Besides, the topic is also raised with different contextual purpose by the likes of Addison and Teixeira (2001), Acemoglu (2002), Chennels and Van Reenen (2002), Spezia and Vivarelli (2002) and Pianta (2005).
While most studies do recognise the need for a differentiated use of technology, as technology is not uniform in its impact on employment and firms, in the absence of concrete data, not many have adopted this approach. Thus, measures of technological change have been restricted to research and development (R&D) and patents. But as research may no longer be limited to R&D expenditures and patent, there is a need to look at other measures.

This is also evident from the Eurostat surveys. “Firms carry out a wide range of innovative activities besides R&D including the acquisition of outside knowledge; internal design and engineering efforts; the acquisition of innovation-related machinery and equipment; efforts associated to the marketing of new products; all these aspects are measured for European countries by the Community Innovation Survey” (Eurostat, 2008).

The paper, hence, attempts to discuss the literature on taxonomies, by focusing mainly on the parameters that are defined for analysing innovation. The strategy of defining expenditures may become important for a developed economy, but for developing economy like India the same structure may not hold. More so, defining R&D expenditures and patenting in the Indian context, where institutions are weak may not be a prudent approach. Thus, by reviewing literature both on developing economies and developed world, the paper attempts to discover new indicators that may serve as proxies to innovation. In doing so, the paper will not only review theories of classification, but do an indicator-wise review based on availability of consequent data on developed and developing economies. Equally important, it shall also look into Mergers and Acquisition data to determine whether these have had any impact on innovation, or whether such measures can classify as proxy indicator for innovation. As start-ups aim to purchase innovation and not carry it out, this may be a sound strategy. Besides, as companies try to deploy various levels of innovation, quantifying everything as one may not be the right approach. Take the case of adoption of technology, not all firms may deploy the same level of technology and the same shall not apply to all sectors. Thus, a baseline scenario for each sector becomes imperative. This shall ensure that not one but several parameters of innovation are adhered to and also guarantee better appreciation of term innovation and efficiency and across classes. Besides, in adding services to the group, it shall also create a classification within services, something that shall defy the original notion of the factory floor. This shall have important ramifications not only job losses, but nature of work, and the evolving nature of workfloor.

**Impact of Trade Liberalisation on Inter-Sectoral Labour Shift:**

*Evidence from India*

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Interpreting the impact of trade liberalisation on macroeconomic issues has always been a matter of concern for developing economies. Developing economies have been trying to be in pace with rapid structural changes concurrent to trade liberalisation and with substantive emphasis on assessing, whether the economic policy reforms and their welfare effects, as planned to be, has reached to the larger deserving people of the economy.
India opened its economy in 1991 by reducing tariff and non-tariff barriers and restrictions on investment flow with a belief that integrating with the global economy would fuel rapid economic growth and usher the era of economic development.

The major issue argued in the economics literature is whether trade liberalisation can lead to accomplishing the developmental goals of the economy by raising the per capita income, increasing the growth rate, removing inequality and increasing the employment, scenario in the developing economy. With liberalisation, India embarked upon a new journey with an aim to bring major structural transformations in the manufacturing sector. Globalisation helped the growth to soar, but the question was, if the growth was inclusive and was trade detrimental to employment generation in the manufacturing sector then there was clearly a disconnect between growth and employment generation.

To support the development of and expansion of industries in India after independence the policy of import substitution, and protective measures insulated Indian economy from external competition. Industrialisation in India post-independence was always considered an important instrument for rapid and sustained growth specifically enhancing employment in the manufacturing sector with the aim to reduce inequality.

Liberalisation boosted the development of capital-intensive industries in different occupations and influenced the wage rate, export-oriented industries automobile and pharmaceutical gave India a global recognition for excellence in design and innovation but due to inherent nature of being highly skill-intensive sector, the capital-intensive sector could not generate employment opportunities

Subsequent to opening and integration of Indian economy, its trade share increased and share of manufactured products increased from 50% in 1980 to 75% in late-1990s. While total exports from India increased from 17,865.4 million dollars in 1991 to 303,376.2 million dollars in 2017 and trade as a percentage of GDP doubled from 14.13% in 1991 to 30.67% in 2017, the unemployment rate remained stagnant. Post liberalisation, the major contributor to GDP was services and modern industries.

The study is particularly relevant in current context for developing country like India, when issues pertinent to trade reforms in light of rising income inequality, regional disparity and unemployment still dominate the country and it seems that the trade reforms failed to keep their promises.

In the post-reform period, small scale industries were given a boost to absorb additional labour with special incentives provided to small scale industries. It was the Micro and small enterprises which witnessed enormous high skilled employment growth. These small-scale industries workers and agriculture workers were deemed to be in transition to becoming organised workers. While labour regulation played a vital role only for the organised sector, it was not successful in raising productivity in the organised sector. Labour unions worked on protecting labour rights and increasing wages, productivity did not grow as expected and inefficiency crept in. Small-scale industry, especially, the unorganised sector, did not fall within labour protection. Currently, the manufacturing sector in India
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is capital-intensive and majorly deploys contractual labour, and the demand for contractual labour is high, diluting the role of labour regulations Deregulation resulted in increased investment, greater participation of services sector in GDP, trade increased moderately but no major contribution was made in enhancing employment. Investment in education and human capital has been low. The power of labour union has decreased, and quality of jobs deteriorated. Contrary to the very objective of expanding employment opportunities in labour-intensive industries, capital-intensive industries have a dominant presence in India. Also, in comparison to the formal sector, the informal sector witnessed skill-based employment (Sarkar, 2018). Manufacturing growth exhibits large regional disparity in India with vast regional variations thus reflecting the absence of regional balance. Liberalisation emphasised on domestic labour market integration due to increased opportunities but labour market mobility is still limited in India and has accentuated unregularized labour migration in India. It is believed that trade reforms led to structural changes and resulted in the regional development of industries followed by the displacement of labour. If trade theories hold relevance than post-liberalisation sectors with relative efficiency would have thrived significantly in India due to rapid percolation of technology from global integration. The primary issue addressed in this paper is the structural changes induced due to technological advancement resulting in an increased flow of income across different sectors of the economy followed by labour shifts within these sectors. Export growth promotes trade specialisation and skill employment leading to increased inter-sector flow of goods and services as obsolete technologies decline and displace less productive sectors of the economy. Labour mobility is an outcome of strong intra-industry production linkages. To accentuate labour mobility, strengthening of intra-industry production linkages and development of value-added sectors in exporting sectors and developing labour with high skill sets becomes imperative for the Indian economy.

The obvious question is- if the right skills help real wage increase due to technological deepening in different sectors of the economy, has it stimulated labour flows across India, keeping in view the shrinking size of the formal sector, the sizeable increase in contract labour and wilting labour regulations?

This attribute has received little attention for research and little evidence on literature is available to introspect closely the issue of intersectoral labour shift due to trade liberalisation in India in post-reform era. The proposed work will fill the gap in the literature.

We will use UNCOM data for export and import related information and NSS unit level employment-unemployment data for the year 1993-94, 2004-05, 2010-11 and 2016-17 (PLFS) to examine the sectoral shift in the labour market. Besides, we will also use NSS non-agricultural enterprises data for 1999-2000, 2010-11 and 2016-17. Our results show that liberalisation of trade has a greater impact on the sectoral shift of labour force. But this impact is greater on capital intensive sectors, while the majority of the workforce engages in the labour-intensive sector.
Understanding the Indian Experience of Economic Upgrading to Social Upgrading for Post Liberalised Manufacturing Sector

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Since the liberalisation of 1990s, India has shifted her focus on trade-oriented development strategies. Over time the nature of global trade has undergone a paradigm shift from inter-industry trade to inter-firm trade to trade via global production networks (GPN). India is also adapting to this new trade regime. This paper ventures to answer a critical question associated with economic upgrading to social upgrading debate in the GPN framework. We tried to check whether employment in the Indian manufacturing sector is facing a quality and quantity trade-off or not as the industries are getting more integrated into GPN. The quality at work is calculated by forming the quality of work Index (QWI). Then using industry-specific fixed effect panel modelling we checked the effect of GPN integration on QWI. In order to capture the GPN integration level and nature for the manufacturing sectors, we used a modified version of the Participation Index. We see that there is a direct conflict between employment creation and the quality of employment for GPN integrated manufacturing industries. Firstly, we witness a reduction in total employment creation as the level of GPN integration is rising. But secondly, we are witnessing a rise in regular jobs and fall of self-employed and unpaid family jobs with the increase in GPN integration. So, lesser jobs but better jobs are being created with a rise in GPN integration. Thirdly, we can see that over time the pattern of employment creation is not changing. In other words, the phenomenon of more regular jobs in high-integrated industries and more self-employed jobs in low-integrated industries is a cross-sectional phenomenon, not a time series one. Fourthly, we also found that forward participating channel has a job-creating ability but backward channel with its job displacing effect is the dominant channel for our country, hence GPN integration is reducing employment opportunity.

In order to capture the quality of work for regular and casual employment, we constructed quality of work index by incorporating six indicators covering four aspects of ‘decent work’ as recognised by the ILO. We concluded that, as the level of integration rises, QWI is rising. But with the rise in integration level, the industries worker absorbing capacity also starts falling. So, we concluded that there is a trade-off between more jobs and better jobs in GPN integrated industries. We further found that within job quality the workers are facing a trade-off between job security and income security, and it is irrespective of the level of GPN integration. But, social security aspects of ‘decent work’ are rising with the rise in GPN integration. This further shows that with a rise in GPN integration though condition at work is improving but working period with a shorter contract is created.

Broadly we can conclude that the economic to social upgrading as an endogenous mechanism checks for the Indian manufacturing sector. But also, we find a huge trade-off between quality and quantity of job in our case. GPN integration is being able to give high-quality jobs to fewer people. But this is only in the regular and casual job category. The lower share of jobs in this category is compensated by a higher share of job in self-employed category. In other words, we see a major clustering of works is remaining in the self-employed category. Unfortunately, their job condition is
not traceable with secondary data. But these jobs are more insecure and uncovered by government regulation. Hence government accountability is not covering these workers. No doubt it is a sign of increased vulnerability in the manufacturing sector labour market.

From our findings, we can make a vital policy suggestion. GPN integration needs to be in the form of value contribution for India to create jobs. Though a labour-intensive mode of production will create more jobs, but with sufficient scale of production and GPN activity with dominance of export or domestic value added can ensure more employment. In other words, productivity can be increased through either increasing output for given workers or by reducing workers for a given output. The former is a high road of integration and the latter is a low road of integration. We have to ensure that the task of industrial upgrading is taken up through the high road. Then through scale effect, employment may rise.

Nature and Patterns of Subcontracting Linkages in the Informal Economy in India: Implications for Structural Transformation

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The informal manufacturing sector (IMS) in India comprises of two segments: the ‘traditional’ segment comprises of Own Account Manufacturing Enterprises (OAMEs), which are family-based enterprises that carry out production using unpaid family labour, and are usually characterised as low productive and technologically backward. These enterprises comprise about 85 percent of the informal sector. The ‘modern’ segment, on the other hand, comprises of ‘establishments’ that carry out production using hired labour and are relatively more productive and technologically advanced than the OAMEs. In much of the literature on economic development, it has been expected that economic growth will create better growth opportunities for the informal firms, thereby facilitating a transition of OAMEs into larger, dynamic ‘modern’ firms. In this context, there exists an influential literature, which argues that development of subcontracting linkages of informal firms with larger, dynamic ones can be one of the most important channels through which various constraints faced by small informal firms, such as inability to avail credit, better technology, and access to markets, could be released, thereby facilitating a transition of these informal firms. Such linkages are expected to grow stronger with robust economic growth.

However, we found that the proportion of subcontracted IMS enterprises registered a fall during the previous high growth decade (2000-01–2010-11) – with the proportion falling from 30 percent to 20 percent over the decade. Moreover, various studies found that the subcontracted IMS enterprises were relatively less productive than the non-subcontracted ones (Bhattacharya et al, 2013; Raj and Sen, 2016). A recent work Basole et al. (2015) analysed the Indian IMS for 2005-06 and found that the impact of subcontracting linkages on the productivity of IMS enterprises has been negative.

In this work, we attempt to explore the nature of subcontracting linkages in the informal sector in India and the role played by these linkages in facilitating an economic transition of OAMEs into larger
and more dynamic ‘modern’ ones during the recent growth period. For the analysis, we will use the enterprise-level national survey data on unincorporated, non-agricultural enterprises.

In the first part of the analysis, we take off from the existing literature to analyse the impact of subcontracting linkages in facilitating a transition of OAMEs into larger, dynamic enterprises. We extend the existing literature in two ways – first, most studies that analyse the possibilities of growth of informal firms in India usually focus on the Gross Value Added (GVA) of the firms. However, given that the OAMEs only engage family labour for carrying out production, there is no explicit payment of wages to the family labour that needs to be accounted for to calculate the fund that they can retain for possible accumulation and expansion. Therefore, following some recent work, amount that needs to be set aside for these household workers and to deduct it from the GVA of the enterprises to calculate the fund – the net accumulation fund – can be used by the OAMEs for accumulation, growth and expansion over time. Second, most of the empirical works are static analysis at one point over the decade. Analysis was undertaken for the entire decade of 2000-01 to 2010-11 to study the impact of subcontracting linkages on the NAF of the OAMEs over the growth decade. This long term analysis is important to understand the role played by subcontracting linkages in facilitating economic transition of OAMEs, particularly during economic growth. In order to investigate the impact of these linkages on the firm’s possibility to grow and transition (captured by the NAF), following Basole et al. (2015), a modified Heckman selection model was used to account for the endogeneity arising from non-random assignments of firms into subcontracting relations. It was found that, over the decade, the impact of these linkages on the NAF of the firms has been negative.

In the next part of this work, the study explores the nature of subcontracting linkages in the informal economy in India and analyses its evolution over the high growth period in order to investigate what type of linkages, if any, have been able to play a positive role in facilitating such a transformation. Findings reflect that the pattern of linkages for about three-fourth of subcontracted enterprises is of traditional ‘putting out’ nature, such that they are completely dependent on the parent firm for procuring much of the raw materials for production and receiving design specifications, and, then, supply the entire produce back to the parent firms. These put out firms retain a much lower NAF than both the non-putout (or autonomous) subcontracted and the non-subcontracted enterprises. Such put-out firms merely carry out production for the parent firms and do not have autonomy over the production process. It was also found that being in relatively autonomous subcontracting relations, positively impacts the NAF of the subcontracting firms. These relatively autonomous subcontracted firms are able to retain a higher NAF that even the non-subcontracted (as well as putout subcontracted) firms at the beginning of the decade, but the proportion of such autonomous subcontracted enterprises is quite low and, over the decade, they have lost the advantageous position, with their NAF falling to the level of that of the putout subcontracted by the end of the decade. The study also empirically analyses different characteristics of subcontracting linkages in India. It found that the proportion of enterprises exhibiting benign characteristics of subcontracting linkages is almost negligible.

While certain kind of linkages may be beneficial to the subcontracting firms, the subcontracting linkages in the IMS in India largely do not exhibit such benign characteristics; rather, the subcontracting
linkages in the Indian IMS seem to be driven mainly by distress and are starkly distinct from the dynamic linkages that are expected to facilitate a transformation of the informal economy.

Is Jobless Growth a Fallacy?
A Study of the Engineering Industries

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Engineering industry is an integral part of the capital goods sector in India and plays an important role in the expansion of the indigenous technological capacity of the country. Since independence, this sector has gained strategic importance in the policy formulation owing to its linkage effect with other industries. It directly facilitates the growth of other sectors. The goods produced by the engineering sector serve as a raw material for the other industries like railways, defense, fertilizer plants, transport equipment manufacturing sector etc. Due to the presence of this forward linkage, the growth in this sector also affects the overall growth of the economy. Several measures have been taken under the state-dominated industrial policy regime to incentivize the production of capital goods manufacturing sector. In the early 1990s India entered into a phase of liberalization. Economic reforms taken under the liberalization policy majorly affected the trade and the industrial policies in India. Indian manufacturing firms started facing stiff competition from foreign firms as a consequence of the rapid integration to the world market. The impact of liberalization on Indian manufacturing firms has been analyzed well in the literature. However, analysis of the impact of liberalization specifically on engineering industries is sparse in the literature. The present paper examines the impact of liberalization on the employment behavior of the engineering industry in Indian organized sector.

In the manufacturing sector, we generally have two types of industries: employment-creating and employment displacing sector. If we combine these type of sectors in any analysis, then, their effect gets cancelled out and may not decipher properly whether there has been jobless growth or not. A sector-specific study analyzing the employment behaviour may reflect the true scenario of the employment status of the manufacturing sector.

The present study compares the employment behaviour of the Engineering industry in the pre, early and post-liberalization period of the Indian economy. The paper tests for the conjecture whether along with the rise in output in the engineering sector; jobs are also generated in the economy. The study has used panel data analysis across Engineering industries[1]during the period 1983-84 to 2012-13 using Annual Survey of Industries database. The entire period has been divided into three phases: Phase 1: 1983-84 to 1988-89 as the pre-reform period; Phase 2: 1989-90 to 1997-98 as the early-reform period; Phase 3: 1998-99 to 2012-13 as the post-reform period. The results obtained from different phases are compared to understand how over the period, employment behaviour has changed in the pre-reform and the post-reform era. Combined analysis over the entire period was difficult because establishing concordance across several National Industrial Classification (NIC) structures (NIC 87; NIC 98; NIC 2004 and NIC 2008) was a major challenge in the study.
The empirical estimation reflects that the conjecture of jobless manufacturing sector growth does not hold true for the engineering industries both in the pre as well as in the post-reform period. It is true that in the post-reform period, characterized by free capital inflow, capitalization of the manufacturing sector led to the loss of formal jobs. However, the same phase experienced a surge in the growth of contractual workers across engineering industries. The relation between employment growth and output growth remained positive throughout each phase indicating the fact that the conjecture of jobless growth is a meager myth for the engineering industries in India.

In the pre-reform era, Basic Metal and alloy manufacturing followed by transport equipment manufacturing industries registered a high employment growth. In the early reform, there was a change in the pattern. Manufacturing of machinery industries showed an upward trend. In the post-reform era many new industries cropped up and were categorized under the engineering sector like the manufacturing of the electrical equipment industries, manufacturing of computer and electronics industries etc. The manufacturing of electrical equipment industries registered high growth in employment accompanied by a growth in output. Across the three phases of our analysis, we observed that manufacturing of transport equipment industries have been consistent in employment generation accompanied by growth in output.

Declining Labour Force Participation in India: Does Education and Training help?

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This paper explores the trends and patterns of labour force participation by education, age, gender, caste and religion groups in India for the period of 1983-2018. It also finds the factors determining the labour force participation decision of males and females, and outlines the process of the recent growth of unemployment and disheartened labour force. This paper is based on NSS and PLFS unit-level data. We find that the labour force participation rate has consistently been declining in India, to reach at a drastically low level, because of the massive decline of female LFPR. As Indian economy moved up in the income ladder and become a low middle-income country, a stronger negative income effect of the improved standard of living at the household level and increasing participation in education, are the major determining factors behind the falling LFPR. Contrastingly, there is an upsurge in open unemployment rate among the educated youth. Simultaneously, the volume of the disheartened labour force is also at the rise, which reflects the fact that the falling LFPR is not solely supply-driven, rather, a set of demand-side factors also partly responsible for it. Hence, unless measures are taken at the earliest on creating jobs, the Indian economy is going to fail in harnessing its demographic dividend, which is otherwise, likely to abate away post-2040. As the Indian economy has been experiencing a structural transformation, with consistent fall of the agricultural workforce, the growth of non-farm employment is crucial for boosting the overall LFPR.
Demand-Supply Skill Gap in the Information Technology and Analytics Industry

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Data science is the new buzzword in the Information Technology industry. The skill of a data scientist is currently high in demand and is also one of the highest paying jobs in the service sector. Analytics using the Internet of Things (IoT) and data science is slowly becoming an allied industry of IT sector in India. IBM has predicted that demand for data scientists will soar by 28% by 2020. More than 50% of this demand is in expected in Finance and Insurance, IT and professional services. It is interesting to examine the trade-off in the creation of decent work and automated work in the sector. Trade-offs also exist between the profitability of IT firms and costs of deployment of automation in the sector. Particularly, as automation is likely to reduce the demand for labour and the current status of decent work in the IT industry is not impressive, any research on the future of work in the industry can answer important questions on the economic and social contribution of technical progress to the Indian labour market. IoT, Artificial Intelligence, Automation and cloud computing can change the labour market dynamics in this industry and there is a need to understand this so as to estimate the future of work in this sector.

The emergence of the new knowledge economy has called for changes in the labour regulations of the industry as the nature of work in such industries is distinct from the traditional industries. The paper, using both primary and secondary data, aims to study the nature of work in IT-Analytics industry and the labour regulations required to improve and reform the work conditions in the industry. The study also examines the current skill demand in the industry so as to understand the possible skill gaps in the labour market. Qualitative research has been used to analyse the data and generate major findings of the study. The study not only holds importance for the existing workforce and the future entrants in the industry but also for policy-makers and labour analysts as it generates some vital facts which need to be monitored constantly to understand the future of work in the industry.

Educational Mismatch and its Implication on Skill Mismatch: A Study of Indian Engineers

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With massification of engineering education in India, there was frenzy among students to become engineers and it led to a rise in enrolment in engineering colleges. However, problem of quality engineers remained. It has been observed that engineers are taking up jobs that are neither in their field or applying for jobs that require a lower qualification and only a handful of engineers get employment appropriate to their training. This resulted in a new imbalance in labour market which is identified as educational mismatch. This imbalance needs to be understood in the context of parental pressure and financial constraints and if the choice of engineering is an imposed one by relating it to mismatch in choice of stream, if any.

Human Capital theory finds adoption in studies that explore issues of choice. An overview of education-labour market linkage has identified five broad categories: productivity, exogenous,
endogenous, screening and prestige. According to Human Capital theory, education in specific field imparts general and specific knowledge, whereby the extent of specific knowledge varies according to the field. In economics, interest is on market valuation of skills which is any quality that makes worker more productive. Besides productivity, the exogenous factors are those characteristics that are sacrosanct viz., age, gender, household characteristics which include family income etc. Contrarily, endogenous choice is what Bourdieu describes as cultural capital. The idea is that higher education raises individual's productivity but in this context the actual productivity level is determined by the match between one's major choice and occupation. Further, screening is done by employers (wherein grades act as a proxy) and individuals (in terms of available jobs because of existing “market capacities”). The exogenous and endogenous factors play their part in restricting this choice. While entering the job market, applicants who chose provider (institution) over the product (branch) get engaged in a procedure where top institutions are identified as brands and command prestige in the job market.

The objective of the paper is to identify whether there is an educational mismatch and any relation between educational and skill mismatch. According to job assignment model, educational mismatch imply skill mismatch. The paper tests the job assignment model and finds that there exists a relation in educational and skill mismatches in engineers’ job market. The literature identifies skill mismatch as an issue on the supply side as there is a constant complaint about lack of skills from the industry perspective. But educational mismatch, a dimension of skill mismatch is an issue due to lack of demand in the labour market (Senarath and Patabendige, 2014). Thus, by relating the concept of educational mismatch to skill utilization, the paper tries to find if the mismatch is a real or a formal one. It utilises heterogeneous skills theory in order to explain the existence of formal mismatches wherein it is argued that engineers are in appropriate jobs and are not under utilising their skills. It further delves into the determinants of educational mismatch among Indian engineers. Also, the paper would make an effort to understand the effects of educational mismatch on job satisfaction. It would try to find out the imposed choice through a mismatch between actual and desired field of study.

At a broad level, the targeted universe in the survey of employed engineers’ dataset is divided into two major sectors: IT/ITeS and Services (finance, consulting etc) where majorly engineering graduates are employed. Based on various studies (National Employability Report or NER, 2014, 2016; Banerjee and Muley, 2008; Sohoni, 2014) 12 roles across these two sectors are taken into consideration for the sample. IT/ITeS has the highest employability as compared to engineering sector (NER 2014, 2016). In regards to services, there is no classification in NER (2014 and 2016). Thus, based on studies by Banerjee and Muley (2008) and Sohoni (2014), the employability of students is spread across different sectors viz. Engineering and Technology, Finance, IT, FMCG, Consulting, R&D and Non-IT services. Based on the data available in these studies, the highest employability percentage is in Finance and Consulting combined followed by IT (Sohoni, 2014). The roles across these two sectors are not equal, 8 roles are taken up in IT/ITeS sector as against four roles in service sector. Across these 12 roles effort was directed to interview engineers randomly drawn to cover a sample of approximately 264 employees. The study is located in Delhi and through random sampling employees were identified. The analysis indicates an existence of educational mismatch amongst Indian engineers and that there is a relationship between skill utilisation and educational mismatch.
TECHNICAL SESSION 1.5

Financial Services Technology Adoption by Agricultural Labour Households in Punjab

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Agriculture sector plays a strategic role in the development of the economy and agricultural labour is an important component, having played a major role in increased agricultural production, especially, in the agrarian economies. Over time, the proportion of agriculture labour was found to be increasing, while the proportion of farmers engaged in the rural workforce was decreasing. The incidence of poverty among the rural labour households was very high as the major source of their income was wage earnings. Studies have found that this category has not been provided access to financial services to a large extent. For uplifting of this vulnerable class, affordable access through appropriate financial services is a big issue in society. Non-access to institutional financial coverage leads to trapping of this category in a vicious circle of poverty i.e. low standard of living, high dependence on informal credit, more burden of debt servicing, vulnerability to uninsured risk and even suicides etc. Therefore, the study was devised to examine the extent of usage of financial services amongst agricultural labour, and to identify the constraints in availing financial services by the selected category.

The present study was conducted in the sub-mountainous zone of the Punjab state during the year 2018-19. The zone is having cropping pattern of wheat and maize. Per capita income and investment level in this zone were found to low as compared to other zones of the state. Multi-stage random sampling technique was followed to draw a representative sample. The total sample comprised of 100 agricultural labour households. The primary data were collected directly from the sampled households through personal interview method. It was found that each sampled household had one minimum bank account. All households were financially included in terms of having a bank account. A total of 191 accounts were held by 100 households. The major purpose of account operation was withdrawals. The usage of other financial services was very low. Usage of internet banking and debit cards was found to be nil among the sampled households. Among the sampled households only, 29.55% were saving the surplus in bank accounts. Major sources of borrowing were non-institutional sources by the households. Easy repayments, ability to borrow small sums and lesser formalities were major reasons for borrowing from non-institutional sources. Low rate of interest, subsidy by banks and viewing the bank as a trustworthy lender were reasons reported for borrowing from institutional sources. The major preferential sources of financial management during emergency were land owners in the village, other family members and drawing the savings.

Constraint analysis was undertaken to find out the problems faced while availing the financial services. Considering the problems faced in accessing institutional credit, it was found that lack of
assets/collateral was the major problem followed by complicated procedure, inadequate amount, delayed loan and illiteracy. The major reason for the denial of institutional credit was the lack of security/mortgage followed by poor repayment performance in the past. The reasons for not availing other types of financial services including ATM services, debit/credit cards and internet banking cited by the households were low savings in the bank account, lack of access to internet and non-familiarity with the use of financial tools. Taking into account the findings of the study, the various policy measures should be undertaken to increase the accessibility of financial services among the agriculture labour households. General, as well as financial literacy in the target group, needs to be encouraged as respondents were lacking knowledge about other financial services, although all were financially included in terms of having a bank account. Income level of the target group needs to be improved to have better access and usage of financial services. Cumbersome procedure in availing institutional credit was found to be the major constraint. So, the procedure needs to be simplified with relaxation in security norms for the target category.

Work, Technology and Employment Growth in India: Policy Issues

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The present paper argues that the choices with respect to broader demand and supply conditions, if enjoin low profit expectations-led low capital (and technology), make clear why a large segment of the population faces distressed employment or unemployment situation. If so, solutions, inked in globalisation-led technological improvements can face demand constraints.

The policy focus has to zero-in on domestic Youngian-Kaldorian revival of growth of demand and employment that are embedded in capital productivity-led growth of innovations, as a solution to the employment problem. More specifically, given macro-structure specificity of the employment situation, the policy should focus on a transition, based on manufacturing-based growth that necessarily incorporates innovations that comes from actualising a Keynesian Youngian-Kaldorian growth process. Innovation starts with the initiation of within-firm specialisation, but it induces the growth of specialisation between firms that permits the growth of verities of products, processes, industries, sub-tasks, etc. in a cumulative way. This growth process can support possible increases in service sector employment, seen as a solution to employment problems, in India. The data analyses, however, show that these manufacturing-led growth processes are missing in India.

The present paper also argues that if external economies matter in the growth process, but such domestic external economies-based growth of innovations and aggregate demand is missing, adoption of import-led increasing scale economies-based models could face serious demand constraints, and inhibit technological and employment choices. In fact, demand constraints can translate into serious foreign exchange (and financial, especially given sensitivity to foreign exchange) constraints; this further limits technological and employment choices, especially facing new and small firms, to improve and to specialise.
In a way, Youngian growth process, a capital productivity-led growth, should be associated with employment and aggregate demand growth, which should permit more mobility of labour. Does the lack of it is due to Senian technological choices, and large low productivity and low wage segment of informal employment in India – that sustains investment with stagnant and high capital output ratio? In any case, large informal employment in India today could reflect a base that reflects heterogeneous individual initiatives – production of varieties that comes from the adoption of varied technological choices (and their limitations), mired in history, local conditions, lack of mobility, heterogeneous product to input prices facing firms, etc. What is missing is the domestic manufacturing-based aggregate demand and employment-led revival of innovations based on narrow specialisations, which otherwise would have lent strength to these individual initiatives for more specialisations-based participation in a meaningful / competitive domestic revival process. There will never be sameness in the adoption of any technology per se in a growth process traced to individual initiatives; but it should be a strength, not a weakness that manifests in Indian large segment of unemployed, who otherwise are informal “employed”, and working under distress.

Understanding the Impact of Trade Liberalisation on Employment, Wages and Labour Market – A Review

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India's labour market has experienced profound changes over the last few decades. However, the Lewis-Kuznets process has not unfolded in an expected manner and has been slower compared to the benchmark economies of Japan, Korea and Taiwan. India has failed to create mass employment opportunities in the manufacturing sector. In recent years, the employment crisis appears to persist and even deepen, with the lack of labour absorption in the employment-intensive sectors. Moreover, for those who are employed, the quality of employment is questionable, given the high rates of informality.

These unfavourable patterns of the manufacturing sector since the 1980s seem to coincide with the increasing outward orientation and liberalising policies of the government. The social costs of liberalisation appear to have manifested through the channels of the labour market, affecting the ‘workers’ class most adversely. The implications of import competition, relocation and displacement of jobs (linked to foreign investment) seem to have triggered the employment challenge. Rising capital intensity, skill-biased technological change and competitive pressure on domestic production units have accentuated the persisting wage inequalities. Moreover, the cyclical fluctuations in global demand for exports, higher import penetration of foreign inputs, and greater dependence of foreign consumption goods have led to greater uncertainty in employment, and a changed composition of workforce towards contractual workers.

In this paper, we attempt to review the empirically established conclusions about the labour market effects of trade in the manufacturing sector in India. We start by discussing the trends in organised
manufacturing sector employment growth and the underlying factors highlighted in the literature, since the onset of the period of jobless growth in the 1980s.

To understand the employment and wage effects of trade, we rely on a simple North-South trade theoretic framework based on the Heckscher-Ohlin-Samuelson model. Against this theoretical backdrop, we explore the implications of trade on manufacturing employment and deviations from theoretical predictions in the Indian context. The analysis is based on a review of studies evaluating the labour market effects of trade through different channels within the organised manufacturing sector in India. On the whole, as against the Heckscher-Ohlin prediction, the literature fails to find evidence for an impressive and radical structural change towards labour-intensive industries in terms of both output and employment. We explore the explanation for the lack of trade induced sufficient employment growth in several features of the Indian manufacturing sector and in nature of trade expansion in India. The various plausible factors found in the literature for an absence of export-led job creation are stringent labour laws, declining labour intensity of production, relative price of capital, inappropriate specialisation against the labour-intensive comparative advantage sectors, the direction of trade, lack of infrastructural support, and changing nature of the consumption demand. In addition, factors like mobility frictions across regions and sectors, search and matching frictions, labour market rigidities and skill mismatches may prevent smooth adjustments to trade, thus limiting the positive employment effects of trade.

The lack of labour reallocations due to mobility frictions can potentially inflict other kinds of favourable or unfavourable effects on the labour market, which manifest in the form of changes in wages, wage distributions or a change in contract intensity of jobs. We also review the empirical literature on the second-order effects of changes in wages and wage inequality between the skilled and unskilled type of workers, and changes in the industry wage structure, and uncertainties in the labour market. Overall, the study does not find strong favourable effects of trade on the labour market.

**Technical Education and Industrial Linkages: Hiring in the Automotive Sector in Pune City**

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Technical education forms an intermediate layer between general education and professional education. However, it has also been one of the most neglected. Presently, as per All India Council of Technical Education, about 40% of the technical workforce is employed in industries (AICTE, 2017). Of these, only a few are able to retain their employment or find alternative employment in the long run. The reason attributed to the same is the mismatch between the course curriculum in institutes and the requirements of the industry which inadvertently leaves many unemployed in the long run. What does this mean for prospective students of technical education? On the one hand, it would imply a limited scope of employment. On the other, even for those who do get employed, they remain confined to a very narrow or specific set of skills which are not easily or readily transferable.
This research is an exploratory attempt to understand the hiring practices in a specific set of industries and how they impact candidates with technical education backgrounds. In particular, it focuses on the labour requirements in the automotive industry, given a large number of primary and ancillary automotive firms in Pune City and a large recruiter of technical education candidates. What are the linkages between technical educational institutions and the automotive sector in Pune city? What are the different hiring practices observed amongst large and small automobile and auto-ancillary industries? What are the implications of the acquisitions of a specific set of skills acquired by students at technical institutes? These are some of the questions we seek to understand through intensive field work and interactions with technical institutions and automobile/automotive units operating in Pune, an important hub of automobile production in India.

Two sets of stakeholders in technical education were interviewed for this study. In December 2018, data on technical education institutes in Pune city were obtained from the Directorate of Technical Education, Maharashtra State. Based on these data, attempts were made to interact with the academic staff in these training institutes. A visit to a Government Polytechnique was conducted to understand the range of subjects on offer in such institutions. In the months of January-March 2019, interviews were conducted with industry personnel across automotive industries operating from the city. The first set of interviews were with personnel in some of the large automobile companies, including Bajaj Auto Ltd located at Akurdi and Tata Motors Ltd, Baner. The second set of interviews was with personnel working with small and medium scale auto ancillary enterprises located in the industrial pockets of the city. These ancillaries are affiliated with large companies in cases. At the large-size firms – Bajaj Auto and Tata Motors – interviews were conducted with the Human Resources Managers. In the case of the latter, the HR official was previously associated with Mercedes Benz and therefore, had a much longer experience of hiring and recruitment. At the small and medium enterprises, interviews were conducted with the HR personnel as well as people on the shop floor.

**Returns to Skills in the Labour Market:**

**Evidence from Primary Survey in Uttar Pradesh**

**Puneet Kumar Shrivastav**, Coordinator, Micro Finance Association of Uttar Pradesh, Lucknow

Skilled and educated workers enjoy at least three basic advantages over the less educated workers in the labour market, higher wages, greater upward mobility in income and occupation and greater employment stability. Skills and knowledge are the driving forces of economic growth and social development for any country. Countries with higher and better levels of skills adjust more effectively to the challenges and opportunities of world of work (Government of India, 2009, 2015). Skills are also a critical asset for individual workers and firms in a rapidly changing and globalized world (World Bank, 2019). Several studies show that the skill development is important for the labour productivity and gainful employment. Salvanes & Forre, 2003 argue that persons with less education would remain unemployed. (Feliciano, 2001) found that there was an increased in wage inequality in Mexico due to new technology and liberalization of the economy. According to Pandit & Siddharthan (2008) in the
1990s, India’s major policy focus was on the need for skill upgradation and remedial training to respond to the twin challenges of deep structural changes in the economy and an ageing workforce (Desjardins & Rubenson, 2011a). Presently, India is also experiencing huge social, economic, demographic as well as political transformation. The existing studies, researchers and policy makers, belonging to India and abroad, have propagated the importance of skill development for India in the light of demographic advantage.

The purpose of this paper is to examine the relationship of level of skills and income differentials among the employed in the state of Uttar Pradesh based on primary survey. The paper focuses on re-examining significant variations in level of income across the hierarchy of skills. It is based on primary survey conducted during 2017-18 of employed and unemployed persons in Uttar Pradesh. The study used Kolmogorov-Smirnov and Shapiro-Wilk test of normality/normal distribution. Two non-para-metric tests, Kruskal-Wallis Test and Mann-Whitney U Test have been applied to show the difference in income across the skill groups. Further, a semi-loglinear regression model has also been used to find the impact of skill on income generation along with other variables.

The results clearly reveal that as the level of skill increases, the income also increases. It is found that there is a significant difference in income generation across different levels of skill in the labour market of Uttar Pradesh. The results of the study are significant for the policy makers and suggest providing required level of skills to those without any skills and further re-skilling and up-skilling for better income. The study is unique as it is based on primary survey in the most populous state of the country. Skill has been defined by clubbing general education, technical education and vocational education together and accordingly categorised into four levels of skills. Based on survey data, the analysis re-approves the positive relationship between skill and income in the labour market of Uttar Pradesh.

An Econometric Analysis of Differences in Wages in Manufacturing Sector: A State-Wise Study

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The Liberalisation policy of 1991 has been a major turning point in the industrial development of India. The reforms of 1991 led to the breakdown of various industrial controls and liberalised the trade of goods and services. The post-reform era witnessed a high growth rate in per capita income and it significantly improved the standard of living of people. According to the ‘Standard of living theory of wages’, with an improved standard of living, workers are able to get higher wages. But these higher wages are not uniform across regions and industries. Industries are paying different wage rates to the workers. Differences in wages paid to workers are always an important issue in the growth
of the manufacturing sector. The present study attempts to analyse the differences in wages in the manufacturing sector across Indian states from 1980-81 to 2016-17. There exists a vast literature exploring the differences in wages in the manufacturing industries and states of India. The objectives of the paper are to study the differences in real wages across states in the manufacturing sector and to bring out the factors affecting real wages across states in the manufacturing sector. The data are analysed for the period of 37 years from 1980 to 2016 across six Indian states. These states are Gujarat, West Bengal, Andhra Pradesh, Punjab, Orissa and Himachal Pradesh. The states are selected on the basis of their share in gross state domestic product. To study the differences in real wages across states in the manufacturing sector, the analysis is conducted at eight points in time. i.e., 1980-81, 1985-86, 1990-91, 1995-96, 2000-01, 2005-06, 2010-11 and 2015-16. Then, the real wages are compared in the manufacturing sector across states. The results revealed that firms in Orissa have paid the highest real wages to workers throughout the study period except for the years 1985-86 and 1990-91. In these years, firms in West Bengal have paid the highest real wages. However, workers have received the lowest real wages in Andhra Pradesh at every point in time except for 2010-11 and 2015-16. In 2010-11 and 2015-16, workers in Punjab have received lowest real wages. Moreover, the paper has discussed state-specific intercept coefficients to statistically check that there exists a significant difference in real wages in the manufacturing sector across states. The state-specific intercept coefficients are the coefficients for each cross-section units generated after a fixed effect regression model. For finding out the factors affecting real wages across states in manufacturing sector, panel data estimation technique is applied, precisely, fixed effect model as indicated by the Hausman test. The explained variable of the study is real wages. The explanatory variables of the study are labour productivity, capital intensity, concentration of firms and employment per factory. The results revealed that real wages are significantly and positively affected by labour productivity, capital intensity and employment per factory. The concentration of firms is found to have a negative and significant impact on real wages. The study has further suggested some policy measures to increase the labour productivity, capital intensity and employment per factory as it is having a positive relationship with the real wages of the workers.

Global Value Chain’s Impact on Employment in Developing Economies: The Impact of Second Wave of GVC Integration on India

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While the old theory of mercantilism is based on trade amongst countries to increase exports and curb imports, this absolutism has increasingly been challenged in the new world order. First, the likes of Ricardo formulated a trade theory governing a rule of competitive advantage, but now global value chains are defying old trade notions of production networks concentrated in rich economies. The global world has become a playground both for developed and developing economies, as a manner to increase trade and become integrated with the world production order. As no country is big or large enough to hold all means of production, multinational corporations are relying increasingly on
production networks to fulfill their demand. Thereby, generating employment not in one but in multiple countries with competitive advantage playing its part in assignment of trade.

Global Value Chains or GVCs have evolved to be crucial for the development of developing economies having implications on global trade, employment and integration of firms and workers. The fragmentation of global production network has provided developing economies a plethora of opportunities to integrate with the global economy.

Studies suggest that in 2011, 33% of the global GVC trade was contributed by developing countries. Previous studies for developing economies highlight that employment creation and wage gains are biased towards skilled workers. In the light of technological advancement, the study attempts to discuss the implication of trade in global value chains on labour force participation, mobility of workers, skill of the employees, and section of employment in the Indian economy. Automation and technological advancement have different impact on GVC participation of developed and developing countries as the abundant unskilled labour in developing counties tend to participate in lower-skilled segments of value chains.

Meanwhile, India’s participation in global value chains has risen from 57th place in 1995 to 45th place in 2009, according to the OECD Trade in Value Added (TiVA) Statistics. The objective, thus, of the study is to assess the impact of GVCs on jobs in the context of the Indian economy.

With the advancement in technology, the demand for low skilled workers decreases more as compared to the high-skilled workers. However, economies like India, with increased consumer demand and expenditures, are generating new demand for labour.

While the literature on GVC and labour market is scarce and mainly inclined towards the study of developed countries, we attempt to decipher both an approach as well as an understanding of global value chains for a developing economy like India following methodologies of some of the important studies.

For instance, to understand the impact of GVC on employment at country level, scholars have used a GVC-based structure decomposition analysis—identifying how much of change in employment is caused by each factor—to understand the factors affecting change in employment at country level. The factors hence determined are domestic final demand, domestic production technology, exports and imports.

Others, on the other hand, assess how various factors impact employment via GVC routes by decomposing the change in a country’s employment into change in labour productivity, change in GVC production networks, and change in final demand for China, India, US, Germany and Japan. All the countries are reported to have increased employment due to increased GVC participation. The study asserts domestic and foreign final demand to be the crucial factor for employment growth and labour productivity to the factor leading to reduced employment.

Yet other scholars suggest increased employment from developing economies with increased GVC participation. More scholars study firm-level data for OECD and emerging economies of Brazil, India, Indonesia, China, and South Africa and fixed-effect regressions. Their results suggest that firms with high international linkages have higher employment and higher wages.
But there are studies that point to a contradictory trend. Banga (2016) suggests a negative relation for the Indian economy between backward linkages and employment. The change in employment is attributed to the dynamics of production structure within GVC, domestic consumer demand and foreign consumer demand.

Dynamic Linkage of Government Expenditures and Economic Growth in BRICS Countries: An Empirical Panel Data Analysis using Fixed and Cross Section Random Effects

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This paper tries to investigate the impact of government expenditures on the economic growth of BRICS economies. Three different measures have been used to represent economic growth; these measures are the gross domestic product (GDP), growth rate of GDP and GDP per capita. Later, these variables have been used as endogenous variables. Similarly there are four categories of government expenditures viz., educational, health, defence and total public expenditure. The main aim of the study is to investigate the impact of these variables on the economic growth of BRICS nations. Due to unavailability of data on South Africa, the study is carried out by excluding this country. Data of the selected countries are collected for the period of 2005 to 2015 from the BRICS statistical publications 2017. Data have been tabulated in the form of balance panel by using four countries as cross-sections and analysed using panel data analysis fixed and cross random effects. Before applying panel data analysis techniques, different tests of panel unit root have been used to check stationarity of different data series. These tests are used at level, first and second difference. All the data series of exogenous and endogenous variables are found to be stationary at second difference. Before panel data analysis techniques, the data series of all the variables have been converted at second difference. The empirical findings of the study show that education and defense expenditures are showing significant positive impact on GDP and GDP growth rate. These two variables are demonstrating the inverse impact on GDP per capita. Health expenditures have positive significant impact on GDP per capita and negative impact on GDP growth rate. Total public expenditures are not found to be significant in the case of all the three endogenous variables. The outcome of study will be lucrative for policymakers for formulating various economic policies for enhancing economic growth of respective country. Moreover, this study will also have social implication that society will get to know how different expenditures incurred by government are helping the growth of nation. Society may get motivated for participating with government in different development plans of the country. They may feel their responsible for timely and honestly paying different taxes to boost the economic growth of country.
TECHNICAL SESSION 1.6

Impact of Economic Slowdown in the Indian Economy
Especially on Labour Class

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The GDP growth of Indian Economy has touched the six year low in the first financial quarter of April-June (2019-2020). It touched 5.8% growth in January-March, although in nominal terms, India’s GDP grew by 7.99% which is also the lowest since December 2002. The key sectors bearing the brunt of Indian Economy slow down are agriculture, automobile, real estate etc. This paper intends to highlight the impact of slowdown on the Indian economic and especially on the marginalised groups in India. This is done by looking at the changes in two important aspects namely, on economy, and marginalised communities who are the socially and economically most disadvantaged sections of the India society.

The $100 billion automobile industry that employs 370 lakh people and contributes 12% to the national GDP, is suffering from huge slow down. Around 3 lakhs jobs are lost, sales have gone down and the automobile industry appears to be going in reverse gear. The official data released by the National Statistics Office (NSO) confirms that. Weaker consumer demand and slowing private investments are the two key factors behind the Indian economy slow down. Eight core sectors have registered negative growth of just 2.1% in July, compared to 7.3% in the corresponding month last year. According to the Centre for Monitoring Indian Economy (CMIE), the overall unemployment in India has now touched 8.2%, with a high urban figure of 9.4%. Marginalised, at the lowest end of the economic and social ladder, have to face double impact due to this slow down. The bulk of marginalised in urban areas are without land, they work mainly in the unorganised sector where jobs are reducing. Secondly, maximum marginalised communities are living below poverty line. Their number may go up if the situation remains same for longer. Therefore, all the sectors of the economy and communities need special and target based remedial measures to take India out of the state of economic slowdown and further deprivation.

Conceptual Framework of Work-on-Demand Platform Economy in India:
A Case of Beauticians Providing Home Based Service Work in Delhi-NCR

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The world of work has experienced the advent of a new pattern of organisation where on one side the future of work is seen as one freeing people from drudgery while on the other side it is seen as making work highly precarious and under control. The paper would look at platform economy as the case of a new form of employment. The study majorly presents an operational framework for understanding working within the platform economy. The platforms targeted in the study are the ones
involved with local skilled manual service provided at home by beauticians. The work is not something new that originated in contemporary times but has been traditionally provided in India and have been both demand-based and home provided. The workers that were traditionally introduced to their clients through the social network are now, under the digital platform, set up through online platforms. Thus, when platform enters an already established economic structure, what changes they provide to their workers to attract them into taking up the platform as the alternative economic source.

The study is majorly literature review based. It also uses case study-based method and includes the case-study on ten beauticians working in platforms in the Delhi- NCR area.

The object of the study is platform economy which includes service providers, customers and an intermediary (platform). The major idea behind the platform economy is re-allocation of wealth away from middlemen to across value chain towards producers and customers. But in cases of the privately-owned platform, the platform itself becomes the mediator between “self-employed” and “customers” and takes up the task of a traditional mediator. The proposed idea is to make the process frictionless and provide speedy service through digital intermediation between matching of a large pool of workers and customers. This fluid and temporary networked collaboration for production and sale of goods and services dissolve immediately after completion of the task and the individuals set on seeking new assignments. The study presents a detailed relationship between the workers, customers and the intermediary. These include both the direct and indirect power relationship between the three with major focus of the service provider. Besides exploring the working the platform from within, the study also explores the relationship of the platforms with the outside environment such as the industries providing the raw material for platform works and like. The work process of the service providers is explored in detail and their impact on the service providers are observed keeping economic sociological understanding in the backdrop. The paper would explore the idea of the service provider as an entrepreneur as well and try to place the service provider in the whole nexus. The study focuses on the consumers as well and explores the changes experienced in the social setting for the same. The study understands platform by looking at aspects of control, gamification, reputation, security, trust, McDonaldisation and resistance among other things. This would involve critiquing the whole narrative which promotes self-exploitation and alienation. The paper would touch upon how the organisation hides behind ‘neutral’ technology to manage the workers in the new form of work.

Research and Government Sector Jobs:
A Gender-Based Study in Indian Perspective

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The theory in educational literature says that higher level of investment in education enhances the chances to get better employment. The government of any country is also promoting higher education through various schemes financial and others. The students are going for higher and higher levels of education to get better returns, in terms of jobs. The highest level of degree in the educational system, is
conducting research. Students see the need to educate themselves to add value to get an advantage into the job market (government as well as private). In Indian society, government sector jobs are the most desirable ones, so this paper focuses on government jobs for researchers. The paper attempts to find out the relationship between the higher level of education; i.e. research and government jobs in India. Females are the almost half population of any nation, and they are the discriminated ones. Gender-Based discrimination obscure the inclusive growth of the society as a whole. The patriarchal culture of Indian society keeps half of the population on the margin. Therefore, this study also examines the research and employment opportunity from a gender perspective. This is a quantitative study using the IHDS-II dataset. This paper has been examining Ph.D. research scholars and their employment in government sector jobs. Regression analysis has been applied to know the findings for the study. Government employment outcomes are poor, especially in the case of female researchers. The findings indicate that there is a need to link positively the higher education attainment and gainful employment.

In our descriptive analysis, the odds of having a government job increases by a factor of 12.499 when the individual is having a research degree while keeping other factors constant. And the odds of having a government job increases in favour of males by a factor of 3.097, keeping other variables constant. These results indicate that by using secondary data of IHDS-II, the research degree holders have higher chances to secure jobs in government sector whereas the female researchers have low chances to get a government job in comparison to their counterparts. The study points out the policymaking that must favour the research environment in the field of higher education that will bring demographic dividend in favour of the country. Half of the population should be encouraged to take up higher studies so that their betterment could bring out the holistic development of the family in particular as well as society in general. However, lack of government jobs for female researchers might be influenced due to a vast array of causes which could be societal or economical as well. A study that investigated further in this array would be better to comment on the lower representation of female researchers into government sector jobs.

Exploration of the Trend in L and K Contribution of the Output in the Indian Textile and Garment Industry

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The Indian Textile and Garment Industry, with its $120 billion size that is slated to grow up to $230 billion by 2020, accounts for 2% of the GDP, 10% of the industrial production and 14% (in terms of weightage) to the index of Industrial production (India Brand Equity Foundation, 2017). It is one of the biggest foreign exchange of earners of the economy (15% of total export revenue) and accounts for 45 million direct employment (India Brand Equity Foundation, 2017). An estimate by the Centre for Monitoring of the Indian Economy indicates that the share of women in the total workforce of the Textile and Garment sector is around 80%. The significance of this lies in its low capital and high labour intensity along with low entry barriers that offer ample scope of entrepreneurship. In recent
time, since the phasing out of the MFA (Multi Fiber Agreement), the sector has been witnessing rapid expansion in both the volume and value terms and thus, presents itself as a sector with a lot of potential for direct and indirect employment generation for a labour surplus economy like India.

Developments in the area of automation in manufacturing poses a major employment challenge for a sector like Textile and Apparel that has historically been a labour intensive one with relatively higher share of female workers as compared to other industries. The purpose of this paper is to explore the trend in capital and labour contribution of total output of firms in the Textile and Garment (T&G) sector over the last 20 years. An assessment of the trend in output share of these two factor inputs is important for the sake of a descriptive understanding of the extant situation. Further research in the direction of likely future scenario in terms of K (capital) and L (labour) substitutability can be built on the current understanding of the situation.

A study done by Biswanath Goldar of the ICRIER presents an alternative methodology of calculating the Total Factor Productivity and concludes that the declining share of wages in registered manufacturing units is due to the decline in the relative marginal productivity of labour. The study further concludes that the trend in the growth rate in employment during mid nineties was negative and the trend in growth of value added was insignificantly low at 0.5% during the period. The paper estimates Translog production function for the entire manufacturing industry in India using panel data of 17 two digit industries for the period of 1980 to 1998. Time as a variable has been used in regression to de-trend the data along with the use of interaction terms, Goldar (2004).

A 2017 paper on the productivity trends and determinants of exports competitiveness of Indian T&G firms has concluded that growth rate in GVA is at a slower rate, Dhiman and Sharma (2017) by regressing the Gross Value Added on Capital Productivity, Labour Productivity, Unit Labour Cost and Real Effective Exchange Rate. An analysis of the productivity data based on interviews conducted on a sample of 80 garment manufacturing firms using variance technique revealed significant productivity enhancement scope. The productivity level was found to be lagging behind the European countries and resulting in neutralising the benefits of low wages in India, Bheda (2002).

The ‘intercept’ term has been interpreted as the level of technology or total factor productivity and the coefficients denote the partial elasticities. This equation can be estimated for each year using firm level sample data on total output, wages and depreciation on capital. All these variables are reported in the standard balance sheet and profit and loss account of firms. The basis of sample selection is stratified sampling. The population data, which consists of around 200 stock exchange listed firms in the T&G, would be divided into 4 quartiles based on standard statistical procedure of quartile stratification. For every year, from the last 20 years, a total of 40 firms would be selected, 10 from each quartile or each stratum.

The OLS regression would produce estimates for , and . The production function thus generated would be an estimation of the average output of all the firms. Using the data on firms in the sample, the coefficients and can be calculated for each year and subsequently the and for each year can be computed. The trend in the contribution for the last 20 years can further be analysed to produce average annual change in both the contribution percentages. From the preliminary analysis, it is clear
that for the Textile firms, the number of establishments, employees and capital stock have shown a decelerating trend while for the clothing firms, number of establishments and employees have shown an increasing trend.

**Does Globalisation Influence Employment?**

**An Empirical Investigation of South Asian Countries**

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Protectionism paradigm saves job in the short run and slows economic growth in the long run, though jobless growth is assumed to be high tax to the people of a nation. The globalised world reflects economic, political, social, and homogenisation of cultural integration that enhances the sphere of jobseekers. It is almost a dynamic process that construes the death of distance between the nations subject to the degree of openness of the concerned nations and it depends on the willingness to be globalised of the concerned countries. Cross-border trade in goods and services, technology, flows of investment, workforce, and information in post globalisation era might enhance the welfare of the global people, job opportunity too. UN chief Kofi Annan in 2000 blamed the industrialised countries for erecting trade barriers to exclude developing nations from the benefits of global trade. Despite the occurrence of trade barriers, the world’s export as a share of global GDP has climbed from 8% in 1950 to 26% in 2000. In spite of the evolutionary or reforms process of globalisation, the changing scenario of employment pattern in the new millennium is perhaps explained by changing profile of habits, taste and preferences, lifestyle including food-habits. Second, the impact of technological innovation on employment generation or its ruination should be taken into account. Third, reforms or changing the profile of government policies are equally relevant to generate new kind of employment as the host country has to accommodate FDI facilities etc. South-East Asia has been relatively successful in attracting FDI because of, probably, sound business environment. In contrast, South Asia is not able to pull enormous FDI compared to Southeast Asia. Unemployment has been reduced in some East Asian countries like Korea, Taiwan, Hong Kong, Singapore, Indonesia and Malaysia due to change in technology-induced government policies.

The question is how do we measure globalisation? There are many factors that play a vital role in defining globalisation. We identify KOF Globalisation which is an index of the degree of globalisation of countries constructed by Axel Dreher. The Index makes use of 24 variables covering three areas of globalisation: economic, social and political globalisation. Data for each variable are transformed into an index on a scale from one to one hundred, where 100 is assigned to the maximum value. We refer to related research works available in the literature to justify the relevance of our present study when not enough studies are done with respect to employment generation in South Asian countries.

Our objective is to examine empirically how globalisation has affected overall employment generation in the South Asian countries during the period 1991 to 2016 with the application of Globalisation Index. Time series data set on employment-population ratio from World Bank site are
taken for the same period. To test whether a series suffers from the “unit root” problem, we apply the augmented Dickey-Fuller (ADF) test. If a series suffers from the unit root problem and if its first difference is stationary, then the series is Integrated of Order One \([I (1)]\). There is a basic question regarding the choice of lag length. The best practice is to apply the concept of optimum length that is done on the basis of Akaike Information Criteria (AIC). We apply the well-known Engel-Granger co-integration test in order to examine whether the series are co-integrated or not. We apply the Engle and Granger method of error correction for observing the long-run relationship between employment ratio \((Y)\) and the extent of globalisation \((X)\) variables. Here we follow the Granger method for testing the direction of causality between employment ratio \((Y)\) and the extent of globalisation \((X)\) of the selected countries.

The graphical view shows employment-population ratio in Nepal tops the list and Afghanistan is at the bottom. So far as globalisation is concerned, Sri Lanka and India top the list and, Afghanistan and Bhutan remain in the bottom of the list.

Empirical results support that the change in the globalisation index makes a cause to change in employment only for Bhutan while a change of growth rate of employment makes a cause to change in the rate of globalisation for Maldives and Nepal. Thus, the extent of globalisation and employment generation in the South Asian countries do not have strong interrelationships. Relatively better employment scenario of any country implies that prevailing working environment is supposed to be friendly that might create better business environment (good governance too) and hence foreign MNCs are likely to be induced to invest funds in Maldives and Nepal or employment-multiplier effect may work due to better employment indicator and an increase in consumption demand. Better consumption level backed by better employment scenario might favour market potentiality too. Second, sound employment profile maybe associated with relatively export-based activities, an indicator of globalisation, that might raise the degree of globalisation in Maldives and Nepal.

The Productivity Impact of Globalisation in Industry

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The growing interdependence of economies, cultures and populations in the world brought about by cross-border trade in goods and services, technology, the inward and outward flow of investment, human capital and information are termed as Globalisation. Globalisation brings with itself the liberalisation of trade and foreign direct investment which leads to greater competitive pressure on domestic firms and because of this, firms have to improve productivity to survive. FDI brings technological diffusion through knowledge spill-over which increases labour productivity and facilitates a faster rate of growth of output. Trade liberalisation enables firms to use high quality parts, components and machinery at lower prices resulting in improved productivity. Given this hugely productive, assimilative, allocative and resource transfer capability of globalisation, it could be said that opening up of economies to global
market forces is good perhaps an important way to promote employment and labour productivity. The export-oriented economies have done better in terms of raising labour productivity, living standards, wages and employment in a sustained manner.

The principal objective of the present study is to analyse the impact of globalisation on labour productivity in the Indian industry during the period 1991-92 to 2015-16. The share of FDI and trade of goods in industry in GDP respectively has been analysed and growth trends in FDI and trade of goods in industry respectively have been examined.


The productivity of labour and capital has been calculated and results revealed that labour productivity ratio has been on the rise since 1991-92 from 0.04 to 0.48 in 2015-16 and capital productivity ratio increased from 1.35 in 1991-92 to 2.25 during 2006-07 but fell down to 1.78 in 2015-16. The labour productivity showed tremendous growth (CAGR) of 0.11% over the study period and capital productivity recorded a growth of 0.01% only. The share of FDI inflows in GDP is very small remaining less than one during 1991-92 to 1999-00. Thereafter, the ratio gathered momentum (1.06 and 1.01) in 2000-01 and 2001-02 respectively and after becoming less than one in 2002-03 and 2003-04, improved dramatically (2.13) in 2005-06, which entails growth in the domestic economy, improvement in the investment climate as well buoyancy in FDI flows. The share of Trade of goods of industry in GDP is consistently rising, particularly over the decade to 2010-11; from 6.72% in 1991-92 to 57.46% in 20010-11, thereafter it showed a tendency to decline reaching 43.63% in 2011-12 and further decreasing to 36.95% in 2015-16.

Overall, during (1991-92 to 2015-16), the compound annual growth rate of imports and exports in the industry was recorded at 0.18% and 0.16%, respectively. Accordingly, the compound annual growth rate of trade has been recorded to be 0.17% and of FDI at 0.33%.

The strength of the relationship between labour productivity, FDI, trade, output, emoluments, capital and employment in the industry has been figured out. It is observed that labour productivity has a very strong positive correlation with capital (0.982***), output (0.973***), and trade (0.965***), implying that growth of capital, output and trade greatly influence the growth in labour productivity. It is also seen that labour productivity has a strong correlation with FDI (0.861***).

The impact of foreign direct investment, trade, output, capital, employment and emoluments on labour productivity has been analysed in industry. The multiple linear regression results showed that the estimated coefficient of globalisation variable trade is positive and statistically significant. The value of the coefficient of Trade is 0.165*** suggesting that a 1% increase in trade will increase labour productivity by 16.5% in industry. The industrial variable capital is positive and statistically significant in its influence on labour productivity which connotes that 1% increment in units of capital has 15.4% increases in labour productivity. The estimated coefficient of FDI negatively and significantly impacted labour productivity in the industry.
This implies that the productivity of labour in the industry is driven by trade and the availability of capital during the study period. The inflow of FDI as percentage of Gross Domestic Product is increasing over time; however, the global share of FDI in India is very less when it is compared to other developing economies. Lack of proper infrastructure, high corporate taxes and limited export processing zones are considered to be major hurdles for low FDI into the country. Therefore, there is a dire need of adopting innovative policies and good corporate governance practices on par with international standards, by the Government.

**Are Mergers and Acquisitions Improves Labour Intensive Technique in Indian Pharmaceutical Industry during Post Merger Period?**

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Globalisation compelled firms to restructure their operations in various ways and M&As played a significant role for firms in reconfiguration of their production and managerial operations and provide firms an opportunity to avail economies of scale and scope by integrating assets, marketing and production strategies. These major factors have resulted in this sudden growth of M&As deals. These are facilitated by favourable government policies, capital flow, economic stability, corporate investments, and changing attitude of Indian companies.

The present study takes into account the mergers and acquisitions in the Indian pharmaceutical industry from 1994 to 2017. For the purpose of this study, the year 2005 has been taken as a benchmark, since it had the highest M&A activities (95 to be exact) in that year. The Competition Policy Act of 2002 had been enacted in January 2003, to establish a competition commission of India (CCI). This commission aimed at checking the anti-competitive activities such as the formation of cartels, collusive bidding and consolidation, via M&A, which could cause market dominant abuses. The entire period is divided into two phases as pre-merger period (1994-95 to 2003-04) and post-merger period (2004-05 to 2016-17). The study was based on secondary data compiled from the Ministry of Statistics and Programme Implementation (MOSPI) and the PROWESS database.

Most theoretical stochastic frontier functions have not explicitly formulated a model for the inefficiency effects. Empirical studies have raised the issue of the explanation of the inefficiency effects. These studies adopt a two-stage approach. The best practice level or a frontier is the production function giving the maximum possible output given a set of inputs. However, in order to reach the best practice level, knowledge of this level or the frontier is needed and also the distance from the frontier.

Studies have also analysed the general formulation of the Cobb-Douglas varying-coefficients stochastic production frontier in terms of panel data for the post-reform performance of the manufacturing sector in India.

In general, theoretical perception for the important motives of M&A are: to attain economies of scale, reduction in transportation and distribution costs, saving of costs, duplicate R&D activities, cheaper raw materials due to the increased size of purchases, better management, and pecuniary gains.
Existing studies have reported a mixed impact of M&As on the financial performance of firms such as profitability, liquidity, asset value and no physical parameters like productivity, growth, technical efficiencies, etc. These raise an important question: has the wave of M&As in the post-reform era helped Indian firms in improving their performance? This gives rise to certain issues in the sphere of M&As which need to be investigated.

In this perspective, the proposed study makes an attempt to examine the impact of mergers and acquisitions on physical parameters of the Indian pharmaceutical industry.

The result of pre-merger period shows that the non-fulfilment of Hicks-neutrality tests is that technical change in this industry involves a technical bias. The coefficient of \((\ln L)^t\) is negative while that of \((\ln K)^t\) is positive, which suggests a labour-saving bias of technological progress. Further, in the estimated is statistically significant at 1% level and is negative. A significant, along with a negative, implies the existence of technical inefficiency that increased over the years.

Implications of New Farm Technology: A Case of Small Peasantry in Punjab

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The ever-improving scene of the technologically evolving agricultural economy of the Punjab state, especially post green revolution, seem to have left the small peasantry reeling under the stress of keeping abreast with the required innovative improvements. Though the state owns a large number of machinery and equipment that facilitates augmentation of productivity, the share of the small peasantry in this is meagre. The marginal and small farmers own just 13 and 31% respectively, of the total tractors in the state. The appreciating cost of production due to ever-improving methods and mode of production and also to reap the maximum possible productivity has squeezed the crop profitability and economic surplus of the farmers. The surplus left post farm and domestic consumption expenditure from farm income has become meagre and was even negative in the state. It is worth mentioning here that the economic surplus of the sampled marginal farmers from agricultural activities alone turned out to be negative to the tune of Rs 8,600. Even when supplemented by non-farm income, the annual surplus was approximately Rs 18,000. This highlights the plight of the farmers that were dependent on agriculture alone to make a living as it was hardly possible to survive without earning additional income from non-farm. On average, a small farmer was estimated to be earning an economic surplus of Rs 79,780. The small holdings though better off than marginal holdings are still highly dependent on non-farm earnings.

In Punjab, as much as 71% of marginal households and about 59% of families of small farmers of the state were found to be living below the poverty line. However, there was a variation in the level of poverty among these farmers in different zones of the state. In zone-I around 31% of marginal
farm families, in zone-II about 22% marginal farm families and in zone-III around 24% of marginal farm families were living below the poverty line. Though relatively less severe, the situation of small farmers was no better than marginal farmers. At the state level, 12.86% of families of small farmers were living below the poverty line. Zone-wise analysis indicates that in zone-I, about 16% of the small farm families were living below the poverty line. Similarly, 12% of the small farm families in zone-II and 12.82% of small farm families in zone-III were living below the poverty line.

Although Punjab state is known as an agriculturally developed state of India it still has a large number of small farmers trapped in the clutches of poverty. To keep these farmers abreast to the fast pace technological innovation and the struggle to remain productive, it is crucial to address the farm profitability of the marginal and small farmers amidst the rapidly increasing fixed and variable costs. The state should provide the farm inputs at a differential rate of subsidy to reduce the cost of production and to raise the farm income level. Already, the subsidies are being provided to the agricultural sector; however, the reach of these subsidies is not justified as the beneficiaries are not always the ones that are in dire need. The need of the hour is introduction of smaller farm-friendly technology which would be cost-effective; organisation of a large number of farmers into cooperative farmer societies to extend the benefits of joint ownership of the expensive farm technology; subsidising and rationalising the existing subsidies for the required expensive machinery and equipment; and setting up of more farmer service centres to facilitate custom-hiring of machinery. These steps are imperative to ameliorate the plight of peasantry and to facilitate them to remain abreast the fast pace evolving technological growth like in most of the developed agricultural economies.
Inclusive Technology for Organisational Sustenance in a Globalised World

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Inclusive economic growth through job creation was the primary intent of ‘Make in India’ programme (2014) of the Government of India. To make India a global manufacturing hub, a series of measures like FDI, implementation of intellectual property rights, innovation, skill development, and a renewed focus on manufacturing sector were initiated to encourage multinational and domestic companies. Since the launch of the ‘Make in India’ programme, between the year 2014 and 2016, India could witness a 44% increase in FDI (including equity). From the year 2018-2019, we started witnessing a decline in FDI. From October 2017 onwards, we have also been witnessing a decline in domestic investment (investment as percentage of GDP). Even in exports of labour-intensive manufacturing goods, among emerging Asian countries, we find India’s share is decreasing, while countries like Vietnam, Indonesia, Cambodia and Bangladesh are witnessing a rising trend.

Job creation and inclusive economic growth gradually eluded India. In between two serious economic policy decisions, like; demonetisation and introduction of GST (Goods and Services Tax) could have further dragged Indian economy down, eroding growth prospects. Although we have the argument that the imminent global economic recession has to be blamed for this; we must not forget in globalisation index, India is still ranks low with a score of 52.38. However, compared to the period of subprime crisis of the year 2008, the situation now has changed as worldwide, capital markets, goods and labour are more integrated. An increased spate of globalisation now facilitates technology transfer, knowledge sharing, and mobility of workers. For years together India has neglected investment in education, healthcare and infrastructure. Effect of policies like demonetisation and GST, together with weakening global economy; now persuading economists to look for an alternative model for growth and sustenance.

Globalisation, technological change, and changing job composition complicated the process of economic growth in India, and today unanimously we all are agreeing that India is experiencing structural change and truly reeling under economic recession. In such a situation, it is necessary to explore a possible model that can successfully absorb the shock of economic recession and sustain. This paper explored the possible model of inclusive technology that can benefit the organisations and so also the economy, protecting the employment of workers, who otherwise could have experienced redundancy. The suggested model here is based on the author’s experience in managing change crises in some small and medium scale organisations in eastern India.

At the outset, the paper reviews the theoretical issues on globalisation, technological change, and job composition shift, and then examine the organisational issues, selecting two medium scale organisations in eastern India, where the author had the chance of playing a critical role in managing transition.
With new technology, organisations can be more productive and efficient, but its dehumanising effect on employees may make them alienated. Contrarily when inclusive technology approach is adopted, it can make both organisations and its employees more pro-active, productive, and efficient. Inclusive technology approach insular operations activities of the organisations, partnering with all stakeholders, activating the interfaces between organisation, employees, customers and suppliers. In the process organisation can benefit the society, balancing various stakeholders’ needs.

Although the observations are based on experience in two organisations; which is certainly a major limitation of the study, it is possible to replicate such an approach in other manufacturing and service organisations too, going for technological change with a human face.

Economic Integration and Labour Income Share in India

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Trade and Globalisation have intensified demand preference for quality labour, that embodies knowledge and skill to enhance production capacity on one hand, and on the other hand, it has changed lifestyle and consumption behaviour of the society. Consequently, this has led to a significant change in the composition and structure of the economy, and also the trade structure. In this context, this study examines the impact of economic integration through trade openness and financial integration on the labour income share in India. The research questions are twofold. First, how global economic integration affects labour income shares at the aggregated level? Second, how global economic integration affects the labour share at the disaggregated industry level?

This study contributes to the existing literature in various ways. First, we analyse the impact of global economic integration at the aggregated economy. Second, we also estimate the impact of financial integration, and trade integration through trade openness and offshore by considering 27 industries of an economy following India KLEMS classification. This analysis is new as there is no study that uses 27 industries of KLEMS in dealing with trade openness and offshore in the context of India. The findings show that trade openness and financial integration, and TFP are significant in explaining labour income share in the total economy. These findings are confirmed from the disaggregated industry-level analysis.

The study focuses on the effect of global economic integration on labour share at the aggregated level and sectoral level in India. For the aggregated level analysis from the year 1980 to 2015, we have used time series methods, particularly the Auto-regressive Distributed Lag (ARDL) method. ARDL cointegration technique is robust when there is a long-run relationship between the variables under consideration in a small sample size. The second part of the empirical analysis includes 27 KLEMS-sector over the period from 1995–1996 to 2015–2016. The endogeneity relations are expected between the labour share and productivity as a regressor. Due to several advantages, the panel system-GMM estimator is employed for the empirical analysis.

Our data set on total economy comprises annual from Pen World Table (PWT) and KOF database on the measurement of global integrations. The labour income share is the share of income accrued
to labour in the total income of an economy. Economic integration consists of trade openness and financial integration. Trade openness is represented by four alternative variables. They are trade index of KOF, the ratio of trade to GDP, export ratio to GDP and ratio of import to GDP. The other explanatory variables are total factor productivity (TFP), capital intensity (KIN) and human capital. The economic structure is represented by the contribution of structural change to labour productivity growth, which is calculated through the shift-share method.

The disaggregated industries data are taken from IKLEMS of RBI and Trade-in Value added (TiVa) of Organisation of Economic Cooperation and Development (OECD). The explanatory variables are trade openness, the ratio of import to total trade, offshore, capital intensity, TFP and sectoral value-added share.

The preliminary analysis in this paper has highlighted the declining trend of labour share from the mid-1980s in the Indian economy. The broad reason is that the wage rate has not been able to grow with labour productivity growth in contrast to the high growth of capital income during the period from 1980-81 to 2015-16. The empirical analysis both at the total economy level and disaggregated industry level point to a dominant role of TFP or technology and global economic integration in this declining trend of labour share. The important finding emerged from the disaggregated industry-level analysis is that TFP and offshore affect the labour share negatively

**Wage-Productivity Relationship in Indian Organised Manufacturing Sector:**

An Industry Level Analysis, 2000-01 to 2014-15

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This paper makes a modest attempt to analyse the trends and patterns of segment-wise wage rates in the organised manufacturing sector over the last one and half decade; 2000-01 to 2014-15, both at the aggregate level and at two-digit industry level. It also seeks to analyse trends in gross value added over the period and the shares of income of different segments of employees in it. Trends in and pattern of labour productivity is also analysed with particular focus on the gap between labour productivity and real earnings of different segments of employees in the sector, which is followed by an investigation of the wage-productivity relationship in the sector using the Annual Survey of Industry data at 3 digit level of national industrial classification.

The major conclusions from this paper are as follows: the employment stagnation of the 1990s continued until 2003-04, and after that, there has been significant growth in employment in the sector. All the categories of employment followed the more or less same trend. At the broad employment category, the composition of the workforce changed slightly. The increase in the nominal wage per worker has been almost crowded out by the increase in inflation over time while this is not the case with other categories of employees. The share of bonus and the provident fund has reduced sharply and the earning disparity among the different segments of employees has increased.
Labour productivity has increased significantly but its benefit has been concentrated on the supervisory and managerial staffs and profits in the sector. The situation is worse at the industry level in the sector. Real wage per worker has declined in 8 out of a total of 22 industries over the period of the study. The average decline in the real wage per worker has been 5.8% while the average increases in the labour productivity and real wage per supervisory and managerial staffs have been 119% and 86% in these industries. These industries employ about 51% of total workers in the sector. Therefore, about half of the total workers in the sector has experienced a decline of about 5.8% in their real income over the period of the study despite a substantial increase in labour productivity. Furthermore, the relationship between labour productivity and the real wage per worker per annum is found to be positive but very weak. Other things kept constant, a 1% increase in labour productivity translates into a mere 0.09% increase in the nominal wage per worker per annum. In other words, if labour productivity increases by 100%, the real wage per worker will increase by 9%.

It can be argued that the increase in the share of wages to supervisory and managerial and a marginal increase in the share of wages to other employees over the period may have come at the cost of fall in the shares of wages to workers, bonus to all staffs, and provident fund and other employment expenditures. The corporate profits have been even a bigger reason for these trends. Increasing incidence of contractualization in the sector is also one of the major explanations of these findings. Also, the increased capital-intensity and decreasing bargaining power of the unions in the sector has contributed to increasing the suppressing power of the capitalists, where the capitalists or the employers suppress the input costs by suppressing the real incomes of the workers. In this process, the capitalists appropriated more and more share of the increased labour productivity, resulting in stagnation or even a decline in the real earning of the workers.

**Technology and Globalisation:**

**Implications of the Fourth Industrial Revolution**

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On the base of classification of different ways in which the created knowledge is communicated, this paper attempts to discover the impact of the diverse forms of the globalisation of technology on the work culture of developing countries. Through mass media, social media, Internet and many additional communication channels, technology allows the transmission of knowledge to the globe at a much larger pace than in the past. However, this does not mechanically suggest that developing countries are prospering from technological developments only. On the opposing front, this has significance with the nature and kind of technology used and policies planned to implement the upgraded work culture.

The globalisation and technological advancements have made the international transmission of know-how, knowledge much easier and comfortable and in a way helping in the growth of the world economy. The load of science-and techno-oriented commodities has constantly increased the world trade, foreign direct investment (FDI) by multinational corporations (MNCs) is a significant vehicle for the diffusion of innovation across the globe. Implementation of existing regulations has weakened
over time as a result of both proactive steps taken by state governments as well as neglect of and complicity by the regulatory system.

Work culture has changed a lot from steam and water operated engines to mass production then indulgence into automation of work and now it’s the 4.0 era of Artificial intelligence and Internet of Things (IoT). The detailed form and scope of technological upgradation in the globalised world in the developing countries endure important consequences from their government support and actions, and implies towards significant active attitude towards innovative policies and framework. At the same time, one cannot overlook the consequences and cost of change of improving.

Technical growth within the 4.0 era growing and merging crossways the digital, physical and biological worlds; powerful shifts are being experiential across all businesses through the disruption of their incumbents, the development of new business models, and the reforming of the schemes of consumption, manufacture, transport and supply. In the 4th industrial revolution (IR), exact technologies will be significant but the factual changes will impact the financial and social systems that form common people lives and the way they live. The consequence and influence of the 4IR ‘web’ on government, corporates and the normal man in the way is extensive and all-encompassing.

There are some worries about the weakening of the ‘tech boom’, as a novel drip in private and public estimates of technology firms propose; however, there are also those supporters who deliberate the evolving uprising and technological revolution as a way of safeguarding long-term gains in efficiency and effectiveness, more operative supply chains, as well as better profit possibilities.

One particularly distinctive feature of the 4IR will be the wider application of AI However, experts are discussing the transformative impact of not only AI but also technologies such as robotics, 3D printing and biotechnology, on almost every industry - from manufacturing and retail, to healthcare and entertainment.

The 4IR has become a global trend that has resulted in new ways of making value and novel commercial models. This has increased collaborations among numerous diverse partners in world-wide networks of value creation. The full influence on the staff still needs to be determined towards the accomplishment of this. Nevertheless, technological growth or work culture up-gradation is helping mankind in making hectic jobs more user-friendly, time-efficient and easy going but still one cannot ignore the consequences of the same. Hopefully in the future with the help of technology itself, we will be able to find out the solutions for the same.

Changing Pattern of Employment in India since Economic Reforms

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Introduction of economic reforms in India was believed to result in higher economic growth and thereby faster expansion of employment opportunities. However, this did not happen. Growth rate
Theme 1: Technology, Globalisation and Work

accelerated but employment growth saw a deceleration. The present paper attempts to analyse the changing employment situation in the country by examining the changes in the labour force participation rate, worker population ratio, changes in the sectoral distribution of employment, employment status and condition of employment, and changes in the unemployment rate, and finally suggest some policy measures to tackle the problem to some extent. The present study uses data from 1993-94 to 2017-18 collected from various employment and unemployment reports of National Sample Survey Office. The decline in LFPR was significantly sharp among rural females as it declined from 33.0% in 1993-94 to 18.2% in 2017-18.

For urban females, its percentage share declined from 16.5% to 15.9% over the same period. In the case of rural males, LFPR declined to 54.9% in 2017-18 from 56.1% in 1993-94, while it improved marginally for urban males. WPR has increased marginally in the case of urban males from 52.1 to 53.0% during 1993-94 to 2017-18. WPR for rural females declined to more than half over the period under study. The change in employment was of cyclical nature. In the post reform period, the deterioration in employment was found to be larger among rural females. There is an urgent need for government intervention in the economy for generating employment opportunities for achieving the target of inclusive growth. The share in the primary sector's employment had been continuously declining due to the mechanisation of agriculture in India, but its share among females in the rural areas was still significantly large. The study found an occupational shift towards the tertiary sector for both males and females and in both rural and urban areas and this shift was higher among urban females. It was due to the fact that present education policies are highly biased towards generating employment in the tertiary sector especially in the teaching profession and banking sectors. There is a need for sound policies for inducing youth employment in the secondary sector and the need to promote the labour-absorbing industries, construction, manufacturing and agriculture-allied sector.

The share of the female workforce in rural and urban regular salaried employment has increased by 7.8 and 23.7 percentage points respectively, while that of casual labour has steadily declined during 1993-94 to 2017-18. During 2017-18, about 68.4% of the workers were engaged in the informal sector. Although the share of informal employment was declining over time, its share in employment was still significantly large. It is highlighting the fact that the majority of the workers in India are still working in the informal sector without job security and social security benefits. To improve the quality of employment, one should expand employment in regular salaried and self-employment works.

The study also reveals a huge wage gap between the male and female wages especially in rural areas; the females were getting only Rs. 297.96 per day as compared to wages for males which are Rs.451.11 per day. It is indicating discrimination against women workforce in the labour market in India. The wages received by casual workers were very low if compared to the wages of regular employees. In this regard, programmes and policies are also required to reduce the rising gender discrimination against women in the labour market. Women should be provided higher education facilities, required skills, equivalent wages, and regular and self-employment especially in rural areas. During 2017-18, the unemployment rate reached a massive scale which is a matter of great concern for the government and the policy makers as this problem will further raise many economic and social problems such as
lower living standards, poverty, greater income inequality, increasing in crime, etc. For tackling the problem, the government should generate employment opportunities and induce policies to improve the condition of employment in the country by providing self-employment and regular salaried work, formalisation of informal jobs, providing higher education and skills to the labour force, reduce gender discrimination against women workforce and proper implementation of employment generation schemes.

**Technology Parks as a Perspective towards Innovation and Employment Generation in Punjab**

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Till the beginning of the new century a piece-used and disjointed approvals to industrialisation through industrial and monetary-fiscal incentives were being opted. But a new technology-driven comprehensive support to a perceptible growth of the industry was needed highly. In today’s competitive world, the manufacturing sector needs to exploit new ideas by encouraging new technology for the growth of entrepreneurship, by introducing high-value-added products and services that spur the industrial competitiveness in the global market. An investment in innovation and technology always leads to an increase in productivity which further stimulates economic growth and higher living standard. Generally, technology and innovations perform a significant function of economic growth and sustainable development to promote the manufacturing sector. In this regard, Technology Parks would provide a stimulus to the manufacturing sector in creating educated employment in the economy. Such parks induce new enterprises and also create an environment for national and international firms to interact with each other and exchange knowledge and technology for mutual benefits.

Punjab has also been taking initiatives in building up specialised technology parks for giving a new level to the manufacturing sector in creating educated employment in the economy. For promoting industrialisation and entrepreneurship, the state government has been conducting experiments with infrastructure facilities for setting up technology parks in different sectors of industry and regions of the state. Therefore, an essential improvement in the investment climate and an extreme progress in industrial productivity is now necessary prerequisites to compete in an increasingly globalised and competitive environment of production and trade.

Punjab needs structural transformation coupled with the interdependence of investment and technological progress to enhance the importance of industries. The structural transformation is considered a healthy sign. For structural transformation in the economy coupled with technological transformation and investment in R&D activities. Punjab needs to enhance the industries of the state.

During the Eighth Plan, there was hardly any activity related to IT industry in Punjab. For a sustained development of the economy of Punjab and giving more emphasis on the development of IT sector, and generating modern infrastructure and integrated info-structure for encouraging
global competitiveness, the Government took an initiative to set up Technology Park in Punjab in order to stimulate micro, small and medium enterprises by creating a productive environment for IT entrepreneurs and also with the prospects to promote software industry through innovative activities, to influence the growth of industry in the state.

Technology Parks in Punjab were developed with the aim to contribute to the prosperity and development of industry and also to promote the culture of cooperation. Generally, it is believed that firms that perform in clusters have a number of potential business partners, suppliers, efficient manpower and technical expertise.

**Widening Gap between Policies and Ground Realities of Admission and Employment in Higher Education of Globalised India: A Case of Delhi University**

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This paper critically examines the Indian State’s agenda of promoting social justice in the times of ICT revolution and globalisation, through higher education in the light of Draft of National Education Policy and Sustainable Development Goal-4. State’s perspective on addressing the issues of caste and social justice are directly and indirectly is projected in the draft of New Education Policy 2019. This paper highlights the systemic loopholes on the ground in the form of improper implementation of reservation policy at the entry level of under-graduate programme, which in turn results in the shortfall of SCs and STs in the colleges of the University of Delhi. The paper also reflects on the DNEP focus on inviting private stakeholders in higher education as a parallel and contradictory development to the idea of social justice. For this, the author used recent social category-wise data of student-intake at under-graduate level in the academic session 2019-20 in the colleges of the University of Delhi. The data is examined in the context of the principle of “equality leads to efficiency” as highlighted by the Supreme Court judgment on the promotion of teachers of the disadvantaged groups in the Indian higher education. The paper problematises the state’s agenda of ensuring social justice through education as the document of DNEP repeatedly mentions the idea of ensuring equal and inclusive access to quality education to all but without mentioning a word on improving budgetary provisions for the same rather talks about ‘affordable education’ and inviting philanthropic contribution. This reflects that the half-hearted efforts made by the Indian state and the goal of ensuring social justice by offering quality and inclusive education in terms of SDG-4 remains elusive. At last, the paper comes up with some concrete policy suggestions for higher education, to be included in the draft of New Education Policy, 2019. The focused higher education policy includes higher public funding, proper implementation of reservation in the admission and recruitment processes, training and sensitisation of teachers, awareness of students and their parents for the rights of social-justice; and transparency in the provision of information about admission and appointment in the colleges and university.
Foreign Direct Investment and Economic Growth: A Comparative Study of India and China

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In developing economies where investment activities are sluggish, the role of FDI is very important as it directly stimulates investment. Therefore, it is imperative upon these economies to strike a careful balance among the different components or determinants of FDI without crowding out domestic entrepreneurship. In a country like ours, where FDI inflows continued to be by and large of the equity range, comprehensive and spread across a range of economic activities, it is pertinent upon the government and policymakers to highlight the role of FDI in the growth and development prospects and work on growing FDI substantially on both gross and net terms. And in a country like China where the industrial sector is dominant the investment promotion activities and cross-national industry-level studies on FDI show that more franchises or concessions are in the industrial sector which attracts FDI in such areas. In both India and China, we find the enormous role of FDI in distinct ways, therefore, it is very important to go for a comparative study of India and China so as to crack FDI goalmouths and succeed in trade and development marks.

For embarking upon such comparative study as far as FDI and economic growth are concerned, the present study extracted data from various reliable databases (international sources) such as International Financial Statistics (IMF), World Development Indicators (World Bank) etc. The annual data is used for India and China from the time period 1996-2017. To accomplish the study of trends in FDI since the 1990’s the methodology used is Annual growth rate, Decadal growth rate, graphs etc.

The general Model Equation used is FDI = f (market size, openness, labour cost, political stability, infrastructure, economic growth, corporate tax rates, and exchange rate). On the other hand, specific equation is: FDI = β₀ + β₁MS + β₂OP + β₃LC + β₄PS + β₅INF + β₆EG + β₇CT + β₈ER + ε

Where FDI is Foreign Direct Investment; MS is the market size; OP is trade openness; LC is labour costs; PS is political stability; INF is infrastructure; EG is economic growth; CT is corporate tax rates; ER is the exchange rate.

The population size of the country (in millions) is used as a proxy for market size, trade openness is used as a proxy for openness (X+M/GDP), and the real wage rate is used as a proxy for labour costs. The political stability index is used as a proxy for political stability, and the Railroad lines are taken as a proxy for infrastructure. As far as economic growth is concerned, it is measured through GDP per capita. The Real exchange rate is taken as a proxy for the exchange rate.

Our findings coincide with the practical global upward trend of FDI during the 1990s. Since 1990, the main determinants of FDI such as market size, trade openness, political stability, and economic growth have had a statistically significant impact on FDI inflows into India and China. In addition, overall, the determinants used in the present study are proven to be very important factors promoting FDI flows.
Productivity Trends of Indian Organised Manufacturing Sector

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The paper aims to analyse the performance trends (in terms of partial productivities and total factor productivity growth) of Indian organised manufacturing sector. This study is also concerned with technology and employment, thus a further attempt has been made to find out the relationship of productivity (in terms of total factor productivity), employment and technology (in terms of R&D). The analysis has covered different appropriate methods according to their suitability. Growth accounting method has been used for estimation of TFPG.

Although a significant and positive relationship between R&D and productivity and an inverse relationship between employment and productivity has been established by previous literature, we find no study that provide empirical evidence of such relationships on a sectoral basis, particularly in the context of the Indian manufacturing sector. To fill this gap, econometric analysis has been done to estimate the relationship amongst total factor productivity, employment, value-added and capital (physical capital in terms of capital stock and knowledge capital in terms of R&D stock) of Indian organised manufacturing sector by using ASI & Prowess database. Correlation analysis has been used to estimate such relationships.

The result shows that TFPG of the total organised manufacturing sector was negative in the pre-reform period but has improved and turned positive in the post-reform period. All four sub-sectors of organised manufacturing i.e. LT, MLT, MHT and HT have registered improvement in their TFPG during the post-reform period. Results of the present study are consonant with some earlier studies based on the Indian manufacturing sector. A significant rise has been registered in MHT industries whereas, in LT industries, least improvement has been noticed. The overall picture shows that Indian organised manufacturing sector is characterised by low productivity (though improved). The study has estimated that value-added has a significant and positive relationship with employment and R&D. Significant positive nexus has established among value added-productivity-R&D. A trade-off between productivity and employment has been seen in the organised manufacturing sector. R&D growth has a positive relationship with employment but such a relationship is weak (non-significant) in nature.

Employment and Earning Differences among Vocationally Trained Youth: Evidence from Selected Districts of Punjab and Haryana

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The high unemployment rate among youth has also resulted in several problems like social and economic problems in Punjab and Haryana. In this context, it becomes important to explore the employability and earning/wages pattern among vocationally trained youth. It also becomes very important to access the earning inequality and the reasons behind the inequality, i.e. it is due to
human capital endowments or discrimination. In order to feed into the better and long-term policy making, this study collected information from vocationally trained pass-outs (a tracer survey of both ITI and Polytechnic degree holders) specifically to provide in-depth analysis of their earnings and draw policy measures that would help in a long run sustained growth of non-farm jobs in Punjab and Haryana. The current study depicts that public sector employment among vocationally trained youth is less than 1%. On the other hand, only about 35% and 12% of vocationally trained youth are employed in the private sector and as self-employment respectively. Furthermore, the high NEET phenomenon among trained females would reduce their labour force participation and it is a big hurdle for socio-economic empowerment of females. The analysis of the computed results shows that females and youth from SCs suffer substantially lower economic returns. The high paid self-employment opportunities such as motor mechanic, electrician, manufacturing workshops are male-dominated. On the other hand, boutique, tailoring and fashion designing are female-dominated where the earnings are low. We observed the average monthly earnings of SCs are lower than Non-SCs (others and OBCs) castes in almost all categories such as general education, trade groups and types of employment. It is observed by decomposition analysis that raw earning gap between male and female is largely due to unexplained factors or discrimination. There is also a considerable difference in earnings of SCs and non-SCs with the same level of vocational training. Even though the youths belonging to the SC community can earn more because of the polytechnic diploma, their earnings are very low due to the discrimination factors.

The results of the current study reveal the quality of vocational training is insufficient to enhance the employment and earnings of vocationally trained youth. So, the policies should encourage high enrolment of females into Polytechnics. It also should be focused on increasing the availability of diversified trades such as food technology, healthcare services. The institutes should also focus on qualitative practical training and soft skill development for the poor and the socially marginal section of society. The minimum wage act for skilled workers should be properly implemented to help the new entrants.

An Empirical Analysis of the Regional and Industrial Distribution of Foreign Direct Investment and Economic Growth in India

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The wave of liberalisation and globalisation sweeping across the world has opened many national markets for international business. Private investment is now made by transnational corporations (TNCs) also called as multinational corporations (MNCs). These transnational organisations help to enhance world trade and investments due to their effective management, technology, financial resources etc. Recent developments in the international markets are the result of rapidly growing international business. The end of the 20th Century has led to embark a tremendous growth of investments at
the global level, trade and financial transactions accompanied by the integration and openness of international markets.

In the case of India also, major economic reforms of liberalisation and globalisation helped in attracting foreign direct investment (FDI) inflows in India, FDI has increased from US$155 million in 1991 to US$ 2,319 million in 2000 and further to US$ 34,417 million in 2014. Moreover, India’s share in World FDI flows also increased from 0.10% in 1991 to 0.15% in 2000 and further to 2.91% in 2014. However, there is much scope for attracting FDI into still neglected sectors and states/regions. Therefore, there is a need for in-depth study of trends and impact of FDI on the economic growth of the country at regional and industrial level.

Considering this, the paper seeks to examine (i) growth of FDI inflows at state and industry level, (ii) composition and structural changes in FDI inflows at state and industry level and (iii) the impact of FDI on economic growth at the state and industry level.

To realise these objectives, the paper has been divided into four sections. Section I studies the growth performance of state and industry-wise FDI inflows in India, Section II discusses the structure of state and industry-wise FDI inflows in India, Section III focuses on the impact of state and industry-wise FDI on economic growth in India along with conclusions and policy implications have been given in Section IV.

Keeping in view the above objectives, the study is based on secondary data covering the period from 1990-91 to 2014-15. For State-wise analysis, data have been taken from 2005-06 to 2014-15. Moreover, seven industries for the first period (1994-95 to 2004-05) as well as forty-five industries for the second period (2005-06 to 2014-15) have been taken into consideration. The choice of the industries and the periods depended upon data availability. For State-wise as well as for Industry-wise FDI inflows in India, data have been taken from SIA Newsletters (Various Issues). Data have been analysed by calculating growth rates, percentages and simple regression equations.

The study reveals that the state namely Andhra Pradesh, though has put a significantly positive impact of FDI on the growth of the economy but still, its growth rate was lower due to negative trend of FDI inflows while comparing with other regions. Therefore, a comprehensive strategy at the central and state levels need to be evolved to ensure a more equitable distribution of FDI inflows, so that deprived state may also benefit from it. Further, the impact of FDI inflows on the Automobile Industry was positive and significant but in comparison with other twenty industries, its growth rate was lower due to wider fluctuations of data in between the years. Thus, the government should revamp its whole framework, relax the entry barriers and provide better and transparent information on policy regulations and procedure in deprived industries. In short, FDI inflows are inevitable in a developing country like India and in this dynamic world, no nation can survive in isolation. Today, nations have no options but liberalise their economies with the rest of the world. FDI cannot be washed off despite its many negative implications. Under the circumstances, it is better to understand the pitfalls, frame the policies accordingly and cope up with the challenges of FDI.
Education and Employment: Service Sector in India’s Skill Policies

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This paper looks into the education and skill in India’s fastest growing sector i.e. service sector using the data from two NSSO rounds (61st and 68th). It has been argued since many years that there is a shortage of skill in the Indian labour market and there is an urgent need to skilled the Indian workforce (National Knowledge Commission, 2006; World Bank, 2007). Two main reasons for this is higher economic growth of the Indian economy since the last three decades and the demographic shift of the population in favour of the young population. It is the second reason which is important not only for skill and education but also for further economic growth. In India, the present Western education system came with the British establishment in late the 18th century. ‘TB Macaulay’s minutes’ and ‘English Education Act 1835’ were the foundation for the modern (western) education system in India. But if we look into the history of the education system in India before this century, it was based on the caste system and for centuries women and the persons from lower castes (as it is commonly termed) were deprived of getting an education. The profession of a person was already decided by the caste in which they were born and there was no way to change the job for the whole life. Hierarchy of work and skill in society was based on the hierarchy of caste in society. There was no economic basis for this pre-determined hierarchy which was based on illogical arguments of the rigid caste system. The politics behind the forceful imposition and rigidity of this hierarchy was the desire of the upper caste males to rule the society by establishing their hegemony to maintain their power without any challenge. The relationship between job hierarchies and skills need to be analysed carefully while keeping the social reality in mind. It is not necessary that those who work at the lowest ends of job hierarchy are unskilled as well. Also, today there is no guarantee that those who acquire “higher” skills will be placed at the top position in the job hierarchy. For instance, those who get high training from informal apprenticeship process may work as an independent self-employed worker (outside the value chain) or at the lowest end of the value chain as a home-worker. Therefore, the ultimate position of a person in the job hierarchy depends on many factors like the worker’s educational level; his/her personal and social characteristics etc. (Srivastava 2008). India has a large population of illiterate workforce in different sectors. It is led by the primary sector. The service sector has the least share of workers with no education or education up to primary level and employs the largest share of workers with higher education. More than 97% of workforce is without any technical education in the economy but in the service sector it is around 93% the least. There have been policies which address the skilling of the workforce engaged in the industrial sector since the early years of planning but there was no such specific policy for the service sector. The recent ‘Skill India’ programme is also not helpful in this regard even though some service sub-sectors have been listed where the government has planned to focus. But this is not enough as the biggest problem for the economy is to generate quality jobs along with the skilling of the labour force.
Scheduled Tribes and Changing Pattern of Occupation

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As per the Constitution of India Article 366 (25): Scheduled Tribes mean such tribes or tribal communities as are deemed under Article 342 of the Constitution. It considers that these communities suffer from extreme social, educational and economic backwardness on account of the primitive agriculture and allied practices, lack of infrastructure facilities, and geographical isolation. The primitive stages of Scheduled Tribes of India were held closed economy, lived in the forests and were fully dependent on the forest products, herbs, woods, etc. for their livelihood, but are presently facing several difficulties. Recently, the process of growth has adversely affected their society as well as livelihood occupational pattern. In order to supplement their income, the study reports that the migration tendency has increased among many tribal groups due to lack of sustainable livelihood in their origin places. Migration in the absence of a sustainable livelihood has become unavoidable in remote tribal areas of Madhya Pradesh, whereas industrialisation of parts of Madhya Pradesh and Orissa have led to migration of the tribal population from different areas of Jharkhand as unskilled and semi-skilled workers. As per the NSS 64th round on employment, unemployment and migration, about 11% Scheduled Tribal household had reported employment as the reason for migration. Some of these tribal groups became labourers in factories, industries etc., but did not get a decent place in the so-called civilised societies. Although under the influence of modern development, tribes are adopting other religious and cultural practices namely Christianity, Jainism, Islam, Buddhism, etc., which weakens their culture and civilisation. Almost the entire tribal population in Manipur and Nagaland is Christian, an overwhelming majority of the tribals in Mizoram and a large majority in Meghalaya is Christian, about one-fourth of the tribals in Assam and about one-sixth in Arunachal Pradesh are Christian too, and the schedule tribes of Sikkim are almost entirely Buddhist. It has been suggested by many researchers that the government should provide them livelihood in their own place to reduce migration and deterioration of their culture, civilisation and language. ILO has also recommended nations to make policies for tribal people to retain their specific identities, protect and preserve their culture, language and their original inhabitants. Recently NREGS has begun providing economic livelihood for the tribal community in their origin places and has become the way to economic, social and environmental sustainability for the Tribes of India.

Providing employment to schedule tribes was not among the original intentions or main objective of the National Rural Employment Guarantee Act (NREGA). However, wide coverage of schedule tribe community for the employment under the scheme (22.5% of the total person-days worked by STs in 2011-12 and 17.41% in the year 2018-19) and the act which permits land improvements works on land owned by SC/ST families ensures that schedule tribes of India benefit from the scheme in a certain manner. National Rural employment Guarantee Scheme as legislation for the job guarantee scheme was enacted on 25 August 2005 and it was launched on 2nd February 2006. It guarantees 100 days of employment a year to at least one member of any rural household who is willing to perform unskilled labour for the minimum wage. By combining rural development with livelihood
protection, NREGS focused on the work designed to develop infrastructures such as roads, irrigation, flood protection measures, drought-proofing measures, rural drinking water, rural sanitation and other development projects like land development, water conservation, etc. Such policies can help to prevent the migration tendencies among Scheduled tribes but such types of policies are not proving occupation to them for their livelihood on the basis of their indigenous skill.

The present study tries to focus on the increasing tendencies of migration among scheduled tribes - from their origin place to semi-rural or urban areas and their impact on the changing occupational pattern - from traditional occupation based on their indigenous skill to unskilled occupation. The study is conducted with the help of NSS and IHDS unit data set.
Skill Development and Employment in India

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Skill development is crucial for economic growth and social development. The demographic transition of India makes it imperative to ensure employment opportunities for more than 12 million youths entering the working-age annually. It is estimated that during the seven-year period of 2005-12, only 2.7 million net additional jobs were created in the country. To enable the employment-ready workforce in the future, the youth need to be equipped with necessary skills, education and training.

The National Policy on Skill Development was first formulated in 2009 to create a skills ecosystem in India. It acts as a guide to formulate strategies by addressing the different challenges in skill development. The objective is to empower the workforce with the required skills, knowledge and qualifications to make the Indian workforce globally competitive. Later over the years implementation of various skill development programmes in the country have necessitated changes in the policy. Accordingly, the National Skill Development Policy, 2015 was introduced. The policy aims to provide an umbrella framework to all skill-related activities carried out within the country, to align them to common standards and link skill activities with demand centres.

Unfortunately, the current size of India’s formally skilled workforce is very small. As per the latest survey by the Labour Bureau for 2013-14, only 6.8% of persons aged 15 years and above have received or were receiving vocational training, of which only 2.8% was through formal channels while 4% was through the informal system. In contrast, skilled workforce in other countries is much higher – Korea (96%), Germany (75%), Japan (80%) and United Kingdom (68%).

Poor literacy levels impede skilling through formal channels amongst the formally skilled labour force, 74% have higher secondary or higher education levels, and amongst the labour force with informal skills, 78% of the workforce has completed only middle or lower education. Such skewed nature of skilling can be attributed to two factors – a) the education level entry requirements in the current skill set-up make it difficult for workers with minimal education to access formal skills training; and b) lack of education also impedes the ability to absorb a higher-level skill

Unemployment and underemployment are acute in the Indian Labour Market. The vast majority of workers are illiterate, unskilled, or without formal training which results in low productivity.

“The challenge of Asia’s Policymakers, is not just creating jobs for the unemployed and the new entrants to the workforce but also improving their productivity earnings of the available jobs” (The Asian Development Bank (ADB) Key Indicators of Developing Asian and Pacific Countries). In India, 19.6% of males and 11.2% of females in urban areas possess marketable skills, whereas in rural areas the numbers are just 10% for male and 6.3% for female respectively. About 80% of the job seekers
enrolling for employment exchanges lack professional skills. Educated youths without professional skills constitute 69% of the total unemployed. All these data show the lack of identifiable marketable skills among the overwhelming majority of the workforce, not only in rural areas but also in urban areas. More than three million graduates and postgraduates are turned out from higher learning institutions but a majority of them lack the skills necessary for acquiring jobs in the growing sectors of the economy. Lack of trained persons becomes an obstacle for sustainable growth. So, there is an urgent need for skilled manpower for accelerating the growth.

In India, almost 95% of the workforce is either unskilled or have not undergone formal skill training. No company can grow without having a competent labour force. Competence is directly proportional to the skills and quality education. In a PIB release it is stated that out of 12.8 million youngsters who join the labour force in India every year, one in every three graduates up to the age of 29 remain unemployed (PIB 2016). This is mainly because of the skewed educational system existing and also a large part of the existing curriculum is irrelevant to employment needs.

Quality concern, lack of awareness, lack of infrastructure, poor quality of training and course curriculum, cost concern, poor response of the women, high dropout rates during training are some of the challenges of skill development in India.

The launch of Skill India mission is an important milestone for imparting Skill Education and training in India. Skills strategies should be followed by generating adequate employment opportunities to reap the fruit of a large number of Young Labour Force of India.

Smart Education and Future of Work in the Era of Globalisation and Artificial Intelligence

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Today, we are in the midst of a rapidly growing technological revolution. As the early 20th century economist Joseph Schumpeter observed, the most significant advances in economies are often accompanied by a process of ‘Creative Destruction’, which shifts profit pools, rearranges industry structures and replaces incumbent businesses. This process is often driven by technological innovation in the hands of entrepreneurs. Achieving the full potential of promising technologies, while addressing their challenges and risks would require effective leadership but the potential is vast.

On a fundamental level, it is imperative to know the impact of digital technology on the development of human cognition and the human brain. More broadly, this is a question about the co-evolution of technology and the human mind. Friedrich Engels’ influential unfinished essay ‘The Part Played by Labour in the Transition from Ape to Man’ emphasised the specialisation of knowledge, division of productive labour, and the role of technology arguing that the development of the human brain and society were intrinsically connected. Engels states at the beginning of his essay, “Labour is the prime basic condition for all human existence”. In a sense, we could say that labour created man himself.
Developing countries cannot afford to ignore technology because of arguments such as “Food first, technology later”. It is possible to get technology as well as bread, and sometimes it is technology that will help in getting bread. Assessing the factors involved in embracing digital technology as a cultural shift; such as digital awareness, digital literacy and the role of ethics, transparency and dissemination of information in developing economies is an important aspect of this research paper.

The rather poetic declaration in 1848 that “all that is solid melts into air”, was not just a vision but it was based on careful empirical observation of the everyday consequences of industrialisation. A general policy challenge, thus, is to increase among educators and policy-makers awareness of digital technologies and their potential impact. Therefore, learning sciences could have much to offer to research on digital technology and such mutual interaction would enable better understanding about how to use Artificial Intelligence (AI) and technology for learning in educational settings.

The metrics and semantics of the global debate on ‘Future of Work’ needs to factor in the emerging economies, such as India. Structural transformation is the less accessible part of growth and there is a need to look at which sector and organisations of production are going to drive job growth. Vocational training in India needs to move from the Anglo-Saxon Model towards the Germanic Model. The Anglo-Saxon model is based on the primacy of economics, whereas the Germanic Model is based on the primacy of society. Under the Anglo-Saxon model, production relationship is characterised by non-intervention in the market process. On the other hand, the Germanic model is based on a production relationship characterised by a community, with trade unions, employers, government working together in a tradition of reciprocal responsibility.

Translating ideas into solutions requires an innovation system that converts Science and Technology (S&T) research into innovations in society. Sustainable Development should be for broad vocational skills and India particularly needs to focus its resources on Research and Development. However, merely increasing R&D expenditure (especially private expenditure) will not help society become a ‘learning society’. The challenge is to transform knowledge and technologies into commercially attractive solutions through behavioural change communication and social entrepreneurship.

Richard Baldwin’s recent book, “The Globotics Upheaval: Globalisation, Robotics and the Future of Work”, talks about how changes due to Artificial Intelligence (AI) would create both winners and losers. He referred to ‘Globotics’ as ‘Globalisation + Robotics’. Globalisation is equal to Tele-migration (Remote Intelligence), wherein people sitting in one nation are working in offices in another nation.

Baldwin highlighted the theory of comparative advantage in the era of globalisation and new protectionism and how the new ‘digital cold war’ is more about virtual space rather than physical space. In Daniel Kahneman’s book called ‘Thinking Fast and Slow’, coding is equated to ‘thinking slow’ whereas machine learning to ‘thinking fast’. Thus, the future is unknowable but also inevitable.

Globotics is advancing at the explosive pace of digitech, exponentially rather than linearly. Digital Disruption is coming faster than most people believe, predictable but unexpected. In the words of Pascal Lamy, former director-general of the WTO, “Globalisation is painful because it works; it works because it’s painful”. Thus, there would come a time soon when ‘Artificial’ Intelligence would be known as ‘Augmented’ Intelligence.
This paper attempts to find the feasibility of adopting digital technology in education; to ascertain whether AI is adaptive to technological changes that have been brought about by the fourth and fifth industrial revolution. Is AI going to have a negative or a positive effect on the progression of education?

Technological improvements bring about a change in the current establishment of education. While these changes are consistent in developed nations, it is often rapid in developing countries, with institutions having no means or modes to properly execute the benefits promised by introducing AI into education. Will a revolution in education via digital technology increase the disparity and inequality between the rich and the poor? What will this kind of system of education do to reduce inequalities in our society? It is necessary to evaluate whether there would be an increase in gender disparity and marginalisation when it comes to access to AI in education.

**Challenges Faced by Indian Women Workers in New and Emerging Technologies**

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Many labour legislations have come up for the welfare of women workforce, but the implementation of the same is another challenge. The major challenge which has been faced by women is gender bias, inequalities in terms of salary and allowances. Most of the establishment prefers not to give employment to women workforce because of certain constraints as they have to provide certain welfare measures like as per the factories act no night shift can be given to women, facility of crèche to be provided. Sexual harassment cells are required to be set up in all establishments. Maternity benefit has to be given to every woman which was earlier 12 weeks and now it has been increased to 26 weeks. These welfare provisions in other ways dissuade the employer for employing the women workforce. The present study investigated to identify the factors preventing women employees from aspiring from higher post and challenges faced by women workers. Further, this paper tries to explain the real condition of Indian working women and also make an effort to highlight the main challenges faced by working women.

**Digitalisation and its Impact on Global Job Market**

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Digitalisation or the use of internet-based technologies has provisioned access to information in a reliable, accurate and timely manner. Many enterprises of repute recognise that digital technologies would help them run their businesses with more speed and reduced costs and, often provide opportunities to their customers to collaborate in the design and production of goods and services.
Even though digitalisation has opened a new horizon of opportunities, it does bring with itself a multitude of risks. Due to its ability to rapidly transform the way people interact, develop and work, digital transformation is also seen as digital disruption. Artificial Intelligence (AI) and intelligent algorithms are fast replacing (or enabling humans) in the service sector. Besides, the industry is currently witnessing the fourth industrial revolution, known as Industry 4.0 which uses “transformative technologies to link the physical world to the digital”. It encompasses advanced automation and robotics, machine-to-machine and human-to-machine interaction, machine learning and data analytics. Machine-to-machine interaction, also known as the ‘Internet of Things’ (IoT) takes a big leap of ‘Internet of Content’ (using the internet for information search) and ‘Internet of People’ (social networking). Robots will lead to substantial savings in labour costs, besides being available around the clock, never getting sick, and never going on leave or a strike. Technical and economic barriers to adoption of robots are dropping and therefore, widespread investment in advanced robotics is inevitable. A human worker in an automotive industry earns around $25 per hour (including benefits), while the equivalent hourly operating cost for a robot comes out to around $8. It is expected that the next decade will witness an annual growth of 10% in the installed robotics base.

Concerns have been expressed over the drastically changing face of the global economy in the upcoming few years. And these are not due to falling global demand. In fact, the demand for quality goods in recent years has been more than ever before. The reason for this concern is nothing but digitalisation. Though digitalisation of work processes offers new opportunities for innovative enterprises and employees, it also brings with itself a whole new gamut of challenges. The greatest challenge is the loss of jobs as a result of automation. About 37% of jobs are expected to get redundant by 2024. About 47% of total US employment to be at risk, with new developments in Machine Learning diminishing the “aggregate demand for labour input in tasks that can be routinised by means of pattern recognition”. A study by the Institute for Employment Research in Nuremberg, Germany estimates that every seventh job in Germany will be lost because of digitalisation and automation by 2025. Regions predominantly engaged in the manufacturing sector will be at a higher risk.

Brynjolfsson and McAfee (2011) in their book ‘Race against the machine’ argue that computerisation is not limited to just routine intensive occupations. Driverless cars, developed by Google, is one instance of how manual tasks in transport and logistics are being automated. The service sector will be particularly impacted by digitalisation as is evident in banks and other financial organisations where human employees are increasingly being replaced by Machine Learning Algorithms which perform routine back-office tasks, reply to client queries via chatbots and present financial planning or insurance policies.

The authors opine that there needs to be an alignment of training and education to the challenges posed by digitalisation, provisioning employees to continually acquire new relevant skills. Jack Ma, Former Executive Chairman, Alibaba Group remarked, “If we do not change the way we teach, 30 years from now, we’re going to be in trouble. The knowledge-based approach of 200 years ago would fail our kids, who would never be able to compete with machines”. Impetus would have to be given on nurturing cognitive, analytical and problem-solving skills among students. Nations should focus on ensuring skills security instead of job security. In this regard, worker retraining programs would play a key role.
Employment in the Healthcare Sector of India

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Access to good health is a basic human right and healthy human could also contribute to economic growth. New technologies are driving the improvement in affordability of drugs in the market that helps to generate economic prosperity. Even in remote areas, new technologies have improved healthcare facilities and the digitalisation of healthcare deliveries are facilitating quality services at reasonable rates to all the population of the country. With advances in medical technologies, it has been estimated that the healthcare industry will see a greater demand for skilled professionals in the near future. According to a report on the Global Burden of Disease, India is ranked 145th out of 195 countries in terms of healthcare quality and accessibility in 2017. Healthcare in India is still in the nascent stage.

This paper qualitatively analysed the employment trend in the health sector of India and the role of technology in the healthcare sector of India. Also, the major government initiatives to facilitate quality care by introducing various health schemes such as AYUSH.

Ayushman Bharat is a comprehensive need-based healthcare services and it has been designed to provide a holistic approach to healthcare related issues including primary, secondary and tertiary healthcare services at national level. Also, this scheme contributed to raising the number of registered doctors.

The Quarterly Employment Survey (QES) reveals that the estimated relative change in employment in 8 selected sectors recorded at (+0.65%) over the previous quarter. The maximum positive change was observed in the Transportation Sector with (+2.91%) followed by Trade Sector with (+0.97%) and health sector with (+0.76%) over last Quarter (Ministry of Labour and Employment, 2018).

Major factors contributing in this direction are new technologies such as eHealth, mHealth, health wearable.

In the Indian economy, there are several challenges in the health system such as poor funding, poor access to healthcare facilities, shortage of medical staff, and low implementation of mobile health services. This eventually leads to high mortality rates, low life expectancy, poor quality of healthcare deliveries and lower productivity with a presence of disguised unemployment.

Introduction of innovative approaches such as eHealth and mobile health interventions would increase employment in the country; increase in education on health information and digital literacy would improve literacy rate as well.

Also, there is a presence of disguised unemployment in the traditional method of healthcare deliveries as marginal productivity of workers are zero in the healthcare sector especially in rural India. For example, four to five ASHA workers are engaged in the filling of one log book while this task can be performed by one ANM via tablet in the maternal and child healthcare sector.

Health interventions are revolutionising traditional healthcare deliveries, making healthcare facilities accessible to a large segment of people, especially in low- and middle-income countries. Smartphone, feature phones, mobile connectivity and low-cost phones are prevalent in poor setting areas; high
mobile penetration could not lead to quality care in developing countries as digital literacy is still a challenge.

Hence, mobile healthcare deliveries would generate employment and reduce disguised unemployment in this sector. New innovative approach and awareness on healthcare issues are raising employment in the healthcare sector but still, there is a need to tap the potential healthcare market of India.

Productive Employment as the Lynchpin of Inclusive Growth in India and China

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In the world of development, decent and productive employment has sort of become topical. The employment crisis is reinforcing persistent social inequalities that see the poor and low-skilled population increasingly marginalised. The recent ‘Arab Spring’ only provides testimony to the fact that jobless growth can quite seriously undermine the very sustainability of a nation. In fact, long term sustainability of growth has become a critical objective, particularly among the developing nations which are striving towards shared growth/inclusive growth/harmonious development. While on the surface, the rate of unemployment has declined and new jobs are being created, the productive aspect of employment is not being taken care of. In the new entrepreneurial and competitive economy, most jobs being offered are at the lowest rungs which only fulfil survival needs and in no way lead to upward social mobility. In the employment sector, the paper highlights the growing informalisation of labour and even casualisation within the organised sector. Informality in the employment sector has sought to reinforce the existing inequalities and raised the insecurity among the vulnerable sections. A very large number of the working population in both India and China is engaged in agriculture and the informal service sector where productivity and earnings are low and there is a high degree of job vulnerability. Therefore, countries such as India and China have a significant number of the ‘working poor’ i.e. persons employed at a low level of productivity and wages. The formal sector is also increasingly being beleaguered by informality in the form of sub-contracting and outsourcing. The problem of working poor has been a disturbing result of the lack of secure, formal jobs. For the youth entering the labour market in huge numbers each year, skill-mismatch is becoming a huge concern. Things are particularly miserable for the migrants and the rural/countryside populace who often end up undertaking the most precarious of jobs discarded by the urban population. The recent skill development thrust in India and China is part of a larger design whereby individuals are being made market-capable to compete in the new entrepreneurial economy. The untapped entrepreneurial potential of the vast majority of the population outside the organised sector is sought to be exploited in order to achieve rapid economic growth. However, the opportunities on offer in the new service economy are being lapped up by the urban-educated sophisticated youth or the creamy layer within the marginalised sections. The poor and the vulnerable are still left with the lowest level of jobs. In the face of informalisation or casualisation of labour, the marginalisation of poor and vulnerable sections is continuing and the state is oblivious...
of their plight. Yet, it is only the state that has a mandate wide enough to intervene in the market and work its way towards a genuinely inclusive society. Until and unless productive employment is ensured through the creation of decent jobs in the formal sector or greater regulation of working conditions in the informal sector, inclusive growth is sure to remain a distant reality.

The Theory of Institutional Change, Labour, Society and Economic Growth

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The concept of “Autarchy”; i.e., ‘self-sufficiency’ has no meaning in the developmental path of human beings. One has to depend on another to fulfil his diverse needs. Human beings are social animals and hence, they live in society. There is interdependence among individuals and this cooperation between entities decides the progress of the society as a whole. These interconnections are provided by «Institutions». These institutions set the rules for the society and provide lubricant for the smooth functioning of society. Institutions to a great extent help in deciding the performance of economies. The interaction between individuals results well when there is proper information regarding the existing environment in which these individuals reside. But in the real world, information is incomplete and if these are supposed to be available then processing this information is quite a tedious and costly affair. Here, comes the role of institutions in economic growth as it provides a bridge of information among individuals. The immense benefits of institutions lie in the fact that they reduce the “transaction costs”. The new institutional economics is of great value as it tries to incorporate a theory of institutions into economics. The new institutional economics builds on, modifies and extends the new classical theories, unlike other earlier theories which attempt to discard the neoclassical theories. Hence, in recent decades there are numerous scholarly attempts were done to demonstrate the relationships between institutions and economic growth. These institutions have a tendency to be stable, but not unchanging, and hence it is a dynamic concept which goes on changing with time. However, institutions change with time but these changes are not abrupt; they are generally gradual. Recent work in economic literature has highlighted both, the importance and complexity of institutional change and hence, there are numerous efforts given to provide a comprehensive theory of institutional change that affects the lives of labour and society as a whole which in turn affects the economic growth of an economy. The present paper tries to analyse and comment upon the different views regarding explanations of theories of institutional change. The institutional change process is quite helpful in designing the base of future institutions which in turn helps in better interactions among individuals of society and the development of society as a whole. Theories of institutional change help in establishing in present institutions because; institutions serve multiple functions and this functional multiplicity makes the task of institution-building most difficult, as there is no inevitable and simple relationship between the desired function and an institutional form. Understanding how institution changes in the past help in
making institutions that can function in many ways. Formal and informal institutions both constitute an important part of any society and hence understanding and establishing a link between these two will not ultimately help in policy-making but at the same time smoothens the working of a society in a better harmonious way. There is no ‘one-size-fits-all’ model for successful institutional development and hence the theories of institutional change of a particular region can help in establishing an institution that caters to the need of the local indigenous people. However, learning from experiences of the institutional changes of the developed countries help in a great way for developing countries. As being late-comers, today’s developing countries have the benefit of being able to imitate institutions that exists in the more developed countries- of course, taking care that they choose the institutions that right for their circumstances in right forms and the right dosage- and thus cut down the cost associated with developing new intuitions de novo.
THEME 2
Labour Organisations and Labour Rights in the Changing World of Work
The International Labour Organization (ILO) in its Centenary declaration urges a “Universal Labour Guarantee” that would provide a labour protection floor for all workers, including fundamental workers’ rights, an “adequate living wage”, limits on hours of work and safe and healthy workplaces.” (ILO 2019a). Since some 2+ billion people remain mostly excluded, ignored or under-served by public policy, we are far from attaining the ILO’s aspirational goal. In this paper, we argue that a quick review of history reveals major blindspots in our framework of recognizing and delivering workers’ rights. The industrial relations policy framework that evolved alongside the growth of mass manufacturing envisioned a world in which workers could have their voices heard through forming a union and engaging the employer in a dialogue that would result in a collective agreement. While this system helped shape workers’ rights for a century or more, it is now inadequate by itself to lead us to the fulfilment of the universal labour guarantee.

We consider the case of waste pickers, a group that is engaged in “green” productive work but has no voice nor protections under the law. By examining several cases of organizing by these workers, we show that these workers would need a qualitatively different treatment by public policy if their need for voice and decent work are to be achieved. To serve them and similar other groups of workers in the informal economy, public policy needs to guarantee voice and provide assistance to form their own organizations. They also need changes in policy to secure their access to inputs (in this case, solid waste) and fair access to markets for recyclables.

Groups such as waste pickers and many others like them, need to acquire voice and to be able to negotiate their interests with governments, employers, suppliers, buyers or any other group that controls access to resources that this group of workers need. Public policy needs to embed the right to voice and bargaining over their interests in principle at a high level within the legal framework, e.g., in the Constitution. How these rights are realized in practice can be left to sub-national levels of government so that they can design appropriate laws to suit the needs of different sectors.

We conclude by urging that right to voice and the right to negotiate be made universal. At the implementation stage, labour organizations be allowed to take a variety of forms in addition to the membership-based trade union. For example, the labour organization could be a workers’ co-op, an
NGO or a community group. Bargaining rights be broadened to include not only the employer, if there is one, but also governments at all levels, and all other types of organizations that control resources affecting the livelihood of the relevant group of workers. Such an augmented system would be more likely to attain the universal labour guarantee than the legacy system of unions and collective bargaining that has brought thus far in our progress towards creating a just global society.
Discussions about and framing of economic justice relate to those who live within the bounds of a state. However, the primacy of economic justice is carried out through legal measures and is implemented by those involved in formulating and implementing policies and laws related to choosing individuals and social groups of women and men that were seen to be entitled to economic justice. Importantly, as noted by Nancy Fraser (2009) there is a need to understand the process of ‘who’ are seen as entitled to economic justice and ‘what’ measures can lead to achieving economic justice. Furthermore, Amartya Sen (1990) and Martha Nussbaum (2004) approach economic justice as capability development; that a list of capabilities (i.e. adequate nutrition, education, protection of bodily integrity and liberty for speech) must be secured for a minimal justice. Economic advantages and disadvantages spill over into the domain of ‘human capabilities’ (Dreze and Sen, 1999).

Few dispute that women in general and rural women in particular, encounter a number of unfreedoms in their day-to-day lives, e.g. lack of mobility, bodily integrity, discrimination in employment and extremely limited access to ownership and control over land and other productive resources. Admittedly, there have been some policy and legal measures that affirm the economic rights of women, and some progressive language has been used in policies since the Declaration of Human Rights in 1948 and CEDAW in 1979, as well as national government instituted constitutional guarantees for quality and non-discrimination. More recently, the Sustainable Development Goals (SDGs) and Agenda 2030 do exert a moral pressure on governments to report on the progress of activities for women’s empowerment and gender equality. Nonetheless, social norms and practices embedded with patriarchal forms of gender relations have continued as the major barriers against implementation of these policies and laws. An important question that I would like to explore is: Have these policies and social practices transformed unjust structures of women’s inequality and economic injustice, and created spaces for dignity and freedom? And, what strategies are needed to achieve economic justice and stop the legal and social processes that produce unjust outcomes in the home and in wider society? In other words, we would like to explore ‘the who and how’ of economic justice in the arena of land rights of women farmers and farm workers. The who relates to the deficit of economic justice for women farmers and farm workers, who in very significant numbers work (74 percent) are engaged in agricultural production but in very insignificant numbers (an estimated 9 percent numbers) have right to land on which they work. The how relates to improve theses conditions of work and entitlement.

Earlier studies have focused on ineffective policies concerning women’s ownership of land, and the policy concerns for increasing productivity and in limited terms for enhancing women’s agency.
Economic injustice is not only about the differential access to and possession of productive assets like land, it is also about the social conditions that allow certain individuals or social groups to dominate over others. Economic injustice creates and perpetuates power relationships, resulting in cumulative conditions of injustice, violence and multi-dimensionality of capability deficits, unfreedoms and dependency, as is very evident in the conditions of rural women in the Global South. The unjust conditions of rural women are rooted in differential access, ownership and control of land and other productive resources, for example, agricultural land which they cultivate for food for the family and society, but have no rights over such land. This persistent denial of land rights to women farmers has resulted in the perpetual subjugation of women, and is a major cause of women’s disenchantment with policies which claim to accord them some rights and justice, and also in alienation from agricultural production (FAO, 2010-11). In this presentation, we propose to identify strategies and steps that can enhance economic justice for women farmers and farm workers. This presentation identifies barriers and ambiguities associated with economic justice for women and draw social attention to policies and practices to have gender just legal and customary rights.

Labour Rights Versus Ease of Doing Business:
If Labour Loses [as it does] and Business Wins, It is a Pyrrhic Victory!

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The legal and the institutional framework of the IRS was framed during the formative years just after Independence. The policy-makers wanted to achieve economic and industrial progress through ‘economic planning’ which meant considerable state intervention in and regulation of the economy to ‘market economy’ approach. State intervention and regulation in the economic system led to the same approach with respect to the IRS as ensuring industrial peace was quintessential for planned economic targets. It did not mean the suppression of labour and human rights as India adopted a pluralistic democratic political system. Simultaneously, social dialogue and tripartism continued to remain important consultative institutions to frame labour laws and policies.

As globalization, caught on with many countries, India also began to adopt liberalisation, privatisation and globalisation (LPG) policies since 1991 in a consistent and dynamic manner. The global financial institutions like the World Bank and International Monetary Fund (IMF) have been exerting considerable pressure through their lending programmes and other channels on developing counties to pursue neoliberal policies which are consistent with the market economy principles. The market economy principles mean that state should retrench from most economic activities, adopt
Theme 2: Labour Organisations and Labour Rights in the Changing World of Work

Conservative fiscal policies, liberalise product market, open up the economy to global capital, trade, technology, etc. The formation of the World Trade Organization (WTO) in 1994 strengthened the globalisation process further. The LPG model poses tremendous challenges to the workers and their organisations in India in both the so-called formal and the informal sectors as the governments (both central and state) started introducing reforms concerning labour laws and governance (labour inspection, records and registers maintenance and compliance) in response to the growing pressure exerted by employers and global financial agencies.

The historically determined and hard-fought labour rights are diluted by the dictates of neoliberal globalisation as the State withdraws itself from various economic realms including development segments as well as from the labour sector and seeks to use regulation to provide labour market flexibility to the employers. There is virtually a battle between the “ease of doing business” and “labour and other rights” (say “environmental rights or tribal rights”) and these are battled in various spaces especially in the realm of ideas which the trade unions have largely ignored as they concentrate on their ‘organisational capital (membership) which is getting diluted; political capital (the classic nexus between party politics and trade unions) which is weakening and often in conflict when political parties bosses are in power; legal capital (access to judiciary) which is depreciating as judicial pronouncements during the post-reform period have been majorly not favouring the workers’ positions; and normative capital (the right to represent the weaker sections of the society) which has been long under challenge as they had ignored the workers. Trade unions have been waging battles in public spaces and shop floors and are visible but not very effective in a sense as the government does not even partially address their grievances but in a sense successful as their protests held at bay the crucial reforms of labour laws till recently. The State in pursuit of economic progress has accepted the cardinal tenets and propositions of the neoliberal school which means ensuring ease of doing business even at the cost of the labour and other rights. The critics might argue that this exercise is to brush the State in black and white, as being pro-employer or pro-labour. The State’s hesitation to affect crucial labour law reforms to provide labour market flexibility may be taken as a reflection of its concerns for the workers’ welfare. But, I argue that this is because the political context has not been conducive for the outright launch of crucial reforms. Logically, any government (irrespective of the political party in power) would translate its commitment into policy and legal actions provided their ‘political popularity’ and ‘chances of re-election’ are not eroded or lost; hence the historical ambiguity in the government’s policy stance till the present one in power which has unassailable majority. If anything, the mode of passage of the Wage Code with little significant debates shows the darker side of majoritarianism. Further, I argue that there exists enough labour flexibility in the system and the Codification of labour laws would only make them formalised. Even the social security code of the present government and the earlier government’s social security law for the unorganised sector workers show the conservative nature of the State’s dispensation. Judiciary has delivered a set of judgments (not discussed in this paper) where judges spoke of globalisation logic to drive home their judgments; others have sought to correct this undesirable tendency (see Shyam Sundar 2018). These developments have considerable and even grave implications for labour rights in India and they require
detailed analysis for the simple reason that neoliberal regime seeks to empower the least-cost competitor which weakens the aggregate demand in the economy and this is myopic as shortchanging the workers and mechanisation will lead to low purchasing power. This will not only affect the labour productivity and socio-cultural development but also affect the human capital formation. While labour flexibility is essential and employment security is not non-negotiable, introduction of reforms without social protection will hurt rather than bring eventual economic benefits. Low cost competing regime (known as the low road to development) has its own shortcomings such it promotes highly mobile capital in search of lower-cost regions similar to the flying geese pattern. As nations benefitting from low-cost regimes restructure to more value-adding capital-intensive production systems, capital takes flight to lower-cost regions though it is possible for both to coexist (as in Japan to South Korea to China). The argument that “first capital inflows and growth then labour rights” does not wash as foundations of pluralistic and democratic societies do not permit this kind of licentious policy prejudices.

On the other hand, I argue that the trade unions need to revisit their institutional structures, processes and value systems to become more inclusive and build interfaces with not only new forms of labour organisations but also with other social entities to create social movement unionism. Tensions prevail at this moment as trade unions and NGOs interface is mutually suspicious and red-green alliance is not far to fetch as global warming and nature’s depletion will compel the social forces to coalesce if not amalgamate. Hence, there is a need to develop an agenda for action for the trade unions to protect, secure and sustain the established and new labour rights.

This paper seeks to provide a brief background to the (a) development of legal and the institutional framework in the IRS, (b) developments during the reforms period 1991 onwards, (c) reforms concerning labour laws and governance systems at the state, firm and national levels, (d) four Labour Codes and their implications for workers and (e) lay down the agenda for trade unions including reviving meaningful social dialogue and tripartism.

**Migration, Remittances and Dutch Disease: Evidence from Kerala Economy**

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This paper examines the impact of remittances on the structure and growth of Kerala economy using the framework of Dutch disease put forward by Corden and Neary (1982). The paper not only provides empirical evidence on the impact of remittances on economic growth, but also gives insights into the intermediate/transmission mechanism of the phenomena. The paper examines the impact of remittances on the growth of tradeable and non-tradeable sectors of the economy, relative price of non-tradeable services, relative wage in non-tradeable services, and real wage in agriculture. It shows that remittances have significant positive effect on the growth of non-tradeable services and significant negative effect on tradeable sector. The paper also finds that remittances contributed to increase the relative price of non-tradeable services and relative wage in this sector. Both these effects must have contributed to the
expansion of this sector. It is also found that remittances have a positive effect on the real wage of even agricultural workers. Thus, the paper provides empirical evidence for the argument that migration and consequent remittances have significant effect on the structure and growth of Kerala economy.

Segmentation in Labour Markets: Evidence from India

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Despite rapid economic growth, majority of employment in India is in informal sector. There is significant difference in wages and working conditions in formal and informal sector employment. In this study, we use unit level data from National Sample Survey Office (NSSO) to test the whether informal sector employment is result of segmentation or competitive labour market. Our findings suggest the existence of three segments, thereby contradicting a competitive model explanation. In the context of the ongoing jobs debate and unemployment data uncertainty, segmented informal labour markets calls for redesigning skilling programme in rural as well as urban areas so that the programmes and job search accounts for multiple segments within informality.

Determinants of Industrial Disputes in Public and Private Sectors in India: A State Level Analysis

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As per economic theory, industrial disputes can arise in all market structures whether competitive or non-competitive. So, it is an important issue in the growth of labour market. The paper analyses trends and determinants of industrial relations. The study has been done in total, public and private sectors in major states of India. There exists a wide range of literature that focuses on empirical aspects in determining industrial disputes, strikes and lockouts in India. But evidence is lacking on the studies dealing simultaneously with disputes, strikes and lockouts sector-wise. Moreover, not much attention has been paid in exploring the determinants of industrial disputes, strikes and lockouts in both public and private sectors separately. Therefore, the aim of the paper is to study the changes in the trends of industrial disputes, strikes and lockouts in each sector and to bring out the factors affecting industrial disputes, strikes and lockouts in each sector across states. The analysis is carried out for the period of 14 years from 1999 to 2012 across 10 major Indian States viz. Andhra Pradesh, Assam, Gujarat, Karnataka, Kerala, Maharashtra, Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal. To study the change in the trends of industrial disputes, strikes and lockouts, the data on man-days lost are used. The values of man-days lost in 10 major states are summed up for disputes, strikes and lockouts separately in total, public and private sectors. Further, to analyse the changing pattern over time, the summed up values of man-days lost in disputes, strikes and lockouts are compared among six points in time i.e. 1999, 2002, 2005, 2008, 2011 and 2012. The study has also analysed the change in the relative share of strikes and lockouts in total disputes in total, public and private sectors. Further, for identifying the
determinants, balanced panel data technique is applied consisting of 140 observations across 10 states and 14 years in each sector. For estimation, there are three dependent variables namely man-days lost in disputes per worker, man-days lost in strikes per worker and man-days lost in lockouts per worker. The independent variables of the study are average real wages, contract worker ratio, female participation rate and average firm size. The study has analysed the impact of these variables on man-days lost in industrial disputes, strikes and lockouts in total, public and private sectors separately. From the analysis of trends of man-days lost in industrial disputes, strikes and lockouts in all the three sectors, it is found that man-days lost in private sector are much higher as compared to those in public sector in all the three cases i.e. disputes, strikes and lockouts. It implies that owners and managers in private sector are facing more industrial conflicts than in public sector. Inter-sectoral comparison of relative share of strikes and lockouts in man-days lost in disputes shows that in total and private sectors, lockouts have the major share while in case of public sector, strikes has major share in man-days lost in disputes. Further, the analysis of determinants of industries disputes, strikes and lockouts suggest that in total sector, average real wages and contract worker ratio have significant effect on disputes but in case of public and private sectors, average real wages, female participation rate and average firm size have significantly affected the industrial disputes. Further, strikes in total and private sectors are not affected by any of the variables but in public sector, average real wages, female participation rate and average firm size have significant impact on strikes. Lastly, in case of lockouts, average real wages and contract worker ratio have played significant role in total sector while average real wages, female participation rate and average firm size have significantly affected lockouts in private sector. Therefore, it can be inferred that industrial disputes, strikes and lockouts are affected by different factors in different sectors.
TECHNICAL SESSION 2.2

Theory of Employment Relations: A Case for Labour Laws

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In its 2015 Doing Business Report, the World Bank states that “employment regulations are unquestionably necessary”, not just to protect workers from ‘arbitrary or unfair treatment’, but also ‘to ensure efficient contracting between employers and workers’. Labour laws ‘increase job stability and can improve productivity through employer-worker cooperation’ and as such ‘benefit both workers and firms’. Market economics, however, tells us that labour market is in equilibrium prior to intervention and that labour laws are market-distorting devices that retard economic growth and reduce potential for development. Paraphrasing Bhattacharjea (2019), it has been alleged in the literature on Indian manufacturing sector that the “major reason for country’s poor performance in manufacturing has been its excessively pro-worker labour laws. According to this literature, these laws have: reduced output, employment, investment, productivity, entry by new firms, labour turnover, and the elasticity of demand for labour in organised/formal manufacturing, inhibited the response of one or more of these variables to trade liberalisation, local demand shocks, and the abolition of investment licensing: encouraged labour unrest: discouraged a potential fall in urban unemployment, slowed consumption growth, and restarted the pace of poverty alleviation: enhanced the negative impact of trade liberalisation on trade union representations: induced firms to outsource employment labour contractors who offer inferior compensation and no job security: manufacturing activity to the unorganised/informal sector. The list of problems is seemingly endless. This paper is an attempt to build a case for labour reforms in the light of theoretical arguments for and against the motion.

Creation of output, to begin with requires getting together of the employer and the labourer. However, post production these two compete for share of output. These two factors of production do not share equal bargaining power and market (even if efficient lacks the aspect of equity) does nothing to make the allocation of output equitable or fair; these facts combined call for an intervention by the state institution. The intervention that thus protects the rights of labour are known as labour laws. This paper summarises various studies that list the pros and cons of labour laws and tries to reason out why labour reforms are necessary. We maintain that labour reforms impacts the economy in two ways, one, that is obvious is the socio-economic impact on the workers, which seeks to improve their bargaining power, working conditions and standards of living; and second is that on the society at large, getting rid of chaos, poverty, inequality etc and on the economy whereby the levels of economic production, growth and development go up. It is important to mention here that though labour norms may look anti employer to begin with, it is ultimately the employer who benefits in the long run. As the labour becomes more secure in his employment his work capacity begins to improve, in the longer term the investments in human capital rise and the productivity goes up. This study is a case for labour reforms on the grounds that labour reforms boost economic growth and welfare by a two-way impact.
Employment in India’s Unorganised Manufacturing Sector: Post-Reform Trends

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The unorganised manufacturing sector plays a prominent role in India’s labour market by creating substantial employment opportunities and contributing to economic development. Although the sector share in not significant in terms of value addition and capital formation, it provides employment to vast number of people. Around 80 per cent of aggregate manufacturing workforce is employed in the unorganised manufacturing sector (NSSO, 2011-12). This possibly indicates the low level of productivity, technology and low income characteristics of the unorganised manufacturing enterprises. There is need to provide special attentions to the large unorganised sector for the inclusive growth as large number of socially and economically deprived sections are concentrated in this sector. Therefore, in order to increase employment creation capacity in economy, the unorganised sector cannot be ignored. Thus, there is a need to analyze the performance of India’s unorganised manufacturing sector in terms of output and employment growth.

In this background, the present study aims to analysis the performance of unorganised manufacturing sector, with special focus on its employment creation capacity over the period 1994-95 to 2015-16. In doing so, we examine the trend and growth in unorganised manufacturing sector in terms of size, employment, output and capital. A detailed analysis at three-digit industry level is done have a holistic picture of Indian unorganised manufacturing sector. The focus is on exploring labour intensive industries which have employment-generation potential throughout the analysis. Since employment is the focus of the study, the paper then investigates the ‘Jobless Growth’ phase and discusses the reasons behind such jobless growth in unorganised manufacturing sector.

The analysis shows that the performance of unorganised manufacturing sector in terms of employment generation remains quite dismal, despite moderate output growth rate in post-reform period (1994-95 to 2015-16). During 2000-01 to 2010-11, unorganised manufacturing sector experienced negative gross employment elasticity which was mainly on the account of job loss in the household enterprises. This is not a worrying trend as OAMEs were falling behind establishments everywhere. Hence, wage work was increasing during the period. The decline in the household enterprises may be seen desirable as they employ unpaid family workers including child labour and employment in this sector has mostly been in form of subsistence level (State of Working Report, 2018). However, the above trend comes under arrest during 2010-11 to 2015-16, as performance of industrial sector both for organised manufacturing and establishments starts getting worse from 2010 onwards. Employment growth slowed down in organised manufacturing sector and establishments in unorganised manufacturing sector are hit with declining share in employment and output, while the period saw a rise in the share of OAMEs in terms of enterprise, workers and output. The fact that when no or less employment opportunities are available both within unorganised manufacturing and outside, then push may have led to some growth in OAMEs. Labour productivity has increased rapidly during 1994-95 to 2015-16 in aggregate unorganised manufacturing sector. It is found that
capital intensity has been the major contributor to the rise in the labour productivity during the same period. A disaggregated analysis revealed that the share of enterprises and workers are mainly concentrated in only 10 core labour intensive industries. We found that Wearing Apparel, Tobacco products and Furniture are the fastest growing industries in Unorganised Manufacturing sector. These three industry groups have improved its position relative to other industries during the 2 decades under the study. The share of Wearing Apparel, Tobacco and Furniture together is around 50 per cent in enterprise, 38 per cent in employment and 32 per cent in output in 2015-16. These industries are indeed important from a policy perspective as these industries could be targeted for pro-poor growth in economy. These sectors have potential of job creation as these are labour intensive industries with significant share in aggregate unorganised manufacturing employment and output. But it is also important to acknowledge that employment generation in these industries is unlikely to be significant to absorb India’s surplus labour since these sectors have low-income elasticity of demand and quality of employment generated is very low (majority of workers are home-based women).

**Inequality of Opportunity in Informal Employment in India**

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The persistence of pervasive informal employment in India has been a matter of debate in the past decades. Based on calculations using data from the second wave of India Human Development Survey (IHDS) (2011-12), it is observed that not only is 87 per cent of the workforce informally employed in India, the average earnings are a quarter of average formal employment earnings while inequality in earnings of the former is twice that of the later. Further, within informal employment, more than 50 per cent of the workforce is wage employed while close to 30 per cent is self-employed with substantial variation in the inequality in the earnings observed for the two groups. This calls for a closer inspection of the factors driving these differences. In this regard, the concept of inequality of opportunity is used. Inequality of opportunity helps identify the circumstances that are beyond an individual’s control but significantly affect the outcome of interest, which in this case is earnings. Its application permits estimation of the contribution of each circumstance in explaining total inequality in earnings. Using IHDS-II, this study uses non-parametric and parametric ex-ante approach which has been widely used in literature pertaining to unequal opportunities. Further, application of the concept of stochastic dominance assists in determining the most disadvantaged subset of the informally employed. The results reflect that geographical location (part of the country individual belongs to), region of residence (rural or urban) and gender are the most important variables that determine an individual’s earnings. Investigation at segmented level of informal employment reveals that agricultural self-employment reduces inequality in earnings for females while increasing region-based inequality since agriculture is mostly concentrated in rural regions. Estimation for informal wage employment for both agriculture and non-agricultural activities reveals the same pattern of results, where gender accounts for 60-70 per cent of inequality of opportunity observed. An analysis for age cohorts also provides similar patterns thus affirming the confidence in the results.
It is determined that the most disadvantaged groups are females residing in the rural regions in the central and eastern states of India belonging to backward caste groups. This analysis therefore helps in identifying the subpopulation that requires directed policy intervention for encouraging income generation opportunities for the disadvantaged groups.

**Street Vendors in Chandigarh: A Socio-Economic Assessment and an Analysis of Implementation of Street Vendors Act, 2014**

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Since time immemorial, market places or the commercial centres have always been a vital part of a city’s public domain. Such market places and the concept of public spaces have become more important than ever in planned cities. Chandigarh, India’s first planned city is no exception. While numerous components of the original plan by Le Corbusier have turned out to be robust, challenges continue to confront planners and administrators of Chandigarh to accommodate various and diverse socio-cultural and economic groups, to create inviting and safe public spaces, to satisfy the high-end retailer and support small scale, informal commerce. All of these, however, have to be overcome while adhering to essence of the beautiful city, the message of which is “to give and the hand to take; peace and prosperity, and the unity of mankind and reconciliation” as symbolised by the Open Hand Monument in Chandigarh.

The objective of the study is to analyse the socio-economic aspects of the profession of street vendors in Chandigarh; rationale and provisions of the Street Vendors Act, 2014 and analyse the act through the lens of not only Street Vendors, but also other key stakeholders such as retailers and consumers. Further, the extent of implementation of the Act in the city is assessed. For the purpose of this particular study, the field work was carried out in four major sectors of Chandigarh namely Sector 8, Sector 17, Sector 19 and Sector 22. These were identified on basis of the concept of ‘natural markets’ developed by SEWA, well-known locations of street vending as identified through personal visit and discussions with the officials of the Municipal Corporation. Attention was also paid to selected markets where protests were held by vendors, retailers, residents etc. The sample consisted 40 vendors, 20 retailers/shopkeepers and 20 consumers from all the four markets. Semi-structured interviews with the vendors, retailers/shopkeepers, consumers and municipal corporation officials were carried out to collect relevant data. A comprehensive questionnaire with both the qualitative and quantitative questions was developed to collect the details of the vendors. Several informal discussions were also pursued at the vending zones, streets and public places. Also, non-participant observation was an effective tool to gather additional yet important details about the respondents.

The socio-economic profile of street vendors was understood through various parameters such as age, gender, caste, education, place of residence, migrant information and further a co-relation among these parameters helped in gaining more insights. To know about vendors with respect to their profession and business, a thorough analysis was done based on the parameters such as types
of goods sold (perishable/non-perishable), types of street vendors (stationary/mobile), number of vending years, time spend on vending, income and expenditure pattern of the street vendors and so on and so forth. Since Chandigarh is a city of aspirations, people from almost pan India come and settle in this city. As the study also showed the nine out of ten of the vendors in Chandigarh were migrants who have chosen this profession for various reasons discussed in this research. At the same time, the condition of having a Chandigarh-based Aadhaar and residence as Chandigarh are necessary conditions for getting registered as Street Vendors in the city. However, Street Vendors, despite being significant part of informal sector and a contributor to the economy of the state, face many problems in their day-to-day activities. It was observed that challenges such as harassment, eviction, confiscation of goods, bribes, low profits, no space for vending etc. were the most common.

Such challenges and problem faced by street vendors are expected to change with the formulation of the policies/laws/legislations. Various policies and a model law were brought by the government, and in the year 2014 a uniform legal mechanism for the regulation of street vending in the country was established through the Street Vendors Act. However, implementation is where a legislation is crucially tested. Therefore, a comparative analysis of the implementation of the Street Vendors Act in four areas of Chandigarh was done and the changes in the vending activity after the implementation of the Act were studied. While there were street vendors who were not aware of the act, there were others who reported less harassment, decrease in bribery, increase in legitimacy, and decrease in conflict with police. There were still other street vendors who responded that there was no change after the implementation of the Act. The responses, however, varied from one area to the other. With respect to various key provisions of the Act, sector wise analysis showed that although a survey was conducted as mandated by the Act, there were street vendors who were missing out of the database of the people surveyed. Licences to the street vendors were not assigned even after four years of the promulgation of the Act which gave birth to new problems and challenges such as mushrooming of a number of illegal street vendors.

Accessibility to Education and its Implications on Employment and Well-Being: Inter-State Analysis with Special Reference to Youth in Bihar

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Education is an integral component of human development; it improves functional and analytical ability and thereby opens up opportunities for individuals and groups to achieve greater access to labour markets and improved livelihoods. Globalisation and internationalisation of economies have further enhanced the importance of education, knowledge and skill development. The role of higher education in economic development has been recognised for quite some time amongst policy makers and social thinkers in India. After independence, country has been experiencing rapid expansion and
demand for higher education. However, despite all these expansion and diversity, the status of higher education is quite unsatisfactory. India has largest young population in the world. More than one-fourth of the country’s population is young. With proper education and training these youths can prove to be a great resource for the development of the economy. Unfortunately, our educational institutions are not well-equipped to transform these youths into quality human resources for the country. Higher education in the country is suffering from issues related to poor accessibility, skewed distribution, poor quality and lack of employability. Bihar is third largest state in India in terms of youth population, but unfortunately it is one of the most educationally backward states of the country. The current status of higher education in the state is characterised by low enrolment particularly among girls, low completion rate and poor qualitative as well as quantitative infrastructure. Colleges in Bihar are not well-equipped to impart market oriented training and skills to exploit the opportunities in labour market. This article is an attempt towards understanding educational status of the youth population, their accessibility to quality educational institutions and implications on labour market and well-being. A comparative study of top 10 states having relatively larger proportion of youth population has been done to understand current state of youth in India. The state-wise analysis on these inter-related issues throws light on relative position of Bihar in comparison to the selected 10 states of India which are Andhra Pradesh, Bihar, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal. These states comprise of 74 per cent of total youth population of India. Analysis of critical higher education indicators provides comparative picture of accessibility, equity and quality amongst the selected states. Bihar has high number of youth population but there is low level of accessibility to education. Over the years, growth of institutional capacity and enrolment in Bihar is lagging behind other selected states. Consequently, there is high average enrolment of youths affecting the quality of education. Also, lower value of gender-parity index highlights the issue of inequity in education amongst youth. Income profile of a person varies with the level of education and acquired knowledge. Institutions imparting higher education therefore play a central role in producing quality and efficient workforce. The study highlights the impact of accessibility of educational institutions on employability and well-being of selected states. Education plays an important role in alleviating poverty and making the nation economically and socially strong. It has direct and indirect implications on income, employment and health. Investment in education sector must, therefore, be accorded high priority. Greater number of qualified manpower is a necessary condition for the overall development of a country. There is, thus, an urgent need to review and gear up the higher educational institutions for both quantitative and qualitative improvement. A sustainable effort must be undertaken to improve the education sector to fulfill the aspirations of both youth and nation.
TECHNICAL SESSION 2.3

Does Training Affect Employability and Earnings of Youth?
An Empirical Investigation in the Context of Bangladesh

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Although Bangladesh has been able to attain a moderate to high economic growth over the last couple of decades, the country could not transmit the economic growth into employment-augmentation. The employment elasticity of economic growth has fallen from a 0.26 in the late 2000 to 0.12 in 2016. Low female labour force participation, a constantly falling share of urban females in the labour market, inferior quality of jobs, high youth unemployment and youth NEET (Not in employment education and training) have created immense pressure over the overall economy. In addition, a surprisingly high share of employment in the informal sector (86.9 per cent according to the Labour Force Survey 2013) direly necessitates required policy attention regarding skill enhancing active labour market policies.

Empirical literature holds that education and training are major contributors for greater employability and earning capacity. Given the proportionately high youth population in the country, for endowing them with essential skills and engaging them in gainful employment, providing training of relevant job specific skills can be an important tool for policy makers. Especially, for Bangladesh, which is scarce in land and lacks physical capital, investing in youth can be an essential strategy for eventually transiting towards a higher growth trajectory. As economy-wide opportunities and the type of industrial demands are being diverged day by day, a sluggish age-old curriculum along with apartheid view towards women makes the school to labour market transformation increasingly challenging.

With the help of a nationally representative data set, this research aims at analysing the impact of different types of skill training programmes (e.g. agriculture, manufacturing, service-related) on labour market participation probability and income earning capacity of youth. In this context, it also aims to understand the sectoral as well as gender dimension of training programmes by applying suitable econometric tools. The core objective of the current research is to analyse - how training affects employability and earnings of youth compared to others who have same observable characteristics yet have not received any training. In this respect, the paper applies propensity score matching (PSM) method. After controlling for all observable characteristics, the PSM exercise shows that persons with training have 26 per cent more probability to be employed compared to persons without any training (however, with same observable characteristics). It also finds impacts of different types of training programmes over employability where it is observed that, training on manufacturing trade provides higher employability than training in other trades. The paper also analyses the impact of different training programmes (for instance, training in agricultural, manufacturing or services) over earnings. In this respect, to control for the sample selection bias, the Heckmen two-step method has
been applied. The results show that, persons with training in manufacturing has 9 per cent higher income than others while persons with training in services has 11 per cent higher income than others. Subsequently, the paper suggests appropriate active labour market policy options for Bangladesh for fostering human capital formation through skill-development to attain the Sustainable Development Goals.

The Impact of Responsible Sourcing on Labour Rights in the Textile Industry

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The article examined the dynamics of labour rights based on two relationships – one, emerging from responsible sourcing, second, based on the role of state. Although there are two systems to ensure the labour rights, the paper argued that there is spillover effect in both the systems. In this paper we looked at the causes for spillover in both the methods. In terms of analysis on labour rights under responsible sourcing, this paper goes beyond the landscape of readymade garment sector and the assessment of labour rights is conducted on workers in micro and small textile industries. The micro units are fabric printing and embroidery while garment making is a small unit. Responsible sourcing is an outcome of Rana Plaza incident which questioned the methods of sourcing and whether it was conducted in a responsible manner and at what level the labour rights of workers are underplayed. Thus, the article explored ethical practices applied in the supply chain to understand the role of stakeholders in creating responsible sourcing that impacted the labour rights. Based on this, a hypothesis is formulated, which stated that intervention of state policies and responsible sourcing resulted in fragmentation of labour rights rather than consolidating it in the micro and small textile units. In the contemporary labour market, the rights of workers are being pushed to the fringes by the means of outsourcing and subcontracting under the global production system (GPS). Nevertheless, this has been the source of labour fragmentation in the textile industry. In the recent years, responsible sourcing is carried out by third-party agencies by the issue of certification on various aspects of business. It included labour rights, health, safety, environment and business ethics. They are derived from International Labour Organisation (ILO) on the basis of fundamental principles and right at work, 1998 declaration. The factories are evaluated on the grounds of whether the employment is freely chosen, existence of freedom of association, collective bargaining, decent working conditions, no child labour used in the production process, if workers are paid living wages, non-enforcement of excessive work hours, practice of non-discrimination, providing regular employment, and no harsh or inhumane treatment is allowed in the factory premises. These aspects of intervention adversely affected the survival of micro and small textile industries that further impacted the implementation of labour rights. Following the strict implementation, the micro and small garments in Tirupur regions have taken two routes to tackle their business growth – first, to follow the ethics laid out by the buyers at the same time educate their employees to lie when audit takes place. The second method is move out of export-oriented business and concentrate in domestic production at the same time create their own brands. The reason behind this is that the profit margin is high in domestic production (25 per cent) while export-oriented production
has low margin (10 to 16 per cent). In order to survive in such business environment, garment units created layers of unorganised garment units because of which fragmentation has escalated and labour rights are deteriorated. The safety of the labour in micro and small textile industries is deteriorating as the owners are not taking enough precautions to maintain the standards of the factory. Analysis of cost of production and cost of certification for labour welfare has resulted in trade-off in production method and labour rights. In order to understand these aspects, the sample drawn for this study is 90, the number of micro and small units surveyed is five. The study used cross-sectional research design, and employed mixed method research to collect the sample.

**Does International Migration Lead to Occupational Mobility?**

**An Analysis of Emigrants from Kerala**

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This paper examines the impact of temporary international migration on the occupational mobility of individuals. It studies the impact of geographical mobility on occupational mobility as a possible channel of reduction in economic inequality in the source region.

Currently, the broad agreement among development researchers regarding labour migration is that while remittances contribute to the flow of capital into a developing economy, return migration is the inflow of human capital. This dual flow of capital and brain gain potentially gives the push to economic growth and development in the receiving economy. Assuming return migration entails a ‘brain gain’ and the proportion of those who return is large enough, aggregate output and even output per capita may increase (Dustmann et al., 2011). On the other hand, there is empirical evidence that most of the jobs available to temporary labour migrants are at the lower rungs of the occupational ladder. But since these jobs pay five to eight times higher than the earnings of these workers at home (Addleton, 1991), they willingly occupy lower-skill jobs, thereby possibly ‘de-skilling’ themselves, a process whereby overseas workers lose previously held skills (Stahl, 1983; Smart et al., 1984). This could make it difficult to re-integrate, let alone move upward, into the domestic labour market post-return. However, if these return emigrants have accumulated enough savings while working abroad, they tend to start entrepreneurial or agricultural ventures that could lead to income and employment generation in the source economy (Arif, 1997).

We take the sample of return emigrants in Kerala from KMS 2011 and construct occupation mobility matrices for the three phases of migration (i) pre-emigration to abroad, (ii) abroad to post-return and (iii) pre emigration to post-return. There is moderate mobility in the first and second matrix and low mobility in the third matrix, indicating that workers move out of their traditional occupations while abroad but mostly return to their own occupation post-return. Work experience abroad does not cause any significant upward mobility in any occupational groups except among professionals who move to managerial positions. While 40 per cent of migrants show interest in entrepreneurial activities, only 10 per cent are engaged in the same, that too mostly as shop keepers, indicating that return migrants are not agents for generating income and employment opportunities. Also, the low
occupational mobility and lack of entrepreneurship among return migrants suggest that migration is more a strategy to improve the financial resources to the household through diversified income streams and not a channel to improve occupational positions. Both these observations are of significance in the context of increasing naturalisation in the Gulf Cooperation Council (GCC), which will lead to both a falling rate of emigration and increasing rate of return emigration in the future as there will be significant impact on the already strained domestic labour market.

The Changing Gender Composition of Waste Collection in Pune City

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In 1993, Kagad Kach Patra Kashtakari Panchayat (KKPKP), a trade union of those collecting paper, glass and metals, was formed in Pune (India). It constituted an important watershed event in the collectivising of labour associated with waste. In the early 1990s, waste gatherers in the city constituted a heterogeneous lot. Certain transactional forms of waste existed in the market, marked by a gender divide. The bhangarwala or raddiwala were male dealers who purchased scrap and newsprint respectively from households. The female dabbabatiwali purchased glass and other utensils. Some barter forms existed, as in the case of exchange of old clothes for steel utensils or waste for onions and garlic (the traders were referred colloquially as the kandalasoonwaale). In some of the industrial pockets of the city, some men would carry large magnets and scout for iron filings which would be sold as iron scrap. These niche forms aside, a large pool of labour comprising of women rummaged from the bins and other public dumps of waste to gather what they perceived as valuable chunks of recyclables. The bulk of those who joined the union belonged to this segment; they were the ones whose work previously lacked any identity.

The collectivisation of the waste pickers reduced the degree of precariousness of waste collection as an occupation. Further, with the formation of Solid Waste Collection and Handling (SWaCH) in 2008, the members saw a change from being itinerant waste pickers to door-to-door collectors. SWaCH is one of the best examples of integration of informal waste pickers in solid waste management in India. As described by the organization, it is “a cooperative of self-employed waste pickers that provide front-end waste management services to the citizens of Pune”. SWaCH is authorised to collect segregated waste from households and commercial establishments. In return for their service, they charge a user fee. The waste pickers also earn money from selling the recyclable waste they retrieve.

With the formation of SWaCH, the workers entered a new domain of work; they moved from being self-employed waste pickers to contractual labour force. They were integrated into the municipal waste chain and were at the cusp of the formal informal chain. Further, its integration with the Pune Municipal Corporation (PMC) gave an official recognition to waste picking as a profession. The collectivisation and the subsequent formalisation transformed the understanding of the women
themselves about their work. In fact, these women were not even thinking of waste picking as work before KKPKP. However, through the union they have managed to develop an identity of themselves as people who are doing something productive for the city. Previously, they were thinking of waste picking as some random activity that had no legitimacy. From there they have moved on to giving their work an articulation which is that it is environment friendly. Materials which would have gone into landfill or got destroyed, are collected by these women and pushed into recycling channels, thereby benefitting the city. Given that the city is benefitting from their free labour, the city also owes them some compensation and using this argument that they have carved out a space for themselves in terms of medical insurance or state provisioning of education for their children. However, it is important to note that at the time of these struggles, the occupation mostly consisted of women. Waste picking has today become an activity that is actively pursued by both men and women. It saw an increase in its male participation after its formalization post SWaCH.

With men entering into spaces where women are the more embedded constituents of the labour force, how do their roles get re-defined and what are emerging forms of gender hierarchies? How do we understand these work spaces? How do we explore into the possibility that men and women could be engaging in some variations within the same job despite the fact that the broader category continues to remain the same? These are some of the broader theoretical questions we seek to address through our case on waste collection as a labour form.

**Between and Within Group Disparities: Inter and Intra Group Caste/Class Dynamics during Economic Growth in the Post-Reform Period**

**Vaishali Kohli, Ph.D Scholar, South Asian University, New Delhi**

Caste and class are two major markers of social and economic stratification in India (Nayak, 2012; Patankar, 2015; Thorat, 2013; Vakulabharanam 2010). The hope was that economic growth and structural changes would transform the socio-economic environment, leading to dilution of the ossified structures of caste and the rigid hierarchies of class, and thereby create conditions for the betterment of the socio-economic status for all sections in the society. However, the advancement and improvements that have been derived from the growth process are not uniform and homogeneous for all groups. The SCs and STs still have low socio-economic indicators and there has been persistent inter-group inequality (Thorat and Mahamalik, 2006; Madheswaran and Attewall, 2007; Kang, 2015; Deshpande and Sharma, 2016). On the other hand, there are many studies in the literature that have discussed the existence of class-based inequalities in India. Although there is a wide literature that discusses inter-caste and inter-class disparities, there is a dearth of empirical studies that try to dissect the dynamics of within group disparities especially intra-caste and intra-class inequalities, i.e., it has primarily not delved in to the question of how caste and class identities are interacting with each other and how this interaction is coming together to shape the social and economic outcomes and life chances of individuals belonging to various caste and class locations. This study then examines the distributional effects of growth by analysing the inter- and intra-caste/class disparities in terms of
economic outcomes, assesses if these disparities have narrowed down or widened over the period of analysis, and how the dynamics of growth process give rise to emergent conditions of heterogeneous identities.

In order to analyse the inter- and intra-caste/class disparities and their interaction during the period of economic growth, I use the disaggregated unit-level data from the surveys of employment and unemployment by the National Sample Survey Organization (NSSO) for four successive rounds covering the period 1999-2012, i.e., 55th, 61st, 66th, and 68th round. The data set used for the study is an independently pooled cross-section data covering four time points. To define caste, the generally accepted contemporary caste classification done by the Government of India has been used, where the population is divided into four broad groups: Scheduled Castes (SC), Scheduled Tribes (ST), Other Backward Classes (OBC), and General or Forward Castes (Others). Here, I define class in terms of the position of an individual or a group of individuals within the process of production, and distribution of value added in the economy.

In order to understand the dynamics of inter- and intra-caste/class disparities and to investigate the nature of their interaction over the period of high economic growth, the analysis uses OLS estimation, quantile regression and Blinder-Oaxaca decomposition framework. The OLS estimates with log consumption (MPCE) as the dependent variable suggest that in the rural sector, caste is negatively correlated with consumption in both time periods. SC/STs and OBCs have 15.43 per cent and 7.97 per cent lower consumption expenditure relative to Forward castes in 1999-2000, and this has intensified further in 2011-12, where SC/STs and OBCs have 19.16 per cent and 11.78 per cent lower consumption respectively, relative to Others. Class on the other hand, is positively correlated with log consumption expenditure in both time periods. The caste and class interaction variable turns out to be significant only for SC/ST peasants in both time periods. Education variable is significant for all categories in both time periods. In the urban sector, caste and class have expected relation with consumption expenditure. Self-employed have 3.94 per cent higher log MPCE relative to regular/casual workers, whereas in 2011-12 they have 5.29 per cent higher log MPCE. The caste and class interaction variable turns out to be significant only for SC/ST self-employed in both time periods. Individuals residing in high growth state have 11.25 per cent and 26.92 per cent higher log MPCE in 1999-2000 and 2011-12 respectively. In order to understand the distributional dynamics we extend our analysis for five different quantiles (0.10, 0.25, 0.5, 0.75 and 0.90) of the consumption function. The quantile regression estimates explain the returns to various characteristics at different quantiles of the conditional consumption distribution. In both the rural and urban sector, caste is negatively correlated with log MPCE at all quantiles in both time periods, with the highest coefficient at the 90th quantile. Class is also positively correlated with consumption across all quantiles in both the time periods with the highest coefficients for the 90th quantile. Education, female and high growth states are also significant across the distribution in both the periods. In order to understand the dynamics of between and within group disparities, we further employ the Blinder-Oaxaca method. The decomposition results suggest that in the rural sector, SC/ST’s mean log MPCE would have increased by 32.5 per cent if they had similar productive characteristics as that
of Forward castes, and the unexplained component of this gap is about 67.41 per cent. In 2011-12, the unexplained component increased to 76.34 per cent. Similarly, the unexplained component of average log consumption gap increased from 74.93 per cent to 84.02 per cent. In the urban sector as well, both for SC/STs and OBCs, the unexplained or the discriminatory component of the average log consumption gap has increased over the growth period. In terms of the inter-class disparities, the decomposition of the average log MPCE gap between peasants and rural labour as well as non-agriculture self-employed and rural labour shows that the explained component of this gap has significantly narrowed down whereas the unexplained component has sharply increased over this growth period.

**Challenges of Globalisation vis-a-vis Indian Labour**

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Labour is an integral part of the economy. A sound economy reflects the stage at which a country's growth and development stand. Peculiarly, the Indian economy comprises more than 90% of people working in the informal sector and the remaining minority in the formal sector. The birth of the World Trade Organisation of which India is a member involved a new kind of pressure and further liberalised foreign direct investment. So, India had to integrate closely with the world economy. Thus, the process of Globalisation has involved the integration of the national economy with that of the global economy, the conversion of a national market into an international one, and finally an economic as well as a political, social, and cultural integration of India with rest of the world.

The era of globalisation in India has seen a marked shift in the strategies adopted to meet global challenges. The New Economic Policy and the New Industrial Policy introduced has an impact on the labour force. As labour policy could not align with the economic policy, Indian labour has suffered on account of such change. Labour rights are human rights and Constitutional rights and labour cannot be treated as a commodity. This principle has been recognised and embedded by the international community in its international declarations like UDHR, ICCPR and ICESCR and its international bodies like the International Labour Organisation. The ILO has established core labour rights reflected in its 1998 Declaration on Fundamental Principles and Rights at Work which includes the freedom of association and collective bargaining, the freedom from forced labour, child labour prohibition and non-discrimination in the labour market. It has mandated that all countries, irrespective of the fact that whether the same has ratified the Declaration or not, is bound to follow these core principles. So, protection of the rights of the labourers became a non-optional obligation of the government as the labour force is an equally important contributor in the growth of the economy.

In this backdrop, this paper examines the impact of globalisation on Indian labour. It deals with the New Economic Policy and Industrial Policy as well as the role of the International Labour Organisation. It further discusses the impact of globalisation on Indian labour which includes a discussion on how labour flexibility is used by the employers in reducing the employment opportunities. Next, the paper
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deals with the weakening role of the trade unions, issues relating to the engagement of contract labourers and the problems of migration. Further, this paper briefly focuses on the New Labour Reforms which were formulated with the intention to serve the welfare of the workforce.

This paper presents an overview of the make in India campaign and the move by the Narendra Modi government to introduce labour reforms in the country. This paper gives insight into the threshold areas related to globalisation and Indian labour. It covers the challenges with an objective to inclusive analysis of the labour reforms scenario in the country and renders a few suggestions.

Financial Services Technology Adoption by Agricultural Labour Households in Punjab

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Agriculture sector plays a strategic role in the development of the economy. Agricultural labour is an important factor for increased agricultural production. Over time, the proportion of agriculture labour was found to be increasing, while the proportion of farmers engaged in rural workforce is declining. The incidence of poverty among the rural labour households is very high and their major source of income is wage earnings. Studies have found that this category has not been provided access to financial services to a large extent. For uplifting their economic condition, affordable access to appropriate financial services is has remained a big issue. Non access to institutional financial coverage leads to trapping of this category of workers in vicious circle of poverty. Therefore, the study is aimed to examine the extent of usage of financial services amongst agricultural labour and to identify the constraints in availing financial services by the selected category.

The present study was conducted in the sub-mountainous zone of the Punjab state during the year 2018-19. The zone is having cropping pattern of wheat and maize. Per capita income and investment level in this zone was found to low as compared to other zones of the state multi-stage random sampling technique was followed to draw a representative sample. The total sample comprised of 100 agricultural labour households. The primary data was collected directly from the sample households through personal interview method. It was found that each sample household had one minimum bank account. All households were financially included in terms of having a bank account. A total of 191 accounts were held by 100 households. The major purpose of account operation was withdrawals. The usage of other financial services was very low. Usage of internet banking and debit cards was found to be negligible among the sample households. Among the sample households only, 29.55 per cent were saving the surplus in bank accounts. Major sources of borrowing were non institutional sources by the households. Easy repayments, ability to borrow small sums and lesser formalities were major reasons
of borrowing from non-institutional sources. The major preferential sources of financial management during emergency were land owners in the village, other family members and drawing the savings.

Constraint analysis was undertaken to find out the problems faced while availing the financial services. Considering i.e. problems faced in accessing institutional credit, it was found that lack of assets collateral was the major problem followed by complicated procedure, inadequate amount delayed land and illiteracy. The major reason for the denial of institutional credit was the lack of security mortgage followed by poor repayment performance in the past. The reasons for not availing other type of financial services including ATM services, debit/credit cards and internet banking cited by the households were low saving in the bank account lack of access to internet and non familiarity with the use of financial tools. General as well as financial literacy in the target group needs to be encouraged as respondents were lacking knowledge about other financial services, although all were financially included in terms of having a bank account. Income level of target group needs to be improved to have better access and usage of financial services. Cumbersome procedure in available institutional credit was found to be the major constraint. So procedure needs to be simplified with relaxation in security norms for the target category.
Contesting Social Deprivations in a Dynamic Trade Reforms Context: The Curious Case of Tea Plantation Workers in India

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The present paper examines the aspects of socio-economic deprivations facing the tea plantation workers in the emerging dynamic context of trade reforms, which promulgated the tea planters to adopt various certification systems involving compliance to labour and environmental standards. Adoption of various certifications has been one of the proactive policy measures followed by the large tea plantations to overcome the lingering crisis and revamp the production and trade sectors. These standards involve measures for rejuvenating the production, processing and marketing of tea by adopting various certifications prescribing labour as well as environmental standards. The major tea certifications include: (a) Fairtrade (FT); (b) Rainforest Alliance (RFA); (c) UTZ certification; (d) HACCP; (e) Ethical Tea partnership (ETP); (f) ISO; and (g) Trustea. Many of these certifications are considered as critical entry points aimed at creating decent working and living conditions for the tea plantation workers under the ILO’s International Labour Standards affirming Decent Work agenda. It is expected that these certifications involving various labour standards, if efficiently administered, would help achieve the fundamental principles and rights at work, viz., (a) freedom of association and the recognition of the right to collective bargaining; (b) elimination of all forms of forced or compulsory labour; the effective abolition of child labour; and (c) the elimination of discrimination in respect of employment and occupation. The specific objectives of the paper are to: (a) discuss the historic plight of the tea plantation workers in Indian plantations (north east and south), in terms of their socio-economic status; production conditions; wages and earnings; and living conditions; (b) examine the influence or impacts of various certification systems on improving the socio-economic status of workers and working conditions; and (c) suggest policy imperatives emerging from the study towards strengthening the stake of plantation workers for sustaining the dynamism of India’s tea plantation sector. The paper concludes that: ‘in a context where the very implementation of the statutory provisions of the PL Act is far from reality in most tea plantations across states, especially, Assam, it is a misnomer to believe that the ‘certifications or labour and environmental standards’ of the sorts being adopted by the tea planters would help ameliorate the social deprivation experienced by the plantation workers since the colonial times’.
The provision of social security for workers is an essential ingredient of social policy concerning labour and employment. This has been envisaged by policy makers to not just treat labour merely as a resource for development, but as a beneficiary of social and economic development of country. The basic philosophy behind providing social security is to ensure that labour is not exploited due to employment in sub human conditions or subject to unfair practices in respect of payment of wages, dismissals and retrenchments (Sharma & Mamgain, 2001). When payment of wages is reasonable and fair, minimum security is provided against the risks (such as injury and accident at work), sickness, maternity and old age. There are certain legislative measures in India which mandate employers to provide job security and social security to workers. The factors which initiated a move towards the evolution of social security were pressurized by Trade Unions (Datta, 1998). However, the recent trend of informalisation of the workforce has raised serious concerns as a large section of workforce is unprotected because of the inability to organize, among other things.

In recent years, several authors have measured the effect of Trade Unions on wage (Papola, 1971; Bhattacherjee and Datta Choudhary, 1992; Deshpande, 2000; Madheswaran and Shanmugam, 2003). These empirical studies concluded that trade unions increase the wages of their members more than what prevailed in their (union) absence. However, there is very limited empirical work available in India which analyse the impact of Trade Union on Social Security benefits to workers.

The social security programmes in India consists of two parts: (i) protective social measures, largely for the organised sector such as medical cares and benefits related to maternity, old age etc.; and (ii) promotional security for the unorganised sector in terms of self-employment and provision of basic needs such as food, health and education. The present study seeks to analyse the impact of Trade Unions on protective social measures using the National Sample Survey Organisation’s (NSSO) Employment Unemployment Survey (EUS) data.

In order to measure the impact of trade union or affiliation with any trade union, the study has used multivariable probit regression model after controlling for industry and state specific fixed effect along with other control variables. The political inclination of workers or membership in an union affiliated to the political party in the state could be a potential source of endogeneity in our model as these two variables might affect the decision of Union membership or whether there will be any trade union in any industry. But our model does not capture these two factors in the baseline analysis, therefore, estimates of the baseline analysis might be unbiased. Therefore, to generate near unbiased estimate, we have added industry specific fixed effect and state specific in the model. These fixed models produce near causal estimates.
A Five Trillion Dollar Question: 
Is the Indian Economy Leaving its Workers Behind?

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At present, the Indian economy is under clear signs of distress, with companies cutting down on production and laying off lakhs of workers. On the other hand, the government has a ‘Vision for the Decade’ to turn India into a USD 5 trillion economy. Recently, the Code on Wages Bill 2019 was passed in the Parliament and generated a debate on minimum wages. In this context, we analyse the unit-level data of the Periodic Labour Force Survey (PLFS) 2017-18 and the National Sample Survey Employment-Unemployment Survey 2011-12 to study the state of jobs and earnings in India.

We begin by studying the trends in the labour force participation rates, worker population ratios and unemployment rates across the country. This reveals a trend of decline in labour force and workforce participation rates, driven by rural areas and particularly for women in these areas. The unemployment rate increased dramatically to reach a 45-year high of 6.1 per cent. The trends from other data sources such as the Labour Bureau employment surveys and the Centre for Monitoring the Indian Economy confirm that the rise in unemployment has been a continuing trend over recent years. We also explore the regional variations in these rates, as well as the patterns among certain demographic groups. Our analyses suggest that the youth, women, the formally trained, and the well-educated with a graduate degree or above have to bear a disproportionate burden of joblessness.

The PLFS for the first time captured the earnings of self-employed workers, and we exploit this feature by studying the average earnings of these workers, as well as regular workers and casual labourers. Looking at the distribution of the earnings of these different categories by income slabs shows stark and revealing trends. High proportions of even regular workers, who are considered to be the best-paid workers in the country, have average monthly earnings of less than Rs 10,000 per month. The earnings of self-employed agricultural workers and the regional patterns in earnings are also assessed.

An analysis of the PLFS data highlights some important and long standing issues with India’s labour market. First, a large majority of workers survive on low paying jobs and a large proportion of regular workers do not have job security. Given that regular jobs are not easy to find, workers are driven towards casual labour and self-employment. The low levels of earnings from self-employment indicate that it is not the spirit of entrepreneurship or willingness to be a ‘job-creator’ instead of a ‘job-seeker’ that drives self-employment, but rather a dearth of other options. The earnings of self-employed women are abysmally low on average – even lower than women casual workers. The large mass of underpaid workers with poor working conditions indicates the extremely exploitative nature of the Indian labour market. Significant gender and caste wage/earnings gaps exist in the labour market. Social identities and inter-sectionalities continue to be an important determinants of labour market outcomes which is also confirmed by our regression results. For instance, unemployment amongst the
educated is higher than overall unemployment, and among the educated, those from deprived castes and the women from such groups bear a disproportionate burden of joblessness.

In the past few years, the real wage growth for regular workers has declined while it is slowed down considerably for casual workers. A substantial number of regular and casual workers earn less than the national floor level minimum wage. The government's move to reject the report of its own expert committee and failure to fix the minimum wage at a desirable level raises an important question - Is the economy leaving its workers behind?

Home-Based Workers in India: A Case Study of Bandhej Value Network in Rajasthan

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The 21st century has seen an increase in informal economy worldwide (ILO, 2015). In most developing countries, the share of informal employment in non-agricultural employment is more than 50 per cent and it is as high as 82 per cent in South Asia. Informal sector in India is also rising, where almost 95 per cent of the employment is informal in nature and is characterised by irregular employment, low productivity, less than minimum wages, long and unregulated working hours, poor working conditions, lack of safety measures, provides seasonal, causal and contractual employment, lack of social security measures, lack of workers right and so on (Ramesh, 2004).

Street vendors, rickshaw pullers, road-side barbers etc., who work in open air, are the most visible informal workers. Informal workers are also engaged in small shops, tanning leather and stitching shoes, workshops repairing cycles; selling paper, cloth and metal waste etc. In India, over 90 per cent of the informal workers fall under the category of unorganised workers (Home Net South Asia). Under this category, home-based workers are the least visible informal workers and majority of them are women (ILO, 2013).

Home-based workers are engaged in different categories ranging from very labour intensive activities to highly capital (information) intensive ones. For example, making of incense sticks, garments stitching, rolling of beedies (hand-made cigarettes), processing of agricultural products, assembling of electrical equipments, preparing shoe uppers, making pickles, data entry, consultancy services and analysis services (MOSPI, 2007).

Home-based work of various kinds appears to have increased with informalisation. This is partly because, in the context of increasing competition and the need for flexibility, homeworker constitute a flexible, dispensable, and cheap labour force whose invisibility makes it hard for them to demand higher wages, job security, or improvement in working conditions. This is the reason that big enterprises are turning to home-based workers as they do not even have to recognise them as workers. Without any written contract, these companies reduce the risk without providing any additional benefits (Pearson, 2004).

In India (2011-12) most of the home-based workers are engaged in the manufacturing, wholesale and retail trade and other community services. Manufacturing alone accounts for 55 per cent of the
total home-based workers. The share of manufacturing for the male home-based workers is 41.7 per cent while it is more than 72 per cent for the women. Within manufacturing, they are engaged in wearing apparel, textile, tobacco products, food product (pickle, papad etc) and beverages, wood and cork products etc.

Global trade and production is increasingly structured around the global value chains (GVC). GVC means the whole process of production, starting from the conception of the product design to its distribution to the final consumer. The GVCs links the households and the enterprises across the globe. The relationship between labour and employer is quite unequal as the enterprises can move across the border leaving labour with very less bargaining power. Understanding these unequal relationships helps us in understanding the distribution of income along the value chains/networks. This is also true for the value networks which do not have any global connections where capital operates in the same way; by exploiting labour by denying them their due share.

Against this backdrop, the main objective of this study is to analyse the working and living condition of home-based workers in India with particular focus on those engaged in Bandej value network in Rajasthan. The study also provides the distribution of gains among the actors involved in the network. This will give us the broad picture of current status of most vulnerable workers in these systems and will help in identifying the uneven distribution of power and returns within these networks.

It has been found that most of the work in the network is done by the home-based workers. The recruitment process is highly informalised. Given the irregular nature of work, these workers are working for multiple contractors and under oral obligations. Number of working hours reported goes up to 10 hours in a day while the maximum average earning reported was only Rs 3425 and there was presence of child labour.

Low-Income Urban Migrants in India: Access to Services and Protection from Violence in Guwahati and Jalandhar

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Indian cities have created economic opportunities and attracted a large numbers of low-income migrants from within and beyond India. Yet, the everyday reality for many of them is one of inequality, exclusion and human rights abuses. They work in poorly paid intermittent and insecure jobs, live in
Theme 2: Labour Organisations and Labour Rights in the Changing World of Work

Precarious conditions, rely on irregular networks of service provision and are vulnerable to violence, extortion or bribery. Their marginal position also entails poor access to health-care provisions and other determinants of health. Their enhanced vulnerability to ill-health and ill-treatment simultaneously compromises their ability to access protection, legal support or redress, and accountability.

These floating low-income migrants are mobile, dispersed and invisible, so they present methodological challenges, especially for creating a sampling frame or mapping in a particular locality. Based on an ongoing ESRC-ICSSR funded collaborative research in Jalandhar (Punjab) and Guwahati (Assam), two of India’s fastest growing cities, this paper outlines some of the methodological and ethical challenges in identifying and researching low-income migrants in cities. Then, drawing on emerging findings from ethnographic fieldwork, this paper focuses on low-income migrant workers’ life in the city, their perceptions of their entitlements, claim-making processes and attempts to protect their own health and well-being. In particular, our research finding shows that a new form of housing, built by private landlords for the purpose of renting out to labour migrants, has emerged directed primarily toward migrant labour transforming the city. Overall, the paper attempts to move away from what Sherry Ortner calls ‘dark anthropology’ that focuses on ‘harsh dimensions of social life’ to an anthropology of low-income migrants that focuses on their strategies for mobilising resources and networks to access basic services in the context of distributive politics and contentious citizenship in India.

Labour Freedom and Productivity in Agriculture Sector of Haryana, India

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Labour freedom is a key determinant of Economic Freedom that affects the overall growth and productivity of the economy. Economic Freedom provides choices and opportunities to take decisions for well-being and prosperity and ensures the environment with no restrictions, no burdens and no constraints. The cornerstones of economic freedom are personal choice, voluntary exchange, open markets, and clearly defined and enforced property rights. In short, economic freedom deals with ‘autonomy’ of individuals and societies, likewise labour freedom offers ‘voluntary exchange’ to both workers and employers under the regulation of labour laws. For workers, labour freedom is the ability to work as much as they want and wherever they want and for the employer, it is the ability to hire workers freely in need and to dismiss them when they are no longer needed to increase and sustain the productivity. The notion of labour freedom is the regulation of labour laws without government intervention and control, and without the influence of effective trade unions. Labour Freedom Index is a quantitative measure of Labour Freedom developed and measured by Heritage Foundation and Fraser Institute at the global level. This paper studies various Annual Reports of Economic Freedom Index published by The Heritage Foundation and compiled data for the components of Labour Freedom Index since 1995. The components of labour freedom are the ratio of minimum wage to the average value added per worker, hindrance to hiring additional workers, rigidity of hours,
difficulty of firing redundant employees, legally mandated notice period, and mandatory severance pay. This paper attempts to describe the problem of Inter-State variations of India based on the regulation of labour laws. To fulfill this objective, this paper has compiled information from various reports of Economic Freedom of the States of India. There are several factors affecting labour freedom like socio-economic environment, rural-urban migration, unemployment rate, literacy, poverty, and income inequalities. The classic theory of rural-urban migration by Harris and Todaro, 1970 attributed migration to the existence of relatively better economic conditions in urban areas; migrants compare expected wages in the city to alternative rural income. If urban wages are higher, rural people will be attracted to the city. A general decline in agricultural commodity prices since the mid-1970s may have caused a decline in rural labour incomes and moreover, higher agricultural productivity in the rural areas released people and resources for migration into the city, as in East Asia. This paper has emphasised labour freedom in agriculture sector of Haryana (India) and its impact on agricultural productivity. Haryana is an agricultural state with nearly 80 per cent total land area under cultivation. Agriculture is a primary and significant sector for majority of the people. It is one of the largest contributor of food grains to central pool of India with a share of around 15 per cent and known as a food surplus State. The main agricultural crops produced in Haryana are rice, wheat, sugarcane, cotton, oilseeds, pearl millet, gram, pulses and barley. The paper has concluded that labour is a significant input in agriculture sector of Haryana. Non-farm availability of jobs, rising rural-urban migration ratio and rigid rural labour market lowered the labour supply in agriculture consistent with the rise in input cost of food grains specially paddy or rice in Haryana. Haryana is a state of most fertile soil and enhanced land productivity, thus, technical efficiency has not been affected but it created allocative inefficiency in farm productivity particularly in rice.

Contesting Social Deprivations in a Dynamic Trade Reforms Context:
The Curious Case of Tea Plantation Workers in India

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The present paper examines the aspects of socio-economic deprivation facing the tea plantation workers in the emerging dynamic context of trade reforms, which promulgated the tea planters to adopt various certification systems involving compliance to labour and environmental standards. Adoption of various certifications has been one of the proactive policy measures followed by the large tea plantations to overcome the lingering crisis and revamp the production and trade sectors. These standards involve measures for rejuvenating the production, processing and marketing of tea by adopting various certifications prescribing labour as well as environmental standards. The major tea certifications include: (a) Fairtrade (FT); (b) Rainforest Alliance (RFA); (c) UTZ certification;
(d) Hazard analysis and critical control points (HACCP); (e) Ethical Tea partnership (ETP); (f) ISO; and (g) Trustea. Many of these certifications are considered as critical entry points aimed at creating a decent working and living condition for the tea plantation workers under the International Labour Organization’s (ILO’s) International Labour Standards affirming Decent Work agenda. It is expected that, if efficiently administered, these certifications involving various labour standards would help achieve the fundamental principles and rights at work, viz., (a) freedom of association and the recognition of the right to collective bargaining; (b) elimination of all forms of forced or compulsory labour; the effective abolition of child labour; and (c) the elimination of discrimination in respect of employment and occupation. The specific objectives of the paper are to: (a) discuss the historic plight of the tea plantation workers in Indian plantations (north-east and south), in terms of their socio-economic status; production conditions; wages and earnings; and living conditions; (b) examine the influence or impacts of various certification systems on improving the socio-economic status of workers and working conditions; and (c) suggest policy imperatives emerging from the study towards strengthening the stake of plantation workers for sustaining the dynamism of India’s tea plantation sector. The paper concludes that: ‘in a context where the very implementation of the statutory provisions of the Plantations Labour Act is far from reality in most tea plantations across states, especially, Assam, it is a misnomer to believe that the ‘certifications or labour and environmental standards’ of the sorts being adopted by the tea planters would help ameliorate the social deprivations experienced by the plantation workers since the colonial times’.

Educated Mothers and their Access to Child Care Facilities in Kerala

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Mothers of children aged 0–5 years suffer an employment penalty compared with fathers. One of the significant factors for the decline in the female labour force participation is the maternity and associated responsibility of child bearing and rearing. In the Indian context, there is great importance attached to this responsibility, which often acts as a barrier for women to enter the labour market. In this light, the present paper makes an effort to understand maternal employment and the access to childcare facilities with special reference to Kerala. Using the primary survey data from mothers, the paper examines three related aspects: (i) The probability of mothers’ decision to participate in the labour market (ii) Probable factors that determine the choice of childcare arrangements - this aspect is equally important as one of the barriers that women face at the time of working is to find good quality and affordable child care for their children and (iii) The opportunity cost that mothers forego.

The major findings of the study are as follows: The type of family - especially joint family systems - encourage mothers in Kerala to participate in the work force. Nuclear family plays an important role in the selection of mode of childcare. As the educational qualification of mothers increases, there is a tendency of preferring private provisioned childcare arrangements than public provided childcare.
arrangements. It is seen that there is a preference towards private provided childcare arrangements as the income of the family increases. Together higher income and higher educational levels reinforce the preference towards private childcare arrangements. Low-income families prefer Aganwadis, while families in the middle and high-income categories prefer private day-care centres or even hiring a nanny to look after their child. The analysis shows that the opportunity cost of not entering labour market increases as the level of education increases. Age earning profile by levels of education reveals that there is a positive relationship between age and earnings given the levels of education. Mean income earned and hours of working analysis displays positive relationship between age and wage and negative relationship between age and hours of work. The opportunity cost of (working women) is the leisure foregone (assumed to be childcare) and the cost on childcare. The opportunity cost of mothers who are willing to work (currently unemployed) is the wages earned by working women.

The supply of childcare has an important role to play in mother’s decision of entering and staying in labour market. This role of availability of childcare arrangements on maternal employment is not discussed widely by Indian studies. For the demand for particular mode of childcare - whether private or public provisioned; the income of the family is the determining factor. It is found in the analysis that with the increase in income of the family, there is a shift in the preference towards private provided childcare facilities.

Another important aspect is the opportunity cost incurred by the mothers who are working as well as those not working. As far as childcare is concerned, in the Indian scenario, the role played by joint family is indispensable. The traditional and cultural notion prevents a child to be taken cared by other sources when the presence of grandparents is there in the house. Most of the joint family households do not look for alternative source to take care of their child. One important aspect to look upon is the behaviour of middle-income families. They neither prefer to send their child to public provided Aganwadis because of quality related concerns nor to private provided childcare centres due to the cost concerns. This recommends the need to provide low-cost quality oriented childcare services or facilities.

The need to improve women’s participation in the economy has been a long-standing priority. Once young educated mothers break from their labour force, it becomes a multiple disadvantaged for them to come back. In this context, it is crucial towards looking for achieving the Sustainable Development Goals (SDGs). That SDG 5 states to “Achieve gender equality and empower all women and girls”, includes target 5.4 which states that “recognise and value of unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate.” This target 5.4 is inspired by the Triple R Framework – recognising, reducing and redistributing unpaid care work – which summarises the transformative approach to care policies.
A Study of International Migration in Globalisation: An Estimation and Interpretation with Special Reference to India

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Globalisation seems to be one of the dominant dynamic efforts for international migration (IM). It is noted from the analyses of globalisation and international human migration that different countries begin to lose power to control transnational migration. During the 1980s and 1990s, studies show that monetary factors depend on the movements appropriate to the community during the era of globalisation that dissolve dominance as well as freedom of different countries and promotes IM as an elemental component of it. Under contemporary globalization, current policies of migration represent fundamental policy dilemmas for states. Various countries have made progressive hindrances for constitutional entrance of migration. It seems to be premeditated that expanding operation in terms of draconian administration has compelled many states to superset the aspiration of immigrants. The interdependent current system of immigration is acting as world order for national as well as international immigration system. Globalisation promotes free movement of economic activities across political boundaries of the states. When we are talking about globalisation, we assume and visualise a world divided into fragments by the flow of goods and services and the movable factors of production across the borders towards higher returns. The question arises how far it is true for human migration across the globe. Globalisation means connectedness but there seems to be a big disconnectedness between the fundamental concepts of defining globalisation and quantifying its characteristics particularly through human migration. It is opined that one of the unique breakdowns is the incapability to build job opportunity in the home country for migration. Otherwise, it is the possibility that due to the huge pressure for jobs and subsistence needs, the advantage for home country seems to be evaporate. The major objective of this study is to theoretically as well as empirically estimate international migration with the help of panel data technique for evidence of globalisation. This study is trying to describe international population movements with the help of economic indicators with selected countries to measure the number of migrants as well as formation of migratory systems of the world at present. It also tries to develop a formulation to comment the reason as well as possibility of migration that is going to happen in the theory to account for the initiation and perpetuation of migratory flows in contemporary globalisation. It has used database on five years gap migrant in-flows in 24 states by source and destination, between 1980 and 2015. Countries have been selected on the basis of the top 10 countries with the largest number of International migrants (T10CIM). One important thing is that, for analysis, this study has consider at least three countries against each and every receiving country from where most international migration has happened. Choosing these countries are based on two factors, availability of data and factor of common countries. This study opines that the act of immigration occurs in accordance with sets of elements like income, job availability, social welfare and price level. There seems to be other factors as far as international migration is concerned which restricts free movement of people even in the age of globalisation.
Labour Laws Reform in the Phase of Ranking as Audit Culture

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Ease of doing business has been an important part of the discussion in the last four years among the people in India and in media both electronic and print. It has both political and economic importance of analysis. In the last four years, India has improved Doing Business Ranking where India’s rank was 100 in 2017 from 130 in 2016 and became 77th in 2018. It brought various reforms in different sectors at both central and state level to increase the ranking of Doing Business. The government not only made changes in regulation but also targeted to come within top 50 in the ranking. To achieve the target, government listed 419 sectors to be reformed both in Central and State Level. To encourage reform at states, state level ranking has been introduced based on these reforms from 2015. One of the vital parts listed in the Ease of Doing Business Indicators is reform in labour market regulation where the government is trying to change labours laws to favour the investors in the name of creating jobs. Unions led by India’s CTUOs are opposing tooth and nail arguing it will dilute labour rights and safety at the workplace. However, unions seem to fail to convince the government. Though the government slowed the pace of labour reform at Centre, states like Gujarat, Rajasthan, Assam and others are moving faster in reforming and amending the existing labour laws. With the introduction of state level ranking, it creates a sense of competition among states and thus trade unions lose the essence of opposing the labour reform at centre. The passage of Code on Wages Bill 2019 in the Parliament is one of the recent examples. The idea that labour reform or flexibility of labour market regulation creates more jobs is contradictory to the employment data in India and even inconclusive across the world. It has been observed and analysed by various scholars through empirical studies. And with the abolition of inspection in a business establishment, it compromises on labour safety and other safety measures. However, the larger issue of the ranking is not only related to reform, but is related to broader goals of politics and ideology of governance through numbers or indicators, i.e. calculative practices. The rise of such indices illustrates the ideology of audit in the name of accountability. The idea that audits drive efficiency governs individuals, organisations and even the government. Because of these reasons, audit culture is gaining popularity in India. The government is also quick in adopting the audit culture not only because of the creation of competitiveness but as political technologies and political rationalities that mask their ideological content and removing them from the realm of contestable politics. Thus, sustaining the existing labour laws that trade unions are demanding for proper implementation instead of drastic change poses danger in the phase of Ranking as Audit Culture. To counter such threat, narratives need to change counter-logics of a plural and democratic community. Spatial and geographical dimensions should also be considered in the narratives.

The paper examines the assessment practices in the context of Doing Business Ranking investigating the rise of Audit Culture, a term used to describe a “managerialist conception of accountability” focused on quantitative performance measure (Lilburn, 2017). The role of
state government and central government and the nature of resistance has been discussed. The overall political and economic ideology of the government also highlighted relating with the theoretical part of audit and ranking. Lastly, the importance and objectives of introducing the state-level ease of doing business ranking to support the political ideologies of the government have been discussed. The objective is to understand how labour rights in the changing world faces challenges through ranking as audit culture.

**Allocation of Public Funds in Reaching the Unreached Labour in Tea Plantation Sector of Assam: A District Level Analysis**

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The aim of this study is to investigate the spread of public sector fund allocation in reaching the unreached labourer in tea plantation sector of Assam. The study also seeks if any disparity exists in the inter-district allocation of public fund for tea plantation labourer in Assam.

Secondary data covering the period 2001-2019 on allocation of public funds on various schemes viz. education, training and skill development, sports, welfare in general, household based welfare and health facility for tea plantation labourer and their physical achievements in the state are collected from Directorate for Welfare of Tea & Ex-Tea Garden Tribes, Government of Assam. The data was also collected at the district level for the above mentioned schemes covering the period 2016-2018. The district-wise records of number of registered tea garden, gross area covered by tea garden and area under tea plantation of state has been obtained from the report published by Tea Board of India 2015. The study uses simple descriptive statistics and multiple linear regression model for data analysis purpose.

Given the backwardness of tea plantation labourers, the state government has taken various initiatives over the years for their well-being in the state. There seems to inter-district disparity in terms of number of beneficiaries i.e. tea labourer per garden in the state, with the number of beneficiary per garden being meager in districts having larger concentration of labourer. Increased allocation of funds on training and skill development, sports, general welfare helped to increase the number of beneficiaries in the state. However, fund allocation on household-based welfare and health has been less successful in adding to the number of beneficiaries in the state. Poor allocation of funds on household-based welfare and health of tea plantation labourer in Assam can be held responsible for such results. Hence, there is need for increased allocation of funds for the districts having larger concentration of labourer in the tea sector. There is also need for raising awareness level by government; garden management; non government organizations and self help groups so that public allocation of funds can reach the unreached reserve army of labourer in tea sector of Assam.
Democracy, Capitalism and Trade Unions: Theory and Challenges of Existence

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Trade union movements in India are traced back to colonial period and they received wider public acceptance among the working class in India. Indian trade union has three historical periods i.e. colonial period, period from independence to liberalisation, and post liberalisation period. These three historical periods have made its imprint on trade union movements in India. Colonial period is marked for its success in introducing ‘worker collective’ and during the period of independence to liberalisation, one can see active participation of unions in mobilising and articulating working class rights and social security. The post liberalisation period is a period of delimiting trade union movements. This paper discusses this critical perspective of trade union movements in India. The trade union protests and movements were instrumental in attaining such a massive success. However, there has been an organised ideological campaign propaganda against the success of trade unions as an impediment to capitalist expansion in the country. Liberalisation and informalisation of labour market force the workers to seek man-days rather than the social security and wages. The number of trade union strikes is found to be totally absent during the last couple of decades as the capitalist class directly negotiates with labour than through the unions. This has shifted and delimited the very political space of trade union movements in India.

The Future of Work for Waste Management Workers: An Illustrative Case of Urban Informal Workers in Waste Management

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Research studies related to waste management (WM) in India have by and large focused on negative impact of waste on human health and waste related environmental degradation. Some studies have focused on livelihood of informal workers in urban pockets and value chains linking the formal and informal economy. In the current scenario where policy revisions indicate modernisation of the waste management sector on one hand and the thriving presence of the informal economy in waste collection, treatment and recycling on the other, it is discernable that shifts in technology and changing business dynamics will have a deep impact on the livelihood of informal workers in the lower end of the waste management value chain. This paper attempts to understand the ‘future of work’ of WM workers in the informal economy linking it with recent policy changes and technology transitions.
The paper primarily focuses on studying solid waste management sector and seeks to address the following research questions: First, how is the informal economy located in the structural and policy paradigm of waste management? Second, in the context of current policy changes and revisions how is the technology roadmap of the WM sector being shaped? Third, what is the likely ‘future of work’ for urban informal WM workers in the context of modernisation and proposed technology shifts in the sector.

We use discourse analysis as a research method to elucidate on the signs of technology change in WM and gain insights into how informality is considered in the standard structural framework of the sector. The discourse here is primarily shaped by policy documents. In our study we anchor our structural framework to standard classification of industry and occupations. We refer to ISIC 2008 and NIC 2008 for waste management industrial classification and ISCO 2008 and NCO 2015 for standard occupational classification. Interaction with WM workers and enterprises in the informal economy, NGOs and practitioners in the Delhi NCR region complemented our discourse analysis.

The common understanding about technologies is that these are external to society and society/individuals are expected to adapt to external change. This is typical of the viewpoint of ‘technological determinism’. Here we disengage from the dominant viewpoint of technological determinism and argue that shaping of technology is as much a political, economic and social choice as it is a scientific consideration. It is difficult to draw an overarching technological roadmap for the WM sector because the entire process from generation to disposal is complex but we do observe clear signals of streamlining and regulation in the sector necessitating technological changes. Some of the dominant signs of change are visible in transportation of waste, use of GPS fleet tracking, processing of bio-degradable and non-biodegradable waste and development of material recovery facilities.

Our analysis reveals that the WM industry in India is moving towards modernisation aligned to global industry standards. However, differences are evident in case of occupational classification when compared to global standards (ISCO 2008), particularly at the 4-digit level representing lower skill occupations. Many tasks including manual collection of waste and manual sorting is managed by the informal workers in India which at best find partial mention in NCO 2015. This alludes to structural invisibilisation of informal workers. However, in the recent policy discourse, there is growing recognition about the valorisation and service work done by informal economy workers in WM. Deliberations about the need for integration of these workers in the mainstream are found in the policy documents. Although, it may be noted that discussions about heterogeneity of informal work, or the connotations of formality and informality are hardly perceived. Pertinent issues concerning informal workers in waste management viz., skill needs, sustainable employment, decent work conditions, social protection are largely left unaddressed. Our field analysis lends credence to the above insights and helps highlight different levels of vulnerabilities faced by different categories of informal workers in the context of policy revisions.
Working and Living Conditions of Sewerage Workers: 
A Study in Vijayawada Municipal Corporation

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Sewerage workers are one of the vulnerable groups in urban Andhra Pradesh. The present article documented their conditions of work and living in Vijayawada Municipal Corporation (VMC) of Andhra Pradesh. Both quantitative and qualitative research techniques were employed to collect the relevant data/information for the study. Secondary data were collected from the VMC and contractors/companies in regard to number of sewerage workers, caste and sub-caste wise, pay structure, terms and conditions of engagement and the type of facilities provided at the work site, etc. A structured schedule was developed and administered to a sample of 98 sewerage workers and qualitative research techniques like Participatory Rural Appraisal (PRA), Focus Group Discussions (FGDs) and personal interviews were conducted with the type-wise sewerage workers, contractors/companies, VMC Officials, workers and general public to elicit their views on selected aspects of work and living conditions. Contrary to normal expectation, Other Backward Castes (OBC) and Other Castes (OC) workers outstripped those from Scheduled Castes (SCs) reflecting the unemployment situation of the unskilled in the state and sizeable proportion of them are on contract or time-scale without any social security. Low levels of education, lack of skills and limited opportunities restrict their mobility to other vocations. The salaries were stagnant and neither linked to years of service nor to inflation. The expansion of VMC limits, population growth and no recruitment forcing them to work for longer hours and the contractual nature of service weakened the bargaining power of the workers.

The mechanisation has not reduced the workload as the number of machines in working condition is much less than the demand. The work sites are not safe as workers are not provided the recommended safety equipment and exposure to health hazards is still high. The health care services presently provided are reported to be unsatisfactory resulting in high morbidity and low life expectancy. Many of them have not received any formal training on use of modern equipment and preventive and curative health practices. The working conditions index (WCI) suggest that Madigas followed by Rellis were worse off compared to OBC and OC workers. Work induced health disorders and non-provision of safety equipment are the main reasons for pathetic working conditions. Action points are suggested to improve the working conditions such as annual increments and linking wages to inflation, promoting of contract/time-scale workers to next level based on years of service, skill
development training for horizontal and vertical mobility, improving work environment with provision of facilities and safety equipment, recruitment of staff and extension of effective health care services with periodic checkups through Aarogyasri cards to all the sewerage workers, irrespective of the employment status.

Almost 90 per cent of worker households were indebted mainly for unproductive purposes like health, education etc. Their access to institutional credit is limited and thereby lending from informal sources at exorbitant rates of interest. About 70 per cent feel financially insecure. On several indicators of living standards such as housing, social capital, ration cards and Aarogyasri cards, Madiga workers were more deprived than Rellis among SCs. The most disadvantaged are contract workers. The key determinants of living standards are awareness about and access to government schemes, multiple sources of income and social capital. Thus, agencies and state should initiate measures to promote awareness about schemes and enabling environment through increase in social capital supported by recognised non-governmental organisations (NGOs).
Paradox of Co-existing Backwardness and Industrialization in Tea Districts of West Bengal

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In two districts of West Bengal - Darjeeling and Jalpaiguri - tea cultivation was introduced by the British in the mid-19th century. Conditions at these two districts, along with large parts of Assam, were favourable for tea cultivation. Availability of labour was a problem which was solved through forced family migration of labour from areas like the Chotanagpur plateau. These workers were mostly tribal and belonged to the most marginalized section of the population. They are still considered outsiders with very little interaction with mainstream Bengali population even after residing there for close to two hundred years. There lies sharp demarcation between tea and non-tea population.

Tea areas in these two districts are predominantly rural in character with some small towns like clusters thrown in between. It is significant to note that these areas are very backward even now. On the other hand, tea industry has flourished over the years notwithstanding occasional downturns which are part of the usual business cycle fluctuations. Tea today is one of the prime foreign exchange earning industry. These two districts in West Bengal produce about 25 per cent of the total domestic production. Newer areas are being added to tea cultivation. Production, area under tea, yield, labour productivity all show increasing trend (with usual business-cycle fluctuations). But the only thing constant is the standard of people living in and around areas of these two growing districts. They hardly consume any industrial good and provision of education and health facilities are grossly inadequate. Most tea estates function like enclave economy with very little interaction with outside world. Wages prevailing in these two districts are even less than statutory minimum wages for agricultural labourers. Even government is reluctant to provide welfare and infrastructure in these areas since tea lands are leased out to planters and these areas are treated as private lands and generally kept out of the purview of general district welfare programme(s). These areas were brought under Panchayat in the year 1999 but that did not lead to any significant change in the absence of concrete guidelines about how the Panchayat would function in areas leased out to planters for tea cultivation and manufacturing.

Conditions, as prevailing presently, suggest that even the basic facilities like education, sanitation, health, recreation are missing. In case of education, most of the tea growing areas only have primary schools and secondary schools are located too far away for the majority of the workers to access. Even primary schools are overcrowded and lack basic minimum facilities. Primary education is further hindered because of language issue since tribal population. For majority of the people sanitation is an alien word. Most of them still defecate out in the open. Quality of drinking water is very poor as most of people draw water from open wells exposing them to all kinds of water-borne diseases. Health facilities normally imply whatever the garden hospital/dispensaries are providing which are even at the best of times grossly ill-equipped to say the least. One may argue that situations prevailing in most parts of rural areas are not significantly different. But what makes this situation somewhat unique is
that even industrial penetration of last 150 years did not make much difference. Here lies a dichotomy which needs to be examined.

It is a case where economic growth does not lead to development in a context where development is defined as a mechanism which provides for realisation of human potential. To realise this potential for large number of people both planters and State should reorient policies. Profits need to be reinvested and welfare of the workers should not be neglected. State needs to play an active role. So far it has relied heavily on the trickle-down effect of industrialisation and been very lenient in enforcing legislative provisions. This needs reorientation towards more efforts in creating infrastructure and intense administration with improvement in the delivery system. An integrated holistic development approach should be formulated at the earliest.

Health, Safety at Workplace and Value of Statistical Life of Blue Collar Workers in the Manufacturing Sector in Gujarat: What Does Ahmedabad Cluster Reveal?

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The origins of health and safety law at work places lie in political responses to social problems arising from the upheaval of the Industrial Revolution in Europe. Various labour laws and standards came into place over time with the primary concern being the protection of labour. Being one of the oldest industries in India the idea of labour welfare started first in the textile sector during early decades of the 20th century in Gujarat. Although it started as a political interest, many components of it became the policy instruments at later stages. One such instrument is the value of statistical life (VSL henceforth) which indicates the loss of life-years because of occupational health hazards and unsafe working conditions. With rapid urbanisation and a rich history of industrialization, Gujarat has been experiencing more and more number of workers taking part in industrial works, particularly in the manufacturing sector, which operates both as organised and unorganised enterprises. The manufacturing industries’ factories are often found to be associated with risks of morbidity and mortality that raise the concern of policy makers regarding the introduction and sustenance of various safety measures at those industrial units.

Given this backdrop, the primary objectives of this paper are to: a) Ascertain the health status of blue-collar workers in the manufacturing sector in India in general and Gujarat in particular; b) Understand the status of safety at factories in selected manufacturing industries in Ahmedabad; and c) Estimate the VSL for blue collar workers in the manufacturing sector in Ahmedabad.

Using data from NSS unit level survey on health and morbidity (2014), an analysis is undertaken to discuss the health status of workers in the manufacturing sector. In order to discuss the status of safety at factory workshops and the estimation of VSL, data collected in 2019 through a primary survey from workers engaged in various industrial estates in the Ahmedabad industrial cluster have been used. Following the data on the number of accidents and labour-intensity of factories available with the Directorate of Industrial Safety and Health (DISH) and Annual Survey of Industries (ASI), seven
manufacturing industries have been identified for the purpose of primary survey. A stratified random sampling technique has been followed to identify the industries and factories from various industrial estates within Ahmedabad cluster. Thus, textile, basic metal, machinery and equipment, tobacco, paper and paper products, motor vehicles, computer and electronics manufacturing industries are selected. At least 10 per cent factories from each industry has been selected for the survey spreading over industrial estates at Odhav, Naroda, Narol, Vatva, Moraiya, Changodar, Sanand, Kathwada and Rakhiyal within the Ahmedabad industrial cluster. Finally a total number of 627 blue-collar workers are covered from 224 factories as part of the survey.

As the Commissionerate of Labour under the State Government of Gujarat want to have an ‘Umbrella Legislation’ in the State to provide social security and other benefits to informal sector labour which comprises around 93 per cent of the total workforce, it is topical to understand the status of occupational safety of those who are exposed to risks at work. The results may be useful in: highlighting the status of occupational safety of workers in the manufacturing industries in a developed State such as Gujarat; determining compensations to address the risks that are associated with particular tasks in industries; and formulating policies aiming toward social security, insurance and other measures to ensure well-being of workers in terms of stipulated minimum wage rates and financial assistance for treatment of fatal and not-fatal accidents for industrial workers.

The Challenges of Informal Employment in India-An Economic Perspective

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Unorganised or informal sector constitutes a pivotal part of the Indian economy. More than 90 per cent of workforce and about 50 per cent of the national product are accounted for by the informal economy. Women working in the unorganised sector deserve a separate mention as they are especially marginalised. Women have always worked, albeit the definition of work if seen only through the prism of contribution to national input will mean different things to different people. Women, who might not be ‘working’ in the narrow definition of work, are still engaged in socially productive and reproductive labour. It is observed that there is no legal protection system, bearing and rearing of children remains the first responsibility of women workers and there is not much help from the government and legal framework of the country. Social security and sustained human development for workers of the unorganised sector are big question marks. A large percentage of the unorganised sector includes migrant workers. High rents and living expenses, low and irregular salaries, unequal wages for male and female workers, no overtime payment, no standard daily working hours, no public holiday and no prior notice for dismissal from work constitute some of their trials. The vendors face problems like dependence on money lenders, lack of dignity, and delay in payments, underemployment, and violence against employees, oppression and maltreatment by local authorities. Poor relations between the employers and employees, discrimination at work, sexual harassment, poor health/medical care
Theme 2: Labour Organisations and Labour Rights in the Changing World of Work

and denial of terminal benefits, and poor working conditions echo the common plight of workers in almost all spheres of this sector. Organised sector workers are distinguished by regular salaried jobs with well-defined terms and conditions of employment, clear-cut rights and obligations and fairly comprehensive social security protection. The unorganised sector, on the other hand, has no such clear-cut employer-employee relationship and lacks most forms of social protection. Having no fixed employer, these workers are casual, contractual, migrant, home-based, own-account workers who attempt to earn a living from whatever meagre assets and skills they possess. Therefore, this paper attempts social security and sustained human development for workers of the unorganised sector and women employment in India.

Role of State and Indian Judiciary in Advancing Labour Rights in the Era of Corporates in India- A Philosophical Appraisal

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In the last decade of the 20th century, India was forced to change its economic policy because of world pressure and got into the path of global economy, and the changed economic policy brought in many top global business houses in India. The corporates brought in new social activity and new dimension to the existing labour philosophy in India. Labour right came increasingly under attack from the proponents of labour market flexibility. Proliferation of corporate power undermines the rights of labour and their collectivism, which still resists the rampant individualism of neo-liberal economics. The individualism is being promoted by the corporates more than collective labour rights in order to promote their business interest of making more capital benefits than the workers expenditure. For instance, the use of contract and casual labour, the payment of significantly lower wages for some section of labour, the willingness of the State to overlook many aspects of labour rights in the interest of investments, are areas where the corporates have shown considerable violation of labour laws and labour rights. The confrontation with its workers were shown by the corporates are triggered by the competition created by the liberalised policy of the government and are supported by their close link with the industry friendly government, their ability to read the central government favourable stance for their investment, regardless of the political affiliation, introducing the changes in the employment structure (permanent to contract, casual labour), de-recognition of unions. The only concern of the State is its market economy, but not the welfare of labour. Labour legislation in the name of liberalisation undermines the freedom of workers and their rights in the corporate sector.

The Supreme Court in India and High Courts under the parameters of constitutional philosophy have played a unique role through the power of judicial review which has tendered to revolutionise the methods, approaches and interpretations opposed to the attitude adopted by the employers. Slowly and systematically, a new industrial jurisprudence has grown with a decisive thought towards social justice. Faith in the rule of law compels everyone to understand the implication of Constitutional Law in labour disputes and industrial adjudications. The contribution made by higher judiciary in India in this
direction has been largely positive. This paper deals with the status of labour rights in the corporate sector and the role of judiciary to protect the rights of labour and their union to maintain better industrial relation and to protect the labour in India.

**Determinants of Child Labour in India:**
**A Cross-Sectional Analysis**

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The pervasiveness of child labour is a problem which continues to plague the world at large and developing nations in particular. There are different inter-linked factors that cause this phenomenon. Child labour prevents the children from accessing education and formal training, as a result of which they are deprived of opportunities of dignified work as adults. The objective of this paper is to study and analyse the different determinants of the occurrence of child labour in rural and urban areas across districts of India. There has not been any work, to our knowledge, which deals with the occurrence of child labour at the district level. District specific differences may cause child labour to manifest differently. This is the gap that our paper hopes to fill. Also, since most of it is found in agriculture and related activities in rural areas while it is mostly seen in informal sectors and specific industries in peri-urban or urban areas, it makes sense to carry out separate analysis for rural and urban areas. Our assumption is that given the difference in characteristics of these two areas, the plausible determinants will affect the concerned variable, that is, child labour, differently.

We explore and analyse the supply side and demand side determinants of child labour by performing a cross-sectional analysis using Census (2011) data. The analysis covers select districts throughout the country. Districts of each state have been sorted and chosen according to their DDP for the year 2011(measured at the constant price of 2004-05). This exercise has given rise to a sample of 143 districts in rural areas and 145 districts in urban areas.

The results of the study have given us certain features of child labour which is widely prevalent in India. A high per capita income of a district can act as a deterrent to child labour in the rural areas, but the effect will be opposite in the urban areas. Looking into the distribution aspect of the income becomes imperative in this context. Mother’s education helps to decrease the incidence of child labour. We have included a variable to check for the effect of caste on child labour and we find that districts with higher proportion of SC/ST population will have higher child labour in the rural areas, but will have lower child labour in urban areas. This can be caused due to the differentiated effect of affirmative action, and the limited scope of reservation policy. One major finding of this study is that access to schools in rural areas has no significant impact on that area’s existence of child labour which is against common expectation. This can be attributed to the inferior quality of government schools available for the poorest strata of the society who are mainly concentrated in the rural areas. Rural areas of
districts with higher percentage of males in the labour force will have higher child labour. This result is observed because agriculture as an employment generally call for participation of the entire household. Agriculture in rural areas and household industries in urban areas are found to be the primary demand side determinant of child labour.

This study comes with its limitations. In spite of poverty being a major factor causing child labour, we have not included a variable that measures it. This is because poverty and child labour might have a two-way causality. Instead, we have used the measure of per capita income of the district.

**Labouring Poor in India’s Organised Sector:**

*A Critical Evaluation of Social Security Schemes and Alternatives*

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The study highlights that social security measures adopted by a nation may have far-reaching benefits in the form of improving living conditions; raising productivity levels; and promoting sense of pride/self-respect amongst the citizens. In India, the evolution of social security provisions has a rich history. Its nature, extent and forms are largely mandated the constitutional provisions. Social security system developed so far in the country is undoubtedly favouring the formal sector workers with many benefits, though notorious for weak delivery and implementation. This system has been created under the political compulsions and labour mobilisation, by enacting labour legislations/acts which provided much needed social security benefits. Actually, the formal sector workers, having leverage of collective bargaining and political power, are able to secure these benefits from the employers and state governments.

Undoubtedly, workers in India’s organised sector enjoyed good amount of social security. But, actual working of these social security schemes has suggested that still much state effort is required to protect the interests of workers and their dependents. For instance, the success of first three non-contributed schemes (Workmen’s compensation, maternal benefits and gratuity payment) is largely dependent upon the noble intentions of employers, their financial worth, presence of strong trade unions, consciousness amongst the workers about their rights etc. Furthermore, there are many constraints like wage ceiling, threshold limit of employment strength, restrictions on Schedule of industries/establishments to be covered, and overlapping provisions under all these acts/schemes. For instance, wage ceiling limit as well as a cap on the threshold level of employment strength in the ESIS and EPF put brakes on assured benefits to be percolated to the intended workers.

Further, the ESIS membership has almost stagnated during the last four-five years because when an insured worker crosses the wage ceiling, he/she ceases to be the member of ESIS. This has put a limitation on the intended coverage and benefits of the ESIS. Moreover, ESIC's health delivery system
has not been satisfactory in most of the states. The state governments have their own limitations (like weak state finances and other pressing priorities etc.) in ensuring a reasonable medical care to the insured persons. Allowing the insured workers to get medical treatment from reputed doctors/clinics/hospitals in private sector is the best option for the ESI authorities as well as for the beneficiaries. Besides ensuring quality treatment, it would save revenue for the Corporation which could be utilised it for improving the services in existing hospitals and dispensaries.

Employees’ provident fund and pension schemes are now the biggest welfare schemes for workers in India. Considering the number of subscribers, capacity building of the EPFO needs special attention for which it must initiate reforms in its delivery system by using information technology. It is proposed to issue ‘smartcards’ to the PF subscribers and allot a unique number which would improve the delivery system in the organisation. The EPFO already started use of such technology but there is scope for improvement in this arena (Annual Report, EPF India 2001-12).

During the last 60 years, the EPF, EPS, ESIS and many other schemes have been providing certain benefits to the workers like provident fund, gratuity, health insurance, and pensions in old age. They were conceived immediately after independence and though these schemes are still relevant, they do not fully fit in the modern era where a clear and broader policy framework is the need of hour. In the context of globalisation, economic policy reforms, and social protection (in wider context), it is now necessary to have a clear national policy on the provisions of social security to the different groups of workers and employees in the country. Recognising these aspects, it is suggested that the state must initiate steps to simplify and rationalize the social security labour laws, and integrate these into the overall state economic philosophy for bringing new and innovative social security system as per the changing socio-economic environment of each state. At the same time, the existing legislative framework must be strengthened to protect the interests of labour in the organised sector. Moreover, an integrated comprehensive social security system/mechanism should be evolved by having a single legislation covering all existing social security schemes.

Regarding existing act/schemes, it is recommended that the state should (i) extend the coverage of these schemes by lowering the threshold level of employment strength and wage ceiling in the factories/establishments to bring uniformity at all-India basis; (ii) introduce new schemes/programmes of labour welfare by allowing self-financing schemes on self-sustaining pattern by involving the local bodies and workers themselves; (iii) allow and encourage the cooperatives, self-help groups, and workers’ associations to set-up, finance and manage few social security schemes, on experimental basis, for the unorganised sector’s workforce; (iv) identify and rectify the gaps, omissions, and deficiencies in the existing social security arrangement by encouraging bottom up participatory approach; (v) organise social awareness campaigns and dissemination of information to workers about the long-run benefits of these schemes, particularly the workers in the unorganised sector; (vi) put more emphasis to address the educational, health and housing needs of the workers in the unorganised sector; and (vii) involve local institutions like civic bodies/municipalities and Panchayati Raj Institutions for the implementation and monitoring of social security programmes.
Status of Domestic Workers in India: 
A Tale of Two Cities

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Domestic workers form an integral and critical part of informal sector labour diaspora. All the characteristics of informality exist in domestic labour. There is no written contract, no conventional method of wage determination, multiple household employers, total absence of social security, very little government intervention, a distress livelihood option, and lack of decent work environment. Using inferences from NSS 68th round unit level data on employment and unemployment (schedule no. 10) and data collected through primary survey in two cities namely Ahmedabad and Kolkata, this paper makes an attempt to depict the status of domestic workers in India. Findings from the data from these two contrasting cities validate the vulnerability of domestic work as an occupation and lack of legislative protection. There are few dissimilarities but basic findings are in conformity with primary characteristics of domestic work in our country. Although this sector follows locally determined informal norms and practices, there are no formal terms of employment, wage determination is based on local socio-economic milieu and extent of prevailing economic distress characterise the labour market, total absence of social security mechanism, lack of mobilisation, state intervention and indecent work-space.
TECHNICAL SESSION 2.7

Wealth, Occupation and Credit Rationing:
Analysing Indian Households

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This study examines the relationship of wealth and occupational status of Indian households with their credit market outcomes (macro and micro rationing), in both the formal and informal sectors. Using Probit models to model the application and approval decisions separately, this paper finds novel results. First, collateral in different forms (land, assets and livestocks) are more or less preferred by formal lenders in granting credit. Second, formal lenders are biased in favour of lending to cultivator households. For informal lenders, discrimination on the basis of occupation is not very evident. Third, determinants of micro rationing and macro rationing are more or less the same, but the importance of land as the dominant form of collateral becomes more evident in case of micro rationing in the formal sector. However, given that informal credit market is quite heterogeneous, further disaggregating our analysis may provide a better picture regarding the role of various covariates in explaining credit market outcomes in context of specific lenders.

Migrant Women Workers in Chenab Textile Mill:
A Sociological Analysis

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Migration acts as a survival tactics for the rural migrant women although they are facing various challenges to earn their livelihood but still migration gives them a hope to fulfil the basic needs. The study attempted to analyse the trends and patterns of women migration with reference to Chenab Textile Mill. From the recent years, Chenab Textile Mill attracted rural women from the different states of India like Bihar, Uttar Pradesh, Punjab, Odisha, Madhya Pradesh and Jharkhand. It has been found that female migration is majorly associated with marriage. Some women migrated independently not by their choice but their social and financial conditions forced them to move. Poverty and unemployment are the major push factors whereas domestic violence and failure of crop cannot be ignored as reasons of their migration. Further, women who are illiterate and belong to socially disadvantaged groups are more mobile. It was found that women used social networks to find jobs, house and financial assistance at the place of destination. In the end, it can be concluded that women are migrating only for their survival.

A Panel Data Analysis of Economic Crimes in India from 1976-2016

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The concept of tunnel effect given by Hirschman and Rothschild exemplifies a two-lane tunnel where a person in one tunnel is stuck in a traffic jam. If cars in the other tunnel starts moving, this person
might feel enthusiastic, expecting that the cars in his tunnel will also be moving soon. However, if that doesn’t happen after a certain time he might feel frustrated. The theory argues that in the early stages of rapid economic development, the tolerance for inequality across different classes, sectors, regions will be substantial. But after a certain point, the tolerance will be crippled into ‘envy’. Using per capita economic crimes as a proxy for ‘envy’, the present paper attempts to understand the impact of uneven growth in Indian context. For this purpose, the study takes into account the credit-deposit ratio in scheduled commercial banks as a measure of credit availability, state’s per capita income as a measure of growth, state’s development expenditure as a measure of state’s effort to minimise inequality, yield of food grains per hectare as a measure of productivity and annual rainfall and mean deviation from the annual rainfall, considering the factor that India is an agrarian economy dependent on rains; along with regional dummies and a time dummy to consider the effect of Economic Reforms that took place in 1992. The study uses panel data analysis for the period of 1976 to 2016 for the analysis. It finds that state’s development expenditure happens to negatively affect the economic crimes, while credit-deposit ratio and annual rainfall has a positive effect on crimes.

The study concludes that a high credit-deposit ratio might not ensure loan availability for the economically weaker section, as those possessing the required collateral can only avail the loans. Hence, a high credit-deposit ratio might increase the alternative source of income for the richer section of the society, thereby increasing the inequality. State-development expenditure, on the other hand creates more economic opportunities to earn income by legal means, thereby reducing economic crimes. Lastly, the impact of annual rainfall is described by citing the theory which claims that good rainfall induces non-agricultural labour to turn to crime against the agriculturists. However, we do not find a very detailed empirical study on such mechanism.

A Phenomenological Inquiry on Labour Organisation and Practice

Achudha Jothi Manikandan, Research Scholar, Madurai, Tamil Nadu

In the new epoch of Anthropocene, there is a higher degree of inequality and environmental degradation. To elevate from this egregious condition, this study stresses that it is essential to understand the triadic relationship between humanity, production and nature. The second stage of Marxist eco-socialism which is grounded on dialectal interaction, universal metabolism of nature and metabolic rift are applied as a theoretical framework to scrutinise the capitalistic predatory praxis – that results in inequality. The focus of the study is to illustrate why workers do not rebel against the capitalist praxis and what strategies they employ to survive under the capitalist system. A participatory case study on the lived experience of commuting rural cardamom women workers of Theni district of Tamil Nadu is analysed critically to unfold the horror experiences. The new labour process at cardamom plantation and workers’ living experience are similar to the women prisoners in the Nazi concentration camp. This study claims that capitalism and Nazism are indistinguishable because they transform and flourish by playing a zero-sum game, in which labour and nature which are source for creating wealth and well-being of the society are oppressed. Also, it alludes that through natural and social disorder, the
The Relevance of Marx’s Alienation in Contemporary Labor Society: A Case Study of Labor Community in Amarkantak, Madhya Pradesh

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The study mainly looks at the importance of ‘alienation’ among the workers. In general, it is a very old concept given by Marx based on economical and psychological state of the people.

It is found that male labourers may feel more alienated in comparison to female labourers. There are seven sections in this paper. The first section discusses the meaning and definition of labour. The second section explains a division of labour into organised and unorganised forms. The third section shows a relationship between poverty and a labour in terms of discussing vicious circle of poverty. The fourth section describes labour market where rural labour moves towards urban areas for better living standard. The fifth section mainly focusses on the concepts of ‘anomie’ and ‘alienation’ with special reference to Durkheim and Marx. The sixth section shows a relationship between alienation and labour. The seventh is the core section where there is a study conducted in Amarkantak, Madhya Pradesh that proves that how workers may feel alienated at their work places.

On Some Aspects of Multidimensional Poverty: A Field Study from Delhi

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The period of 1991-2011 has been a period of rising mobility in which migration has deepened. As per the Census, the migrant population as a proportion of the total population of the country increased from 27.4 per cent in 1991, to 30.6 per cent in 2001 and 37.5 per cent in 2011. In the period 2001-11, 30.5 per cent of the male migrants were in the age group 15 to 29 years, implying that they moved out of rural areas as there were no avenues for employment there. Delhi has been a centre of attraction for migrants from all over the country, who are mostly semi-skilled or unskilled and end up being employed in the informal sector. They live in unauthorised colonies and JJ clusters due to lack of adequate developed land at affordable rates.

To study the living conditions of the migrants in the slums of Delhi, a survey of 300 households was carried out in two slums. To determine the factors affecting the standard of living of the households, the proxies used were access to health facilities, subsidised ration, use of banking services, LPG connection and toilet ownership. The survey highlighted the deplorable living conditions of poor migrant households with their dependence on local private doctors for treatment. Lack of PDS portability also led to many of them being denied access to subsidised ration. While a substantial proportion did have at least one bank account in the family, very few had any form of social protection. Many households
did not have an LPG connection and had to buy their cylinders from local dealers at high rates without the government subsidy. It was found that the duration of migration and the possession of any token card significantly influenced the probability of having an LPG connection. The slum which a household belonged to and the income of the head of the household had a significant impact on the probability of having access to individual or shared toilets compared to being dependent on community toilets.

Amartya Sen had popularised the idea of using a multidimensional concept of poverty as he felt that income measures are often inadequate to gauge long-term well-being. The Alkire-Foster methodology, based on Sen’s work has been used to measure poverty in the areas of the field survey. This involved the use of dual cut-offs to identify the multi-dimensionally poor in the slums. Various deprivation indicators were used and comparisons were then made across the two slums to see the difference in deprivations across geographic locations. It was found that while some deprivations were more common in one slum, others were more pronounced in other areas. The Multidimensional Poverty Index (MPI) revealed that the average poor household in the surveyed slums was deprived in 45 per cent of the weighted indicators and the surveyed households were deprived in 23 per cent of the total potential deprivations.

A comparison of income poverty with multidimensional poverty was made to see which deprivations are not reduced with a rise in income levels. It was revealed that toilet ownership and access to drinking water are not affected by a rise in income levels. This could be due to market imperfections or lack of markets, where it has become nearly impossible for slum dwellers to improve their condition. This study helped us identify the areas where income gains have translated into better facilities and also locate the areas where economic gains have not led to improvements in non-monetary indicators. Appropriate policy making or a comprehensive plan by the government is needed to fill in where the people are not able to improve their standard of living on their own.


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This paper is an attempt to understand the role of Maternity Benefits (Amendment) Act, 2017, how the changes in the amended Act has affected the employability of women, and whether the proposed Paternity Benefits Bill can act to mitigate this adversity (to some extent). A country’s progress is not only defined by its industrial growth, but also the impact of the working population. In India, historically women have not been that high a participant in the labour market. This was true both for the urban as well as the rural sector. As per CIA data (2018), researchers have found that labour force participation rate for women in India is one of the lowest in the world (28.5 per cent compared to 82 per cent for men). A major concern for any working woman is the family obligations which needs to be fulfilled, i.e., the role of a mother, wife, daughter, daughter-in-law and other extended ones.

In 2017, the Maternity Benefits Act, 1961 was amended, including many additional features such as provision for added paid leave, covering more than two children etc. The amendments aim at
championing the cause of women workforce, increasing their participation, as well as curb the post-maternity attrition rate. However, there is also the implication of women workforce losing job, owing to the onus put on organisations to fully fund the 26 weeks leave policy. Start-ups, micro, small and medium enterprises, with restricted budgets, in all reality cannot afford this. “According to the Team Lcase study, post-maternity retention could cost 80-90 per cent of the annual salary in the case of white-collar employees and up to 135 per cent of annual cost in the case of blue-collar employees.” In fact, as per a study by Local Circles, 46 per cent start-ups said they would prefer to hire a male employee so as not to bear the additional costs.

The Paternity Benefit Bill was introduced in the Lok Sabha on 21st June 2017, and has not been yet passed. Looking into the above shortcomings of the Maternity Benefits (Amendment) Act, one way to bring in little bit more parity, gender sensitivity and equality, would be to bring in paternal benefits for the male employees, (WBL 2018 results show that female to male labour force participation is higher in countries where paternity leave is provided vis-à-vis those where paternity leave is not mandated) thus (hoping to) lessen the adverse impact on the job and hence career prospects of working women and their motherhood plans. Indeed, this is a long-drawn hypothesis, and it is currently not possible to back it by raw/substantial data. This Bill needs to address the issues/concerns regarding implementation, especially in the unorganised sector, as well as the modalities of the proposed Paternal Benefit Scheme Fund. Attempting to solve these questions would also ensure wider acceptance of the same, amongst all the affected stakeholders (including employer, employee and state) and hence help in achieving its stated goals.

Is PMJJY/PMSBY a Shelter to Unorganised Labour?
A Case Study of Bhopal City

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The growing economy and multifarious jobs have raised the demand and requirements of domestic labour in private households. The domestic workers come from the marginalised section of the society and most of them are poverty-stricken, and a large number of them are migrant workers. They do not hold any permanent job and earn temporary wages, therefore, most of them at times suffer from chronic unemployment. Concerned about the gravity of such problems, the Ministry of Labour and Employment has formulated a national policy on domestic workers which is presently in draft stage. The policy is likely to categorise domestic workers as unorganised workers, thus giving them rights and benefits. As per the National Sample Survey estimation (NSSO 2011-12, 68th round) 39 lakh workers are employed as domestic labourers by private households out of which 26 lakhs are female domestic labourers. This research focuses on the implementation of Pradhan Mantri Jeevan Jyoti Bima Yojna (PMJJBY) and Pradhan Mantri Suraksha Bima Yojna (PMSBY) which aims to provide life and disability coverage to the domestic workers for the age group of 18-50 years. This united scheme
of PMJJBY/PMSBY are being implemented by Ministry of Labour And Employment through Life Insurance Corporation of India. Secondly, the study assesses the awareness about Workers Social Security Act, 2008, which provides social security, health and maternity benefits and old age protection to the domestic workers.

Though in India there are a large number of domestic labourers, but they nearly contribute to the economy because the income earned by them is wholly consumed. Their propensity to consume is very high which leads to zero savings, therefore, central government in order to improvise domestic workers’ living and earnings came up with the idea of self-help groups to grow their savings. The study aims to find out the potential of such schemes in B Grade cities like Bhopal. Based on demographic discrepancies, the researcher has divided Bhopal city into two areas, namely, old Bhopal and new Bhopal and data has been collected from both areas.

**Major Determinants of Financial Inclusion:**
**State Level Evidences from India**

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Financial inclusion is one of the essential barometers for all-encompassing growth in any country. Past studies have linked financial inclusion as an economic instrument for inclusive growth. It is therefore imperative to measure financial inclusion in a coherent manner and identify the key determinants of financial inclusion. But, to the best of knowledge, studies on measurement of financial inclusion in a holistic manner are scarce and inconclusive. Initial studies on measurement of financial inclusion used individual indicators. However, numerous indicators when analysed individually do not provide an integrated picture of the reality (Chattopadhyay, 2011; Camara and Tuesta 2015; Gupta et al., 2012). Studies also used diverse indicators and methods to measure financial inclusion. Recent studies on measurement of financial inclusion through construction of composite indices either used parametric methods or non-parametric methods. However, both the parametric and non-parametric methods used in extant literature suffer from measurement issues or procedural inaccuracy. While the choice of weights in non-parametric method is through experiential watching or the instinct of the researcher, in case of parametric methods the weights are selected endogenously by making assumptions on raw data.

To triumph over these limitations, the present article makes a modest attempt to measure financial inclusion in a composite manner through Wroclaw Taxonomic Approach. Understanding the link between financial inclusion and socio-economic development at the aggregated level will assist policymakers to devise and employ programmes that will expand financial inclusion, leading to reduction of income equality and poverty. The paper also seeks to find out if the already apparent major socio-economic predictors of financial inclusion as revealed in the extant literatures are relevant in a panel data framework. The paper finds that the state of Goa tops the list while the state of Nagaland occupies the last position. Four states are found to be in high financial inclusion category for both the years of 2011 and 2015. With regard to low financial inclusion, while five states are observed to be in
this category in 2011, the number has reduced to four in 2015. In addition, 20 states fall in the medium category for the year 2015 in comparison to 19 states in the year 2011. Tamil Nadu and Meghalaya have improved their positions and Andhra Pradesh has gone down from high to medium category during 2011 – 2015. The study estimated the inequality in the distribution of financial inclusion across the states of India through coefficient of variation (CV). The co-efficient of variation (CV) of financial inclusion for the different states of India between 2010-11 and 2014-15 shows that the variation has increased by a meager 0.04 percentage points. The econometric analysis utilising a panel data structure of 28 states of India over four years found that income, infrastructure and employment opportunities are perhaps the most important determinants of financial inclusion. Furthermore, the computed indices can be utilised to track and measure financial inclusion over a period of time and at the micro level. The paper suggests that the policy makers should also take into account these facts to improve the financial inclusiveness of any region.

Organisational Structures and Staffing in a Public Health Programme: The Case of Tuberculosis and RNTCP

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In India, tuberculosis (TB) treatment can be classified into three periods i.e. pre-independence before x-ray and chemotherapy, the introduction of TB control programmes post-independence and the ongoing period assisted by WHO and adopting the Directly Observed Treatment Short Course (DOTS) strategy. The National TB Programme (NTP) was launched by the Government of India in 1961 to control Tuberculosis. Despite the NTP treating 1.3 million patients each year there seemed to be no profound impact on the prevalence of TB. A review of NTP by the Government of India in 1992 found many shortcomings like managerial weaknesses, frequent shortages of drugs, underutilisation of laboratories and low rates of treatment completion, which led to the establishment of Revised National Tuberculosis Control Programme (RNTCP) in 1993 as a small pilot project. It was scaled up nation-wide and by 2006, the entire country was covered by RNTCP.

The RNTCP in India adopted Directly Observed Treatment Short Course (DOTS) which is the internationally approved and recommended strategy to control TB. It acted as a standard and cost-effective approach to bolster the TB control programme in India. The second phase of RNTCP (2006-2011) emphasised on improving quality and accessibility of services and cure targets. Since its inception around six million cases have been treated using DOTS. Despite these achievements, the large numbers of undiagnosed and mistreated TB cases constantly plague the delivery systems of health in India, turning TB into an enormous public health problem. The structure of RNTCP comprises of five levels: National, State, District, Sub district and Peripheral health institutions. At the city level a tuberculosis unit is established for every 1.5-2.5 lakh population to augment the peripheral level supervision. At this level, a medical officer is appointed who is responsible for the management of RNTCP which includes ensuring a regular supply of drugs and providing quarterly reports on
Theme 2: Labour Organisations and Labour Rights in the Changing World of Work

case finding, sputum conversion and results of treatment outcome. The lack of an established health infrastructure in the urban areas requires the programme to forge its own structure and form effective partnerships with the private sector to ensure quality services.

Despite the efforts of the government in controlling TB through the RNTCP, we are witnessing a resurgence of infections. In this project, I seek to understand the existing delivery systems put in place by the RNTCP for implementing the DOTS strategy. By tracking the organisational structures put in place at a city level for RNTCP, the project seeks to understand the limitations of outreach through the programme. The fieldwork for this project was conducted during December 2018 - March 2019 and attempts were made to understand the organisational structure in place in Pune City for treatment of TB.

Labour Rights at National Law School of India University (NLSIU), Bengaluru - A Case Study

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The National Law School of India University (NLSIU), Bengaluru is an educational institution focusing on undergraduate and post-graduate legal and policy education and was established in 1986 by a statute passed by the Legislative Assembly of the State of Karnataka.

A small study was conducted to know whether the contractual labourers on watch and ward duty working in NLSIU are earning correct wages, getting the benefits of EPF and ESI, what is the level of awareness among the labourers about their due and what is the role of NLSIU in ensuring just wages for the labourers.

Information was collected by causal discussions with the security and maintenance staff based on a prepared questionnaire and perusal of records in the office of Estate Officer, NLSIU. The contractual housekeeping staff of NLSIU were excluded from the study. Understandably, the labourers did not want to come on record for the fear of being removed. There is a huge reserve of unemployed and insufficiently educated people in India who can easily replace these security guards and the Agency would do so without hesitation if it comes to know about any complaint against it.

After discussion with the security guards on the issue of wages, EPF and ESI, it emerged that all the security guards get paid less than what they are supposed to get. The Agency earns only Rs.293 per person and at this rate, only Rs 16,701 per month for 57 labourers from NLSIU. Maybe to make up for this small amount of income, the agency is illegally deducting Rs.1000 to 2000 from the pay of each labourer. The security guards are made to work for 30 days without leave. If they take leave, their pay is deducted. But as per the Labour Acts, the minimum wages is applicable for 26 days and if the labourers are made to work on Sundays, they are supposed to be paid extra. But this is not followed at NLSIU.

Underpayment of wages to contractual labourers is a phenomenon found across the country. I have seen this in various government offices and the head of the office should regularly keep a tab on
the wage payment to the labourers and blacklist the erring agencies. Several private security agencies collect more money from the employer but pay less than the minimum wages to the labourers in Bengaluru. The NLSIU administration should ensure that every labourer gets their permanent account number for EPF and should teach them how to check for the deposits, mode of withdrawal, advantages of ESI, affiliated hospitals etc. NLSIU can engage students to volunteer and help the labourers in this regard.

**Child Labour in India: What does It Disclose?**

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The number of children reported legally at work varies greatly from the number at work. There are only two major sources that provide data on child labour at the National level and these are NSSO and Census of India. According to both the sources, the extent of child labour has decreased in total terms. Census 2011 shows the declining trend in the number of working children in India within the age-group of 5-14 years. The number of child labour has reduced to 43.53 lakh.

According to the 66th round of NSSO (2009-10), the number of working children is estimated at 4.98 million, which reduced from 9.07 million child workers during 61st round (2004-05). Thus, the reports of the official sources show a declining trend in child labour in India. No doubt that this is a welcome trend, but the problem is still there with inadequacy of data coverage regarding child labour in the official statistics. The state-wise child labour share has also shown a decreasing trend, except in a few states. Though it shows that the efforts of the Government have borne the desired fruits, but still child labour in India has become the most important socio-economic problem.

The decline in the degree of child labour shown in NSSO 66th round (2009-10) and Census of India (2011) might be due to a decline in general employment. Perhaps this reduction is due to the proper implementation of the laws and regulations by the government and the important role played by NGOs at national as well as at international level.

There are more than 270 central and state legislations in India, which are applicable to children in various spheres of life. In spite of several legislative measures, the exploitation of children by different profit makers for their personal gains continues. As poverty and illiteracy are the most important causes of child labour, a combined and coordinated multi-pronged effort of a range of departments would significantly help to lessen this problem. The National Policy on Child Labour prescribes the need to focus on general developing programmes for the benefit of the families of child labour. Providing income generation to the parents of child labour would make possible them to send their children to school rather than work.

In a country like India, where 41 per cent are children under 18 years of age, which makes it a staggering share of the population, the budgetary allocation for them is rather miniscule which is only about 4.5 per cent of its annual budget. What needs immediate attention though is the way we look at the implementation of laws surrounding child protection, and anti-child labour acts. It cannot be
the job of social sector alone. Unless the government gets down to crack the whip, the detractors and perpetrators will continue to dole out small jobs with high amount of work for money that is not even worth mentioning, to be extracted from these young people. There is a need for policy advocacy on properly defining child labour from a child rights perspective in the official sources of data. Simultaneously efforts to make education compulsory up to secondary level will go a long way in addressing the matter of children who complete their elementary education but are unable to access high school education.

Child labour is an issue on which both the Union government and state government can execute legislation. In a globalised economy, the responsibility of government includes strengthening and developing guiding principle and programmes with consulting collective partners, that deal with the child labour concerns. There is no particular policy that by itself will end the menace of child labour. Different programmes such as beneath shoot approach with the Below Poverty Line (BPL) family unit at the focal point would be more successful plus the creation of returns in the course of various employment- circulating programmes like Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) would be exceptionally helpful.

Results of the empirical analysis of economic growth in relation to child labour also show the prevalence of lopsided economic growth and human development across all states in India. The recent legal framework working to combat the child labour shows various efforts done by the government through amendments in important laws and through social investment in the education budget. The government should allocate at least 5 to 10 per cent of the GDP for the development of the children through various child welfare programmes.

Social Entrepreneurship: Whether an Effective Tool of Job Creation and Social Impact? Evidence from India

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India is a good example of dualism in economy with coexistence of affluent class, high economic growth and huge market along with massive poverty, unemployment and inequality. There have been attempts from the central and state government of India to uplift the status of have-nots through various policies and schemes. Despite having demographic dividend, Indian economy has not been able to absorb labour force into work force. Despite having a huge number of enterprises distributed across the nation, there is a tremendous scope for instilling entrepreneurship spirit among the population. Realising this need, the government of India recently formulated many policies to encourage and support entrepreneurs specially start-ups. India faces immense need of social upliftment and there is a lot that enterprises can do in this direction besides fulfilling corporate social responsibility.
requirements. In this context, social enterprises (SEs) are a very suitable blend for contribution in sustainable development including economic growth, employment generation and social justice.

This study explores the estimation, nature and characteristics of existing social enterprises in India. In the process, the study strives to investigate how the characteristics of social enterprises are contributing in the enhancement of capability of needy people which in turn helps in the job creation, development and poverty eradication. In the same context, the study also attempts to discuss the limitations of social enterprises in poverty alleviation and achieving other social goals.

The study also investigates the association of distribution of social enterprises with the distribution of state-wise poverty in India and then discusses the possible reasons for the distribution using institutional support perspective. The findings show that social enterprises (SEs) are not only present in good numbers in India but are also active in almost all socially relevant sectors causing huge social impact including employment creation. The efforts of SEs in India help in the enhancement of capability of needy people which in turn helps in the development with poverty and inequality eradication. However, the distribution of SEs across different states is not very desirable because of the negative correlation between poverty and the number of SEs existing in the states. Within the state, SEs are concentrated only in the cities and not in the rural areas where there is more need for SEs in the absence of desired institutions. The study per se is able to highlight some important features of social enterprises in India which can be valuable input for policy makers, entrepreneurs and researchers in the context of poverty eradication.
TECHNICAL SESSION 2.8
Informality Patterns among Alang Ship Breaking Industry

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The relationship between economic growth and formalization of industrial sectors has not been unidimensional as several studies have brought different aspects of it from diverse contexts. A large proportion of labour force in the Indian economy is employed in the informal sector. Almost all employment in agriculture and allied activities is part of informal sector. A greater proportion of urban activities too is classified as informal sector. This paper tries to evaluate the existence of informality in the Alang ship breaking industry by setting it against the declared formality of the sector. In addition, the paper also supports the argument that informal patterns of employment can continue, if not grow within a formal sector. The present study has used both primary and secondary data. Primary data was collected through questionnaire survey and interview methods. Secondary data was collected by reviewing available literature and also collect data from the government authority.

Due to concert database on labour and seasonal employment in Alang ship breaking industry, the population for this study remains somewhat unspecified. Hence, 300 respondents are selected for survey by using stratified random sampling method. A survey was carried out prior to conducting field survey to find out the major living areas of workers in the near the ship breaking yards. Interviews were also conducted to collect significant information on Alang ship breaking industry as the respondents of survey questionnaire were labourers with less knowledge of the administrative and policy information. The interview included shipyard owners, labour contractors, yard managers, Gujarat Maritime Board officials. Analysis of the findings reveal a strong presence of informality within labour market dynamics of ship breaking industry in India while several administrative aspects of the industry remain formalised. Study findings support the notion that growth as well as institutional development cannot necessarily transform informal conditions of labour market in developing country context.

Incidence of Poverty Across Social and Religion Groups:
An Analysis of the Districts of Punjab

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The purpose of this study is to examine the district profile of poverty estimates across social and religion groups in Punjab so as to provide suitable policy interventions. It also presents other parameters related to poverty estimates like education of household head, occupational category, household size and fuel used for cooking in the Punjab. District estimates have been evaluated by using the records of available consumer expenditure surveys of NSSO for the period 2004-05 and 2011-12. Furthermore, incidence of poverty across social and religion groups is estimated for both rural and urban districts of Punjab. The various estimates revealed that though overall poverty across social and religion groups
has declined, district poverty trends of social and religion groups witness a rise in the incidence of poverty for many districts in rural and urban areas. Certain groups lag behind in development outcomes of growth, education, occupation and so on. The study recommends that various poverty alleviating policies in Punjab should focus more on reducing the household size, development of socially excluded sub-groups (scheduled castes and other backward classes) and religion groups, delivery of basic facilities of education, fuel used for cooking and lighting and enhancement of employment prospects for casual labourers, with special emphasis on identified impoverished districts as planning is moving from centralized to decentralised system.

Labour Migration in India:
Inter-State and Intra-State Analysis

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Regarding inter-state migration in India, it is observed that more than half of the population migrate from villages to cities. Experts opine that it is essential to create good education facilities and sound infrastructure facilities in villages. Because most of the youth left their villages due to better employment and subsequently better life style. Consequently, they left rural areas permanently. Most of the villagers migrate to urban areas viz. urban informal sector. They prefer initial step to enter in urban informal sector in low wages viz, daily wage basis jobs. Later on, they find better job and settles in urban areas. Thus, out migration from rural areas viz, villagers convert in-migration in urban areas or to stay nearby big cities. So, in-migration of labour in urban areas created overcrowded cities. This major and significant change took place in major cities of India. Government and policy makers should make concerted efforts to provide maximum education facilities, electrification of rural areas and better life style. It is noteworthy that in last three years, residents of urban areas belong to age-group of 18 to 35 years.

In this paper, an attempt is made to analyse rural-urban migration with reference to intra-state viz, inter district migration prevalent in Gujarat. We have observed various trends prevalent in various districts of Gujarat State under 6th Economic Census – 2013’s secondary data. We have observed that in various districts of Gujarat State, various types of trends are prevalent regarding without hired workers with at least one hired worker. Broadly speaking, various districts Ahmedabad, Vadodara, Surat, Rajkot, Bhavnagar, Jamnagar, Banaskantha and Sabarkantha, hold top leading positions regarding number of establishments for non-farm activities.

We have observed different trends are prevalent regarding in rural areas viz, without hired worker, with at least one hired worker. Similarly, in urban areas we observed different trends prevalent regarding without hired worker with at least one hired worker in different districts of Gujarat State. To conclude, we observed that in various districts of Gujarat State regarding persons employed for all broad activities by sectors are different. Broadly speaking, districts of Surat, Ahmedabad, Vadodara, Rajkot, Bhavnagar, Jamnagar, Banaskantha and Sabarkantha are top-most leading districts in this regard. Consequently, over-crowed cities over traffic burden on local authorities had emerged now-a-days.
These are the outcomes of out migration from rural areas. Consequently, in-migration of labourers in district headquarters has emerged various socio-economic problems, in Gujarat particularly. State Planners and policy makers should make concerted efforts to find out an amicable solution for the same.

### Inequalities in the Distribution of Income and Consumption Expenditure among Cycle Rickshaw Pullers: A Case Study of Ludhiana and Bathinda Municipal Corporation

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The cycle rickshaw is a small-scale local means of transportation with three wheels. They are often used to carry passengers by negotiated fare and widely used in major cities of South East-Asia, South-Asia particularly in India for shorter distance. The present paper is an attempt to analyse the level, pattern, and inequalities of income and consumption expenditure among cycle rickshaw pullers of Punjab. The study is an empirical analysis based on primary data collected through the field survey and direct questionnaire to the respondents in Ludhiana and Bathinda Municipal Corporation of Punjab.

A sample of 120 rickshaw pullers was selected for this purpose, comprised of 60 cycle rickshaw pullers from each corporation. Cycle rickshaw pullers did not have a fixed income and their income depends upon various factors like their age, fitness, family burden, weather conditions, location or place where they run their rickshaw and so on. Their earnings depended on their man-days labour as a rickshaw puller and their working hours per day. The study found that most of the cycle rickshaw pullers earned in the range of Rs. 6000 to Rs. 8000 per month.

It was observed that cycle rickshaw pullers played major role in total household income. Out of the total household income, 82.73 per cent of the income was earned by cycle rickshaw pullers. The per capita income of cycle rickshaw puller households was found to be Rs 21652.43. The Gini coefficient for all the sampled cycle rickshaw puller households was found to indicate a relatively fair distribution of income. A relatively less fair distribution of per household is noticed in Bathinda Municipal Corporation than Ludhiana Municipal Corporation. The annual and per capita consumption expenditure of an average cycle rickshaw puller household was found to be Rs 109902.71 and Rs 22739.47 respectively. The Gini coefficient for all the sampled cycle rickshaw puller households indicated a relatively fair consumption expenditure distribution. Inter-municipal corporation analysis shows that cycle rickshaw puller households enjoyed relatively good distribution of consumption expenditure in Ludhiana Municipal Corporation as compared to Bathinda Municipal Corporation.

It was observed that for an average cycle rickshaw puller household, consumption expenditure on non-durables accounted for the major share in the total consumption expenditure followed by services, others, durables, and socio-religious ceremonies. Intoxicants and drugs accounted for the largest share in the total consumption expenditure followed by food grains and vegetables, milk and milk products.
Large number of cycle rickshaw pullers was not having their own house. They lived in rented house with their families or alone. They also lived in rented houses with others by pooling the rent. It is also found that the migrant cycle rickshaw pullers faced the problem of accommodation at large level. The vulnerability of rickshaw pullers is that the majority of those who engaged in rickshaw pulling activity are not owners of their rickshaws. They hired rickshaws on a daily rent basis. A significant amount of their income goes to the owners’ pocket in the form of rickshaw rent.

Changing Nature of Employment in Maharashtra

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Rural employment basically depends upon agriculture and allied sectors and businesses. The employment is divided into three categories like self-employed, regular salaried, casual and contract workers. Basically, self-employment activity needs investment which is depending upon the ability of people and availability of financial services. The distribution of employment defines resources and employment market activities. Rise in self-employment activities reflects the development of new markets and employment skills among the people. Maharashtra is an industrially leading state in India. Industrial sector of the state shares nearly 30 per cent while agriculture sector shares around 17 per cent of the gross state domestic product (GSDP). However, agriculture sector also plays an important role in economic development of the state. Agriculture is a largest employer in the state. It shares about 46 per cent of total employment in Maharashtra. Agriculture and agro-based businesses and industries are the major sources of employment in rural areas of the state. Cropping pattern and availability of raw material determines the industrial pattern in Maharashtra. Considering the cropping pattern in Maharashtra the sugarcane crop and sugar factories create thousands of job opportunities every year. For example, sugarcane crop itself generates employment in rural areas where sugar factories generate many job opportunities from cutting of sugarcane to transport it to factory and factory employment directly. On the other, these sugar factories generate many self-businesses and job opportunities indirectly such as hoteling, tyre puncture, repairing, automobile business, etc. Such employment generated around the factory is self-employment in nature.

Maharashtra is an economically leading state in the country. The economic activities in organised and unorganised sectors play a crucial role in Maharashtra’s development. The distribution of establishments engaged in various economic activities and employment generated through these activities are important in economic development of rural and urban areas in the state. All the establishments are divided into agriculture and non-agriculture activities. According to recent economic census 2013, there are 61.37 lakh establishments in operation in the state. About 32.94 lakh establishments were working in rural while, 28.43 lakh were in urban areas. Similarly, about 45.45 lakh establishments were engaged in non-agricultural activities whereas, 15.92 lakh in agricultural activities in 2013. The non-agricultural establishments grew at 28.10 per cent during 2005 and 2013 while, agricultural establishments grew at 163.53 per cent during the same time period. This trend shows the changing nature of employment market in Maharashtra.
The data for the work is collected from economic census, directorate of economics and statistics government of Maharashtra and employment unemployment survey reports published by national sample survey office, government of India. This paper tries to calculate changes in the establishments in both agriculture and non-agriculture sectors in Maharashtra. The change in the activities during the period of 2005 to 2013 indicates the pattern of rural employment market in Maharashtra.

Implications of Urban Informal Sector Employment

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This study is an attempt to trace the implications of urban informal sector employment in Kerala. The implication mainly arises from the duality concept of Boeke in 1953. The informalisation is mainly happening under the dual phenomena. On one side, formalisation and decent work paradigm is working, but on the other side, informalisation through inequality is growing fast. The concept of decent work is not applicable in the informal sector workers in Kerala. There are mainly four factors that related to the concept of decent work like a) Rights at Work, b) Employment, c) Social Security and d) Social Dialogue.

The central objective of the study is to investigate the implications of urban informal sector workers in Kerala. The study is based on both the primary and secondary data. The secondary data were collected from the unit record data of NSSO the Employment and Unemployment Survey (EUS) 1999-2000 to 2011-2012. A stratified multi-stage sampling design has been adopted for primary data collection. The primary survey has been conducted among urban informal sector workers in two districts, which have the highest proportion of informal sector workers engaged in manufacturing, construction and trade. The primary data was collected from 312 informal sector workers in Kerala related to the three major economic activities in like Manufacturing (29), Construction (106) and Trade (177) by NSSO 68th round data in Kerala. The criteria followed for selecting the samples are a) urban growth regarding the degree of urbanisation (Census Reports 1971 to 2011) and b) the highest proportion of the informal sector workers engaged in these activities. Kochi was selected as it has the highest proportion of urban population (68.07 per cent) in 2011 and 15.20 per cent urban informal sector workers. Calicut was selected as it has the second highest per cent of urban population (67.15 per cent) in 2011 and 14.9 per cent urban informal workers. The following are the important variables that relate to the implications of the workers. In the case of employment constraints, long hours of work is the major problem faced by the workers. The majority of the workers are reaching their workplaces by bus, and the level of income is the most important factor influencing the workers living and working conditions. So, the income depends on the workers living standards. The majority of the workers are satisfied with their present condition of work, and they are ready to continue this job without any protection and security provided by the government. So, one of the major findings of the study is that informal sector workers are not doing as decent work, they have no employment security, hours of work are not properly fixed, and no social security benefits provided by the government.
Flight for Better Future:  
An Exploration of Migration of Indian Students

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Student migration is relatively a new form of migration with its roots dating back to the times when the countries were under the colonial rule. In the present times, the ongoing process of internationalisation of education is due to its multifaceted character, resulting in its universal appeal. It is generally seen that for an individual, education is regarded as a powerful tool to establish a unique identity of oneself, especially in the present competitive world where there is a need of specialised knowledge as there is excess supply and insufficient demand for labour.

India stands second in the world after China in terms of the number of students going to other countries for higher education. In the last 14 years, the number of children being sent from India has increased four times. The present study found that main recipient countries for Indian students migrating for higher education are United States, United Kingdom, Canada and Australia and major programmes preferred are STEM, psychology and entertainment etc. Burning desire for high paying jobs, better standard of living and demonstration effect, widened scope of research, liberal immigration policies combined with the push and pull factors like increased competition for admissions in higher education institutions of India and exorbitant fees charged by them have resulted in increased incidence of this phenomenon. These students contribute millions of dollars to economy of host countries and as a majority of them settle and work in these countries where contribute as the skilled workers. Apart from economic benefits, the host institutions and the country also gains socially and culturally. But for a developing country like India the student exodus is largely a one way street, as the number of students lodged abroad are over more than four times the inbound numbers unlike in case of China where the inbound outbound ratio is 56 per cent, for Singapore it is 200 per cent, for Malaysia it is 100 per cent but for India it is only 14 per cent. But the major difference is that in India, migration is one way while for other countries migration works on both sides.

Though individually this rising mobility in India enhances the job prospects and cross pollination of ideas for the students but for the country as a whole it has major negative ramifications. This mass migration of Indian students is resulting in both in capital and brain drain. It is observed that more and more Indian parents send their wards right after higher secondary education for undergraduate studies. The foreign exchange remittances from their support are continuously increasing. Around $2.8 billion in 2017-18 was spent towards the maintenance of close relatives (hostel) and student abroad (Tuition fees) which was approximately 45 per cent of all the remittances from the country (Reserve Bank of India, 2017).
Human Development: A Comparative Analysis Between Workers in Agriculture Sector and Others

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In the present study an attempt has been made to see the status of human development and economic development among ‘rural people’, ‘people dependent on agriculture sector’ and ‘Dalits’ in comparison with the rest. Using the secondary data from different government published sources of Karnataka, these three disaggregated groups have been linked with different socio-economic indicators.

The study found that rural people in particular and people dependent on agriculture are more deprived in all the socio economic indicators (PCI, HDI, GII, CDI, FSI etc.). Further, the study also found that ‘people dependent on agriculture’ are in more pathetic situation than that of ‘SC&ST’. It is painful to note that people, who struggle to feed the entire nation, do not have the food security themselves.

The study suggests that in the recent years, framing of policies is happening in a more decentralised manner. In such circumstances, taluk level data, at least on consumption expenditure is needed. To collect this data, state should plan for a ‘state sample survey cell’. In collaboration with NSSO, taluk level data can be collected, using the same methodology, same questionnaire, and same canvassing system with increasing the sample size to cover all the taluks of the state. Similarly, for taluk level health related indicators, NFHS methodology can be used. Once taluk level data on health and consumption expenditure is collected, that will be helpful for many policy interventions. Further it is also useful for construction of Human Development and other developmental indices at disaggregated levels like Rural/Urban, Dalit/Non-Dalits, and different occupational groups etc. This will be helpful for the achievement of decentralised, inclusive and balanced regional development of the state.
THEME 3

Changing Pattern of Rural Labour Markets
KEYNOTE PAPER

Features of Rural Workers in India Today with a Focus on Gender and Caste

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This paper explores the features of rural labour markets in the contemporary period. It draws on evidence from secondary data as well as the PARI archive of village data with the Foundation for Agrarian Studies. In the context of major macro-economic and structural changes in the Indian economy over the last few decades, including the fall in the share of agriculture in GDP, we need to understand and appropriately characterise features of the rural labour force in the contemporary period. My focus in this presentation is on women workers in rural India, with work defined as participation in economic activity that is currently part of the System of National Accounts.

One of the puzzling features of rural India is the low and declining work participation of women reported in official statistics. In this presentation, I argue that this characterisation is misleading and needs to be revised. Scholars have shown that standard labour force surveys underestimate women's work based on many reasons including the nature of women's work which is often home-based, intermittent, and in the informal sector. Time-use surveys capture the work done by women better than standard labour force surveys because time-use surveys collect information on the actual time spent in different activities and not on employment status alone. The sole time-use survey in India was a pilot study conducted in six States in 1998-99, and it showed women's work participation to be double the proportion reported in the labour force survey the following year, 1999-2000.

In 2017-18, the Foundation for Agrarian Studies conducted time-use surveys in two villages of Karnataka. The number of women was small but the dataset is unique: for each respondent, data were collected twice at 12-hour intervals for seven consecutive days and in three seasons. This study showed, first, that using a weekly-status definition of employment (that is, having worked at least one hour during the reference week), all women in the two villages came within the definition of workers. Secondly, using a daily-status definition of employment (that is, using a major-time criterion), the data showed near-universal work participation during the harvest season and lower work participation in the lean season. The study found that younger and educated women were likely to spend fewer hours in economic activity than older, less-educated women, reflecting, I argue, the aspiration of younger women for “better” jobs.

A second feature of the rural work force is that the typical rural male worker can be characterised as a manual worker engaged in a variety of jobs during the year rather than being solely an agricultural worker. Indeed, a feature of rural India now is that it is rare to find male workers who were employed only at agricultural tasks. Evidence on days of employment from 21 villages in the PARI archive substantiates the point that non-agricultural work is a significant part of annual employment for an average male manual worker. The picture for women, however, was distinct, as women manual workers were largely engaged in agricultural tasks, with less access to non-agricultural employment than men.
Thus, women workers in rural India are more dependent on agricultural labour than male workers. The relative absence of non-agricultural employment among women workers is consistent with the argument that women face constraints to physical mobility and prefer employment near their homes.

The third notable feature of rural India is the fact that large numbers of women, from different social groups and economic classes, participated in the employment generated under NREGS (National Rural Employment Guarantee Scheme). Village-level evidence on days of employment shows that NREGS is the main form of non-agricultural employment for many women workers in rural areas. The experience of NREGS shows that women enter the non-agricultural labour force when employment is provided.

Together, evidence from the village time-use surveys and the experience of participation in NREGS show that far more rural women are workers than is now reported, and if, adequate employment opportunities were provided, the proportion of women workers would rise further.

The fourth striking feature of rural labour markets is the persistence of a large gender gap in wages. On average, wage rates for women are lower than wage rates for men for specific agricultural operations as well as in aggregate. The gender gap in wages is higher for non-agricultural tasks than agricultural tasks. There is also large variation across states with the gender gap being relatively low in states of the north and east and relatively high in states of the south and west.

To reduce the gender gap in wages, we need to address gender discrimination in wages directly as well as indirectly by various means including enforcement of minimum wages and the creation of high-wage employment opportunities in the non-agricultural sector.

Lastly, while there were regional variations, Scheduled Castes (and Scheduled Tribes where they are present) in the PARI villages typically comprised the majority of the rural female (as well as male) labour force. Scheduled Caste women were the mainstay of the female labour force. In addition, in Dalit manual worker households, women workers were rarely less than 40 per cent of all workers. The participation of Dalit women in the work force was higher than of women from other social groups, and the number of days of employment per Dalit woman worker was on average higher than the number of days of employment per woman worker from a non-Scheduled Caste, non-Scheduled Tribe social group. In rural India, caste continues to shape occupational structure.
TECHNICAL SESSION 3.1

Changing Patterns and Dynamics of Agricultural Labour Markets:
A Case Study of Cotton Farming in Punjab

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The issues of farm labour are generally side stepped while examining the issues in the farm sector, especially in agriculturally grown states like Punjab as dominant paradigm is that of landholders as stakeholders while most of the farm labour happens to be landless. Therefore, it is important to examine the state of agricultural sector as far as labour issues and interface of farm workers and landowning farmers is concerned in terms of not only the organisation of work relations but also social relations and the changing nature and dynamics of such arrangements.

This paper examines the nature and state of farmer labour relations in the context of a commercial cash crop - cotton which is a high value crop in Punjab of importance to both; farmers and workers, with secondary and primary data, including insights from focus groups with men and women workers. It examines the systems of labour provision and inherent issues of wages and work conditions in such arrangements, including the issue of access to farm land for landless labour households and the gender dimension of labour relations in the cotton crop context. It finds that though the wage engagement is more of casual and piece rate wage based especially in picking of cotton, there is some gendering of tasks and gender gap in wages if it is not piece rate based wage payment. Further, workers also find cotton as an important crop in their livelihood strategy as other major crops of the state (wheat and paddy) are mostly mechanised in their operations (except transplanting of paddy) with very little work opportunity for landless workers.

Besides the immediate wage based relations of workers with farmers, the paper also examines the role of collectivisation of workers for securing rights to common land under the panchayats in order to sustain their livelihoods which has been highly contested by local farmers and some of their unions. It also looks into the role of the state policies in facilitating and hindering their access to such lands. The paper brings to light some recent attempts at further mechanisation of the cotton crop by global projects and the state government which can hit hard the labour interest. The paper concludes by highlighting major research and policy issues and way forward for making farm labour markets pro-poor.

Women Artisans of Rural Labour Markets in Gujarat

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What is the nature of humanness when horizons of hope and depths of despair co-exist? Is exploitation by an external agent different from self-exploitation by a voluntary cooperative? An action-research
project with women artisans in Gujarat trained in different crafts for self-employment has raised these and other intriguing questions about psychological and emotional thresholds associated with the dynamics of abundance and scarcity over decent work. Neither nostalgia (phantasy of glorious cultural heritage) nor “postalgia” (fantasy about a grand future unfolding) provide adequate containment to toxicity unleashed in organisational and institutional processes. Nor do they explain how or why processes aimed at self-preservation, dignity and self-worth enhancement in the “here and now” fail to invite attention to management imperatives. Alongside the joy of learning something new by way of skills, women artisans struggling for livelihoods carried feelings of sadness and despondency at not having adequate piece-work for earnings that would provide even the equivalent of time-based statutory minimum wages for unskilled labour. Yet there was no spill over of their despair and anger.

The universe of feelings involved hurt and helplessness alongside pride over a new vocational identity and feelings of enhanced self-worth leading to acceptance over organising one’s own exploitation. The muting of anger and conversion of potential protest against an employer into a protest of women united in an unjust world enabled acceptance of poverty with dignity. Community interest enterprises can be passion-laden identity enterprises whose social character is pivoted around hope generated from membership bonding. They may pursue ephemeral mirages as transitional objects if their social value is organised connecting several proximate local communities. The cement that binds the membership can help cope with the depths of despair. This raises the possibility that such groups can form the core of larger self-reliant ‘anubandh’ communities of habitat, vocations, and trade that could experience a sense of social abundance in the midst of material and economic scarcity.

When horizons of hope and depths of despair co-exist, the notions of abundance and scarcity need revisiting. When beliefs are born in ignorance and fostered by necessity, they could be underwritten by wisdom and knowing or by sheer stupidity or plain deception. The path to our own created hells can come paved with good intentions. The challenges of the poor and excluded are often about dealing with a world that is too small or too big to share and too full or too empty to enable renewal. That is where empathy is necessary but not sufficient, and justice can be stillborn from the politics of relatedness because authority exercised over organisation and management require to give due regard to process work alongside systems and structures.

This study found evidence for distinguishing the capital view of work creation, income creation and formalisation for stimulating economic growth from the labour view of formalisation for decent work. However, instead of attributing the scism to dualism, this paper concludes that the real issue is that labour market and social security institutions in India have not developed for sustaining high gender-neutral labour participation rates. Initiatives by the government for formulating active labour market policies would require not only spatial initiatives in rural labour markets but also attention to missing markets where pecuniary external economies of the Scitovskian kind persist for long periods of time.
Changing Demographic and Agrarian Structures: 
And the Employment Challenge for Indian States, 2005-2018

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This paper analyses the challenges faced by Indian States with respect to the creation of employment in the non-agricultural sectors during the period from 2005 to 2018. This is given the context of the growth of the working-age population, on the one hand, and the gradual withdrawal of workers from agriculture, on the other. The paper is based on an analysis of data from Census of India and official data on employment and unemployment, including the Periodic Labour Force Survey held during 2017-18.

India faces a stiff challenge in creating decent jobs, with the growing size of its working-age population and rising enrolment of young adults for education. Labour absorption has been declining in the country in agriculture, especially so within the categories of women and young men – although agriculture and allied activities employed 41.9% of India's total workforce even in 2017-18. Therefore, it becomes crucial that the generation of new employment opportunities in the non-agricultural sectors – industry, construction, and services – keep pace with the growth of the potential job seekers.

There are differences across Indian States with respect to demographic structures and demographic transition. As per the Census of India 2011, the ratio of the population of the young (in the age group of 0 to 14 years) to total population varied from 23.4 per cent only in Kerala to 40.1 per cent in Bihar. In general, the growth of the working-age population is likely to slow down in a number of southern and western States, importantly Kerala and Tamil Nadu. At the same time, the size of the working-age population is expected to increase impressively over the coming years in a number of other States, many of them in the east and north of the country, including Bihar, Uttar Pradesh, Rajasthan and Madhya Pradesh.

There are also differences across States with respect to the pace of agrarian transformation. In 2017-18, the share of the workforce engaged in agriculture and allied activities ranged from only 16.7 per cent in Kerala and 26.0 per cent in Tamil Nadu to 47.2 per cent in Uttar Pradesh, 58.1 Madhya Pradesh, and 63.8 per cent in Chhattisgarh. The shift of the workforce away from agriculture to the non-agricultural sectors is yet to begin in a big way in the latter set of States.

Construction had been the major source of employment in India between 2005 and 2012, accounting for half of all non-agricultural jobs generated in the country during that period. The growth of construction jobs benefitted men in rural areas, providing them a livelihood outside of agriculture, particularly in Uttar Pradesh, Rajasthan, Bihar and Madhya Pradesh. This growth was linked to an overall revival in India's rural economy that lasted roughly between 2007-08 and 2011-12.

Compared to the second half of the 2000s, the growth of the agricultural and construction sectors slowed down in India after 2012. New employment opportunities created in rural India in construction fell from 18.9 million between 2005 and 2012 to 1.6 million only during the 2012-2018 period. The
manufacturing sector lost one million jobs between 2012 and 2018, with micro and small firms in the informal sector suffering severe setbacks. At the same time, some segments of the services sector, especially education and professional, business and allied services recorded acceleration in employment growth after 2012. Overall, net increase in employment in India in the non-agricultural sectors declined from 49.1 million during 2005-2012 to 26.1 million only during 2012-2018. The crisis in the growth of rural incomes and employment appears to have been moderated to some extent with an increase in governmental expenditures during the period 2016-2018.

Between 2012 and 2018, 30-59-year-old men obtained 91.8% of all new employment opportunities created in India (for 15-59-year-olds) in industry, construction and services. For young men (15-29-years-olds) and women, however, actual increase in non-agricultural employment opportunities was significantly less than the supply of potential job seekers from among them. Women appear to have been hit the most by the job losses in the informal sector, which were fuelled after 2016 by demonetization and the introduction of GST.

The response by women to the slow growth of new employment opportunities has been to withdraw altogether from the labour market. A significantly large mismatch between potential labour supply and actual labour absorption was reported for the first time in the case of men in the 2017-18 survey. This has resulted in an unprecedentedly sharp increase in the number of unemployed among 15-29-year-old men in India, from 6.7 million in 2012 to 21.1 million in 2018. It needs to be noted that unemployed men who were 15-29 years old accounted for 68.3% of all unemployed persons in India in 2018.

The Indian economy will be able to reap the demographic window of opportunity only for the next two decades or so after which the country’s population will gradually start growing old. It will be a huge challenge for policymakers to create conditions that make more effective use of the strengths of its young women and men. The nature of the employment challenge will vary widely across Indian States. While states such as Kerala and Tamil Nadu possess relatively advanced economic and agrarian structures, the prospects for their future growth will be dampened by the slow growth of the working-age population. On the other hand, the fast growth of the working-age population in states such as Bihar, Uttar Pradesh, Rajasthan, Madhya Pradesh and Chhattisgarh will offer them big opportunities for future growth. At the same time, policymakers will find it tough to create employment in these States, especially for the young in rural areas, and particularly when there is going to be a large shift of the workforce away from agriculture.

An Analysis of the Unemployment Challenge and India’s Policy Response

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India’s demographic transition promises a demographic dividend. The demographic transition in India follows a service oriented structural transformation in the economy. Along with the changes in composition of the Gross Domestic Product, the economy is also undergoing a structural change in employment as well. The share of employment in the primary sector is gradually shifting towards other
sectors, especially, services and construction. The structural transformation is also accompanied by a
trend break in economic growth from growing around 2 to 3 percent in the 1970s and 80s accelerating
to around 5 to 7 percent in the 1990s and 2000s. Demographic transition, structural transformation and
economic growth in India would impose dramatic changes to the labour market. This paper analyses the
question of unemployment in India within the above context. The key challenge in terms of employment
is three fold, rising open unemployment and under employment and the large share of working poor. The
key policy response had been in terms of envisaging a reduction in unemployment through economic
growth, which may belie expectations. The key policy initiatives include skill development to enhance
employability and skill matching to increase mobility of workers. While the policy initiatives may increase
the skill sets available, evidence shows that these efforts are only partially successful. Moreover, the
overall policy orientation only seems to target the unemployed or under-employed youth, while the vast
expanse of the working poor, especially in the older age cohort seems to be out of the policy purview.

Rural Labour Markets in India: Some Recent Changes

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Indian economy has experienced relatively a fast rate of growth for nearly last three decades. Although,
agriculture did not display such acceleration in the rate of its growth yet it has experienced structural
changes with implications for rural labour markets. The whole process of development has made rural markets dynamic as well as complex in nature. The complexities in the rural markets have been
made by continued traditional social and economic structures and prevalence of caste system, gender
differentials which imparted segmentation in these markets. On the traditional structures, there has been
penetration of capitalist values, capital formation, introduction of new technologies and innovations,
mechanization of production operations, changes in cropping pattern, rising productivity, sub-division
of holdings leading to emergence of owner-cum-labour households/semi-proletariat-cum workers
and emergence of non-farm employment. This is accompanied by destruction of traditional value
system, decline in community support system leading to enhanced mobility and migration from the
rural areas. The working of the rural economy is deeply affected by market facilitating interventions
such as building roads especially link roads, taking electricity to every village, rising telecommunication
penetration through mobile phones and electronic media, support for introduction of new technologies
and cropping pattern to increase marketable surplus and promote competition between individual
producers and create differentiation between them. The market facilitating intervention of the state
is also accompanied by pro-poor and pro-labour welfare measures and policies as an outcome of
parliamentary democracy such as MGNREGA, PDS, PMAY & PKMSY, etc. The presence of activities
of labour and Kisan unions and NGOs/CSOs are contributing to these changes. This paper examines
the recent changes in the rural labour markets in relation to the whole gamut of complex process during
the last three decades. This paper concentrates on the nature of changes in the rural economy especially
in agriculture across different states of the country. The attempt is made to examine impact of market
facilitating interventions in the rural areas and to identify the direction of changes in the rural labour
markets. The paper also works out the role of pro-poor welfare measures and their outcomes for rural
labour markets. The rural labour market changes are also related to the working of unions, NGOs and CSOs in the country-side. The paper has been written in the context of mode of production debate and traditional segmentation of labour markets as argued in 1980s. The recent changes in the rural labour markets and their interaction with the traditional social and economic structures has been discussed in the light of recent data available on employment and distribution of rural labour across different sub-sectors of the rural economy. An attempt is also made to look into sources of income of rural workforce in different activities and changes over time. The changes in the rural labour market provide wide differentials between various states and different regions of the states. In spite of the differences between states and various regions of the states on rural labour markets, the direction of the change appears to be dominated by dynamics of capitalist development in agriculture sector in the country. This tendency has been strengthened by neo-liberal policies adopted in 1991.

Contours of Transformation in Female Work Participation in Uttar Pradesh: Examining the NSSO and PLFS Data

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This paper uses successive rounds of National Sample Survey Organization (NSSO) data from 1993–94 to 2011–12 and the recent Periodic Labour Force Survey (PLFS) first visit unit level data and provides a description of patterns and trends in female labour force participation in Uttar Pradesh. It also estimates the extent of the recent decline in female labour force participation and delves deep to examine and assess the contribution of various demographic and socio-economic factors in explaining the female labour force participation decision at the State level. The analysis finds that female labour force participation dropped by 20.5 per cent points from 1993-94 to 2017–18 in rural areas and by 5.1 per cent point in urban areas during the same period.

This paper examines the determinants of workforce structure with respect to status and sector in Uttar Pradesh. It develops multinominal regression model by using successive rounds of NSSO's household survey data to comprehend factors that drive to influence the choice of type of employment of workers in Uttar Pradesh. The variables selected for the analysis are income deciles, social groups, religion, educational level, age, and household size as the factors for decision for choice of sectors for female workers. Thus, the study is based on the data drawn from National Sample Survey for multinominal regression for 2004-05 and 2011-12, broadly speaking 61st round and 68th round of NSSO vide its schedule of enquiry (Schedule 10) on the subject of employment and unemployment in India. The survey extends critical information on labour market indicators pertaining to labour force participation rates, worker population ratio, unemployment and wages etc. Besides this schedule also collects information on socio-economic and demographic variables at individual level. For the purpose of study, women in the age group of 15-59 are studied to ascertain their choice of economic activities.
Rural Non-Farm Employment in Eastern India: Implications for Economic Well-being of Rural Households

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India has experienced rapid economic growth in the past few decades, but the pace of its growth has been biased towards urban areas. Over-dependence in rural areas on the low-productivity agriculture sector has brought about a high and persistent disparity between rural and urban incomes. In the historical pattern of structural transformation, the income and employment shares of agriculture in total Gross Domestic Product (GDP) and workforce decline unequivocally, but the high income disparity in India has bucked this trend. Increasing non-farm employment and diversification would boost the process of structural transformation and help India achieve its objectives of equitable and inclusive economic development.

In this backdrop, paper has analysed the process of employment diversification towards the non-farm sector in eastern India for the period, 1993-94 to 2011-12. Findings reveal that the employment participation has increased in both the secondary and tertiary sectors in eastern India and the share of construction activity has expanded considerably in rural employment. The trend in employment participation denotes a structural change; it is broadly similar across quintile groups and farm sizes, but there are some variations. As per capita expenditure increases, participation in non-farm employment rises; however, the effect of higher per capita expenditure is more on the service sector than on the secondary sector. Owners of small and large farms tended to seek non-farm employment. The pace of non-farm diversification was more significant during the 15-year period in Bihar, Assam, and Odisha.

The 2SLS regression and multinomial logistic regression was used to assess the impact of rural non-farm diversification on average MPCE of the sample and the determinants of non-farm jobs. The first stage of the regression, which displays the relationship between non-farm diversification and other variables, reveals that the age, household size, gender, technical and general education, and caste significantly impact non-farm diversification in eastern India. Young people and better educated males prefer non-farm employment, but better educated people working as casual labour do not prefer the non-farm sector. People from large families in rural eastern India are likely to choose self-employed non-farm activity but not non-farm, regular salary/wage jobs or casual labour activity. Non-farm
employment—self-employment and regular salary/wage jobs—improve consumption expenditure but casual labour non-farm employment affects it negatively.

This article highlights that the degree of non-farm diversification varies quite significantly across the types of rural employment. However, the positive impact of this diversification is noticed in self-employment and regular salary/wage earners but the casual labour non-farm activity is proved to be vulnerable as mostly the deprived section tendency towards this casual activity is higher. Although at different level, the casualisation is being highlighted but it should also be specifically highlighted in policy discourse to solve it in the rural non-farm sector.

**Micro-Macro Determinants of Women’s Participation in Labour Market: A Study of EAG and Southern States of India**

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Women in India face several socio-economic and cultural constraints in gaining access to the labour market. Their participation in the economic activities is not only low, but it also varies across various socio-economic-religious groups and regions. This paper studies the female participation in labour market in Empowered Action Group (EAG) states and southern states of India, and explores the reasons why women in the southern states have higher level of participation in economic activities than their counterparts in the EAG states. This study is based on the analysis of unit-level data-set from the NSSO’s 68th round (2011-12) which comprises a sample of 77982 women in the age-group 15-59 years. To analyse the factors causing variation in the female work participation rates across EAG and southern states, both micro and macro level determinants are considered. The probability of women being engaged in the labour market is modelled as function of various micro-level explanatory variables. In addition to this, the analysis also disaggregates the work participation into three types: regular salaried work, casual work, and self–employed work, and applies multinomial logistic model to estimate the predicted probabilities of women being employed in these categories of work using various factors as predictors. Further, impact of macro-level determinants like sex ratio, literacy rate, cropping intensity, growth rate of population, share of SC/ST population and per capita net district domestic product (PCNDDP) on women participation in the labor market is also examined using district-wise data from 266 districts of EAG and southern states. The results of micro-level analysis suggest that women's educational attainment, age, ethnicity, religion, MPCE, possession of land, household size, and technical education affect likelihood of women getting engaged in the labour market. The macro level analysis indicates that sex-ratio, PCNDDP, and proportion of SC/ST population positively affect the participation rate while factors like literacy have negative impact on it. The paper suggests that a different set of policies are required to overcome the cultural and social norms faced by women and policies to create incentives for growth in the sectors which have high potential for women employment.
Off-the-farm Livelihood Choice of Farm Households in India

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A defining feature of structural transformation is a decline in share of agriculture in total GDP, and a rise in the share of non-farm sector. This also leads to an increase in employment in the non-farm sector. Labour moving out from agricultural to the non-farm sector leads to productivity gain, and hence, economic growth. The issue of structural change and its impact on the farm and non-farm sector has been addressed in the literature. However, these studies present a macro-level perspective on structural churning in the economy. A micro counterpart to the macro story of structural transformation is a missing element in the literature. The macro observations of a decline in share of agriculture and rise in non-farm employment due to structural transformation should be reflected with farm households undertaking off-farm employment. A study of farm households diversifying into off-farm activities would offer a parallel micro understanding of structural transformation in the economy. This paper is a response to this end. It provides a micro analysis of the corresponding growing macro literature on structural transformation. By illustrating the factors which may determine off-farm livelihood diversification by farm households, it presents a micro perspective to the narrative of structural factors. Using a rich set of information on structural features, this study makes a comprehensive assessment on off-farm diversification decision by farm households. The results show that apart from farm and household conditions, there is a larger structural context which has a significant bearing on off-farm diversification decision by farm households. Structural factors at the village neighbourhood level, infrastructure, agro-climatic conditions, urbanisation, and state policy factors influence off-farm diversification.

The results have two important policy relevance points. First, as structural conditions are beyond the control of the farm households, the study highlights the relevance of structural features which might impede or facilitate off-farm diversification by farm households. This would equip policy makers to work on those structural features to augment off-farm diversification. Second, “Doubling of Farmers’ Income” by the year 2022 is a stated policy objective of the government of India. The Dalwai Committee Report on policy measures required to achieve this target, suggests generating off-farm employment opportunities near-farm and in non-farm economic activities. Since, this study is based on farm household level data from India, the results substantiates the recommendations of by identifying the structural factors which may require policy attention to encourage off-farm diversification at the micro level (i.e. at the farm household level). Farm household’s diversification into off-farm sector would typically include working as wage labour in other’s farm, working as wage labour in the non-farm sector, and into entrepreneurship/non-farm business. However, farm household’s choice of off-farm diversification depends upon various farm and household level conditions. However, farm households
do not operate in isolation. Household decisions are affected by external such structural factors which could be at the village, district, and state level. Favourable external conditions are required for raising off-farm employment. Study of off-farm diversification decision process without taking into account the external structural conditions could lead to biased conclusions. Using a nationally representative survey data of farm household’s in India, and coalescing it with information on structural variables, this paper analyses the determinants of off-farm diversification decision. Taking into account farm, household and structural factors, a multinomial probit model is estimated to identify the factors influencing off-farm diversification choice. Since structural variables are beyond the control of the farm households, from a policy perspective, this study helps in identifying the structural factors influencing off-farm activities. This would help in ameliorating the structural conditions required to encourage off-farm diversification.
TECHNICAL SESSION 3.3

Rural Employment in Contemporary India:
Some Observations based on PLFS Surveys

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Recently released data from the Periodic Labour Force Survey have shown a massive contraction of employment availability in rural areas between 2011-12 and 2017-18. While the decline in worker to population ratios took place across rural and urban areas, for men and women, and in almost all of the large States, the contraction was highest for rural workers. In fact, for rural men and women, there was not even one State among the 22 most populous ones that did not see a contraction of employment.

In India as a whole, only about a quarter of working-age women found any employment. The State-level figures are even more pathetic. In Bihar, only four per cent rural women found any employment. In Punjab and Uttar Pradesh, less than 15 per cent rural women had any employment. Of the 22 large States, in only three States – Andhra Pradesh, Chhattisgarh and Himachal Pradesh – more than 50 per cent rural women found some employment. In 2011-12, the figure was more than 50 per cent in seven out of these 22 States.

In terms of sectors, the contraction of employment was led by agriculture. Proportion of men employed in agriculture fell by 4 percentage points while proportion of women employed in agriculture fell by 6 percentage points. In 2017-18, only 28 per cent of rural men and 13 per cent of rural women were usually employed in agriculture. These numbers are a damning reflection of the agrarian crisis that plagues rural India today.

Between 2004-05 and 2011-12, construction had emerged as the main sector in which employment expanded. Over this period, proportion of population that was employed in construction increased by 3.4 percentage points for rural men and 1.1 percentage points for rural women. Over this period, construction emerged as the sector that absorbed workers who did not find any other employment. Employment in construction sector involved arduous labour, was insecure and often required workers to migrate. Nevertheless, construction became the employer of last resort for workers who did not have any other employment and could not afford to remain unemployed. After 2011-12, the growth of employment in construction also tapered off and this employer of last resort also shut its door to workers. Between 2011-12 and 2017-18, the proportion of rural men employed in construction increased only by 0.4 percentage points and proportion of rural women employed in construction fell by 0.7 percentage points.

In this paper, we extend the analysis of Rawal and Saha (2015) and Usami and Rawal (2018) using data from 2017-18 PLFS. The paper estimates unemployment rates using the concept of production boundary of the UN System of National Accounts to identify the labour force. It examines changes in the structure of employment of rural workers in the age group 15 to 59 years, and uses age-cohort analysis to examine movement of workforce across occupations and in-and-out of the labour force.
Structural Transformation and Employment Patterns in Rural India:
An Analysis of National and State-Level Changes

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The recently released Periodic Labour Force Survey (PLFS) data for the year 2017-18 have generated considerable interest and controversy in academic, policy, and popular circles. Several divergent estimates of employment generation (or loss) have been published based on the data. In this paper we show that divergences are accounted for by definitions of employment (e.g. principal or subsidiary status), gender, and population estimates. We also provide our own estimates of the absolute changes in workforce between 2011 and 2017. These are based on population projections derived from the cohort-component method. Unlike the usually employed trend extrapolation method, this method enables us to take into consideration differences in the rates of fertility, mortality and migration of different age groups. Next we use the absolute numbers thus calculated to analyse structural changes in the Indian economy with respect to two processes, the Lewis process or formalisation of the labour force and the Kuznets process, or the movement from agricultural to non-agricultural employment. The trend of absolute decline in the agricultural workforce observed between 2004 and 2011 has continued. Between 2011 and 2017 the farm workforce declined by around 10 million. Manufacturing showed very weak employment growth (around 0.6 million), while robust increases were observed in services (17 million). Construction also showed positive changes (6 million) but the magnitude was much less than in the 2004-2011 period. Overall, the Kuznets process slowed down since 2011. As regards the Lewis process, the share of relatively large non-farm enterprises in total employment (hiring 20 or more workers) remained constant at around 16-17% during this period. However, the share of workers in regular wage work increased slightly. Lastly, the paper analyses state-level variation in the structural change process. Even among relatively more agrarian states, the pace of non-agricultural employment generation varied vastly from 0.6% (cagr) in Uttar Pradesh to 6% in Bihar. We discuss the implications of these variations in the context of India’s overall structural transformation.

Caste and Occupation:
An Analysis of Census Data for Marathwada

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This paper examines the relationship between caste and work or employment at the village level in a backward region of Maharashtra. Using data from the primary census abstract and village directory of the Census of India 2011, the paper explores the association between the presence of scheduled castes in the population and the nature of the workforce. Specifically, villages in eight districts of Marathwada
are ranked by the share of scheduled castes in total population, and various characteristics of villages in different fractile groups are then examined.

Detailed analysis of Census data up to 2001, by Sukhadeo Thorat, shows that the dependence of the scheduled castes on agriculture is more than that of non-scheduled castes and that the disparity between scheduled castes and others has remained more or less unchanged between 1981 and 2001 (Thorat 2009). While there are studies of characteristics of the scheduled caste population (be it in terms of literacy or work participation or occupational structure) such as in Thorat (2009), there are very few studies of the characteristics of villages with differing numbers of scheduled caste persons. This paper attempts to capture the nature of employment across villages of the Marathwada region that differ in terms of the caste composition of the population. Specifically, we ask two questions:

(i) Does the male and female work participation rate or worker population ratio vary as the proportion of scheduled castes in the population rises?

(ii) Does the composition of the work force change (in terms of share of cultivators and share of agricultural labourers) as the proportion of scheduled castes in the population rises?

The analysis is undertaken for eight districts of Marathwada, which is recognised to be a backward region of Maharashtra (HDRM, 2012), but is under-studied by social scientists. The socio-economic status of Dalit households in the Marathwada region of Maharashtra has received little attention in the agrarian literature (Bokil 1996, Bakshi 2013, Ramakumar 2011). The Marathwada region is also of interest as it has seen major agrarian struggles in the past, including for the right to land and livelihood. Further, of all the five regions of Maharashtra (Vidarbh, Marathwada, Khandesh and Northern Maharashtra, Konkan and Paschim Maharashtra), the proportion of scheduled caste population is one of the highest in Marathwada (16 per cent). In Marathwada, 57 per cent of scheduled caste households were landless.

The village has been taken as a unit of study. The population has been subdivided into three groups: scheduled castes, scheduled tribes and others. For our analysis, first, in each district, all uninhabited villages were excluded from the data file. Secondly, in order to focus attention on scheduled castes, we have tried to exclude scheduled tribe-dominated or adivasi villages. So, villages with no scheduled castes but some scheduled tribes have been excluded. We also excluded villages with scheduled castes but where scheduled tribes comprised more than 50 per cent of the population. Thirdly, we divided the remaining villages into fractile groups based on the share of scheduled castes in total population.

This exercise, based on data from the primary census abstract of 2011 for eight districts of Marathwada, shows a consistent picture across all districts in terms of the concentration of scheduled caste population and characteristics of the village work force. While the overall work participation rate does not vary across villages differing in the share of scheduled castes, there remains a clear difference in occupational structure of villages in different fractile groups. As we move to villages with a higher proportion of scheduled castes, the share of cultivators falls sharply and that of agricultural workers rises. The traditional association between caste and occupation thus continues to prevail in these villages of Marathwada. This analysis also brings out how caste composition affects not just individuals of specific castes but the nature of the village economy.
Interrogating the ‘Circular’ in Circular Labour Migration: The Case of Internal Migration in India

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Circular migration, or circularity, is a key concept in migration studies. The framing of circularity, however, is distinctly different in the literatures of international migration and internal migration. The two literatures remain separate and largely unrelated in the social sciences (Hickey and Yeoh 2015). That they have evolved in silos, and don’t speak to each other, has epistemological implications for circularity - a topic that is mostly deliberated in the literature on international migration. Globally, internal migrants far outnumber international migrants, yet it is the latter that find predominance in migration research and policy (King and Skeldon 2010). In the context of this literature, circularity is firmly embedded in the contemporary mainstream ‘migration and development’ discourse in which development in source regions is mediated by remittances earned by migrants at destination. This positive nexus between migration and development is labelled as a ‘triple win’ – for source regions, destination regions, and migrants themselves (Geiger and Pecoud 2013).

In the context of internal migration in India, circularity remains less studied, both theoretically and empirically. Notwithstanding Jan Breman’s seminal longitudinal work on labour circulation (Breman 1996, Breman 2009, Breman 2010, Breman 2019) and Priya Deshingkar’s wide-ranging empirical and policy research on circular migration (Deshingkar 2008; Farrington and Deshingkar 2009; Bird and Deshingkar 2013) little space is devoted to the conceptualisation or manifestation of circularity per se. Often, seasonal, temporary and circular migrations are used interchangeably in research studies, policy documents, as well as official statistics (for instance, see, Deshingkar et al., 2008; Government of India, 2010) leading to confusion and dissonance.

Against this backdrop, this paper interrogates the multiple meanings and articulations of circularity in three distinct ways. First, it locates internal circular migration in the seemingly mutually exclusive literatures of international migration and development studies. Second, in the context of internal migration in India, it examines programme documents of the state on rural-urban migration to explicitly delineate discursive shifts in the circularity of migration with respect to the state’s national development programme. Third, it presents circular migration from the lens of a longitudinal empirical study in the eastern Indian state of Bihar, distinctly focusing on results from three methods: large-scale household surveys, an in-depth village study and multi-sited (rural and urban) fieldwork with migrant workers.

Land Market in a Bodo Tribe Village of Assam

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The tribes in the north-east India are generally known to follow community ownership of land. Theirs being swidden agriculture as a form of cultivation, ownership of land in private individual hands is non-existent or so is the popular view. Hence, prevalence of ownership in land, which is permanent,
heritable, transferable, and mortgage-able or contracted for rent, should also not have existed. In close examination of these tribes, scholars argue that some form of private ownership in land had existed even before the British established their dominion in these parts. Economic historians such as Amalendu Guha highlight that introduction of revenue system by the British and post-independence policies by the modern state, have largely impacted community centric relationships with land in the north-east of India (also see Agarwal, 1996).

The Bodos, however, do not fit with the popular view of a largely community centric ownership of land devoid of any private ownership in land. The policies by the colonial empire had much to do with this incongruity. The taxation system which eventually led to formal regulations in land settlements gradually morphed the tribe into peasants (besides other factors of change). In due course the inequality in land ownership among the members of the tribe has evolved into class differentiation among them which is a regular feature among rural agrarian structures among the Bodos or in the so-called Bodoland Territorial Area Districts (BTAD) of today.

In this paper, we study the patterns of distribution of land among households, inequality in ownership and operation of land and the extent and form of tenancy in Majrabari, a village settled by members of the Bodo tribe.

In the first section, we delve into the issue of whether the Bodos had a community system of ownership or private ownership. Reviewing secondary literature on tribes of the north-east, we see changes on four counts: (a) Statisation of ownership in land (appropriation by the state): By the 1840s the mode of revenue collection was fully monetised in the areas known as Assam Proper. The British government had become the sole proprietor of its territories by then, its occupants given only occupancy rights which were deemed permanent, heritable and transferable, subject to a regular tax payment. The sub-montane Duars became a part of British India in 1865 after the Bhutan War. In 1886 the Assam Land and Revenue Regulations Act was promulgated that defined the rules of land settlement in legal terms (b) Transition from swidden to settled agriculture: The adoption of wet rice cultivation brought in a shift in the form of agriculture of the Bodos. This had the effect of arresting movements of people for slash and burn and rooting members of this community in one place for settled agriculture (c) From community to private ownership of land: The notions of private ownership of land soon gathered acceptance through repeated use of the same plot year after year and gradually bestowed a public sanction on the concerned household’s possession of the land (Agarwal, 1996) and (d) Rural Economic differentiation: Privatisation of communal land gradually led to intra and inter village economic differentiation due to ownership differentials in the quality of land and availability of irrigation. Households with excess land sharecropped with tenants while others worked as wage labourers. The Bodos worked as wage labourers in the Tea plantations (Saikia, 2011).

In the second section of this paper, we analyse the present patterns of land ownership and distribution in Majrabari. We also examine inequality in ownership and operation of land in the village. The analysis of the intra village inequalities will provide us the basis for looking into the emergence of Bodo peasantry and their differentiation.
In the third section, we look into the tenancy relations in Majrabari. The prevalence of a differentiated peasantry provides a ground for land market in the village. This section will seek to understand the nature of land rental market prevalent in a Bodo-dominant village (Majrabari revenue village) in BTAD. We ask: is sharecropping the most prevalent form of tenancy arrangement? If so, why? What are the terms and conditions based on which tenancy contracts take place among the households?

Finally, this paper is an attempt at understanding the socio-economic relationships in Majrabari by looking into the mechanisms of peasant differentiation through land ownership and the working of the land market through tenancy contractual arrangements.

**Productivity-Pay-Gap in Agriculture and its Role in Scaling-Up Structural Transformation in India**


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There had been a massive outflow of agricultural workforce during the past decade in India. Ironically, this was the period when real farm wages were rising, agricultural prices were improving, and national policies were supporting farmers. This efflux, even under favourable environment, raises concerns that whether workers in agriculture are productively employed, and are paid equivalent to their productivity contribution. In short, is there a productivity-pay-gap in agriculture? We explored the presence of productivity-pay-gap in agricultural labour market in India during 1981-2016, possible causes behind it, and its influence on structural transformation. We observed a negative productivity-pay-gap in agriculture since 2000s. Wages roughly equaled labour productivity during 1980s and 1990s, after which productivity lagged behind. The Instrumental Variable (2SLS, LIML, GMM) estimates attribute this divergence to a) labour intensification in construction sector and b) introduction of MNREGS-the largest public works program in the country. Against conventional wisdom, increasing agricultural prices fostered agricultural decline, and was found to be the major driver of transformation. It explained 43 per cent of total agricultural decline, followed by the productivity-pay-gap (25 per cent). Capital intensification in non-agriculture (16 per cent) and investing in public agricultural research and education (16 per cent) were found to be the other potential drivers of transformation.

**Short Term Labour Migration and Children’s Schooling Outcome: Evidence from India**

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Migration of parents can affect education and welfare of their children and social policies need to address the same. In India, the Right to Education (RTE) Act, 2009, has recognised the challenges faced by children due to migration of parents. RTE made the local governments responsible for
admission of children from migrant families. This paper uses data from a primary survey conducted in 2019, which covers seven villages in highly migration prone district of Nuapada in Western Odisha, India, to study welfare and educational outcomes of children who out-migrate with their parents and children who are left-behind in the source villages.

The paper quantifies the relation between migration of a family member, child’s learning outcomes and school attendance, conditional on whether the child migrated, was left-behind in hostel or with caregivers. Further, the study finds that schools are being run by the contractors or employers in certain worksites, which work as more of a crèche or day-care for children rather than a regular school. Children who migrate with their parents engage in domestic chores, child-care or work when there is no school at the worksite. On the other hand, state-run seasonal hostel in the source village encourages parents to leave their children behind, which leads to uninterrupted schooling and better learning outcomes.

Next, the paper quantifies the relation between short-term migration of family member and child’s learning outcomes at the national level by drawing evidence from nationally representative data source of India Human Development Survey-II, 2012. The results show that the negative relation not only holds for western Odisha, but it is a pattern that is evident across Indian states. Since short-term migration of parents and learning outcomes of children can be endogenous, the results presented in the paper can be considered correlational at best.

Finally, the paper discusses the policies that have altered the migration patterns in Odisha, and role of state in operating hostels and protecting educational rights of children.

Horticultural Development in Convergence with MGNREGS in Tribal Areas of Andhra Pradesh

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This paper analyses the livelihood impact of coffee plantations undertaken in Paderu ITDA, Visakhapatnam district of Andhra Pradesh, on convergence mode. The MGNREGS, along with ITDA and Coffee Board, was involved in 2009-16 coffee project, with a major contribution of about 82 per cent of total project cost. By 2015-16, about 61,000 acres of coffee plantations were carried out by the 60 thousand tribal farmers. It is expected that such developmental activities have significant positive livelihood implications.

The horticultural liaison workers played a key role in spreading information about the coffee project and procedure of making the claims. The horticultural officer and PRI officials also spread information about the claim process. They provided claim forms and supported the arrangement of necessary documents. Their support was highest for the non-PVTG households than the PVTG households. They were not interested to visit interior areas and helping households while making the claim. They gave more emphasis to approachable places, particularly to roadside villages. They also gave more preference to affluent persons and their relatives. Only those households which were politically and socially strong enough to fight for their demand were able to make the claims.
The distribution of silver oak, coffee and pepper seedlings were much lower than the norm. The problem was more among the PVTG households than the non-PVTG households. The horticulture officers and liaison workers supplied more seedlings to households who would be able to manage them. They deprived other households by stating that very few seedlings were provided by the ITDA that needed to be equally distributed in more number of beneficiaries. There were incidents where seedlings were distributed to VSS members even though they were not claimed for plantation. There was higher mortality among the seedlings distributed. The mortality rate was high in the PVTG habitations than the non-PVTG habitations. Perhaps good quality seedlings were distributed in better off villages whereas low quality seedlings in interior villages.

On average, the number of labour days provided under MGNREGS during the first year of plantation was 45 days/per acre. The average number of labour days used during second, third and fourth years of plantation was 35, 28 and 19, respectively, which was highly inadequate. More number of labour days was provided to the non-PVTG households than the PVTG households. As such, households themselves undertook the remaining activities by use of family labour or labour in exchange.

All sample households reported that maintenance activities were not conducted properly under MGNREGS. The officials blamed the households for the higher mortality rate among the seedlings distributed and no seedlings were distributed thereafter for gap filling. Non-availability of labour at the time of work was another main reason for not undertaking maintenance activities. The other problems faced by households during the maintenance period were no proper inspection by the higher level officers, muster roll improperly maintained, engagement of fewer labour days, more involvement of influential/known persons in work, maintenance works not carried out in prescribed manner, non-cooperative attitude of workmates, wrong entry in job card, role of Gram Sabha undermined, no inspection by the superior officers, and exclusion of female labours.

Households also faced problems concerning wage payment. There was long delay in payment of wage to bank account and households were not getting information (mobile SMS) about transfer of wage amount to the bank account. Such problems were more prevalent in PVTG habitations than non-PVTG habitations. However, all households believe that provision of labour days through MGNREGS to carryout maintenance activities was necessary. It was so because the maintenance activities required use of adequate and timely availability labour which they could afford in terms of wage payments.

The per acre income from coffee plantation was about Rs. 13000 which is quite higher than the income derived from other crops, except cashew and turmeric. The non-PVTG households have more income (Rs. 14037/acre) from coffee than their counterpart PVTG households (Rs. 10993/acre). The analysis shows that convergence played a critical role for increasing the well-being of coffee farmers in terms of supporting initial investments and reducing the cost of cultivation. The non-PVTG households had more benefits than the PVTG households and the difference in financial gains between the PVTG and non-PVTG households was high in the case of convergence.

The household income and employability have been significantly increased after coffee plantation. On average, before coffee plantation, the share of agriculture in total household income was 47 per cent - which dramatically increased to 65 per cent after coffee plantation. Coffee plantation also
helped livelihood diversification from high-risk and low-remunerative source to low-risk and high-remunerative source. There was also a decline in contribution of wage employment, particularly of distress migration. Households do believe that there were eight welfare changes due to coffee plantation: a) increased consumption expenditure, b) reduced distress migration, c) repayment of loan, d) meeting medical expenditure, e) renovation/building house, f) increased bargaining power, g) purchase of household durables, and h) improved social status.

Evolution of Agriculture-Industry Inter-Linkages and their Implications for Agrarian Development: Empirical Evidence from India

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Given the stunted structural transformation as well as the ongoing agrarian crisis in India (Chand et al, 2007; Storm, 2015; Siddiqui, 2015), it becomes imperative to understand the evolving linkages between agriculture and industry, given their prominent direct interdependency, and to see if they are playing their theoretically envisaged roles in driving the transformation. While the role of agricultural sector in the contemporary development process in India has been widely debated, the evolution of domestic inter-sectoral linkages at a sub-sectoral level and its impact has not been empirically studied. This paper is an intervention in this regard. We look at the changing agriculture-industry linkages over past three decades to analyse the nature and pattern of these linkages both at an aggregate and at sub-sectoral levels, and study their impact on possibilities for agricultural growth and economic transformation. To undergo this, relative, backward, and forward linkages are calculated from the Input-Output Transactions Tables (IOTT) for the period 1973-74 to 2007-08 (the latest available IOTT). The study finds that for much of the post-reform period in the Indian economy (i.e., since mid-1980s), the linkages between the sectors, at an aggregate level, have weakened – only after 2003-04 the linkages have started improving.

At a disaggregated level, there are four main observations that can be observed about the nature of linkages. First, there has been an increase in intra-sectoral linkage of the agriculture sector. This implies that agricultural sub-sectors are increasingly becoming dependent among themselves to fulfill their input requirement and to find a market for their output. Second, among the key sectors of the economy namely, jute, iron & steel, chemicals, non-metallic mineral products, paper industry, and paints, soap and drugs industry, except for chemicals and iron &steel industry, the linkages with rest of these sectors have been falling. Demand arising for these industrial sectors from agricultural sector (backward linkage) is higher than industrial direct and indirect demand for agricultural products (forward linkage). Third, most of the key sectors and other industrial sectors that agriculture sector has high linkages with, except for chemicals, electrical, miscellaneous manufacturing and miscellaneous textiles, have experienced a fall in their share of industrial sectoral output. Fourth, many of the industrial sub-sectors which have linkages with agriculture sector have significant presence in the unorganised economy. For industrial sectors like textiles, miscellaneous manufacturing, transport equipment, paper etc., almost half of gross value added (GVA) comes from the unorganized sector, many of which simultaneously are experiencing a fall in their share of output.
The intra-linkages, in terms of backward linkages with agriculture sub-sectors were falling pre-1990; they have revived after 1998-99 due to increasing dependence on animal services. In contrast backward linkages of food crops, cash crops and plantation crops with tractor & agriculture implements sector has fallen after the reforms. It can be argued that agriculture is no longer modernising along the lines of using productivity increasing technology produced in the industry sector.

The period of weakening of inter-sectoral linkages before 2003 means that sectors such as industry and service sector where the actual growth took place in the economy did not provide much push and pull incentive for the agriculture sector along the various demand and supply linkages.

Hence, it can be argued that though one part of the agricultural sector has modernised and is increasingly interacting with rest of the economy, a significant proportion continues to depend upon itself for purchases of its inputs and sale of its output. For one, this leaves a large potential of effective demand for industrial and service goods lying underutilised in the economy. Secondly, this nature of linkages implies that much of the rural population dependent on the agricultural sector have not been much able to integrate with the modern/formal economy, where the growth takes place, and have remained stuck within the stagnant agricultural sector, given the lack of alternative avenues. The falling share of manufacturing sector in the economy provides very few opportunities for people to move away from the agriculture sector.

Based on these results, the paper argues that the specific nature of emerging inter-linkages and the lack of linkages with the key industrial sub-sectors driving the process of economic growth have inhibited the possibilities for agricultural development. The dominant literature on structural transformation argues that the process involves increasing agriculture-industry linkages where the growth in industrial sector would spill over to the agriculture sector through various push and pull incentives along the lines of demand and supply linkages. Weakening inter-sectoral linkages through falling demand-supply is only going to hamper structural transformation further due to lack of incentives and positive externalities generated from the growth of modern industrial sector, leading to a cycle of stagnation.

The specific pattern and nature of the agriculture-industry linkages in India have been characterised by rising intra-linkages within the agricultural sector, increasing integration with the unorganised sector and a lack of integration with the modern/formal industrial sector. This particular pattern of linkages might explain, to certain extent, the distorted nature of structural transformation in India, and raises concerns about the prospects of such transformation along the theoretically expected lines.
This paper investigates the changing labour market in the hills of Eastern Himalayas. It focuses on the State of Arunachal Pradesh, a mountainous border state located in the northeast region of India. There are many institutional and other factors which have had an impact on the labour market in the State. The institutional peculiarity of the state includes the inner-line permit system that restricts the entry of outside labour to the state and the laws preventing transfer of land to people from outside the state. Thus, lack of industrialization, predominance of government service within the non-farm sector, and an ethnically diverse, labour force with a substantial migrant component has shaped the growth of State’s economy. The labour relations in the labour market of the State have been influenced by these specificities to a great extent. The Jhum cultivation system which is prevalent in this part of the region is a labour-intensive method of cultivation which is usually based on elaborate network of solidarity and reciprocity. Often the entire village and clan labour are mobilised for agricultural operations. Using both, secondary data from NSSO, population census and agricultural census and primary data collected through various rounds of household survey, this paper argues that with gradual commercialisation of the economy and transition to permanent cultivation, labour-use arrangements have also undergone a change. The labour market in the state did not emerge in Arunachal Pradesh through the process of dispossession of the tribal peasantry, rather it was created from above, through mobilisation of migrant labour for creating various military and civil infrastructures. In the survey, it was observed that the family, exchange and wage labour co-existed in a large number of the study villages. But in recent years, it was observed that transition in the labour exchange system was taking place in numerous ways. In the traditional labour sharing system, the entire village or clan worked as a single unit, which could be described as cooperative labour sharing. In such a collective labour-use arrangement, reciprocity was generalised and monitoring was a collective responsibility, institutionalised through the village councils led by the village chief commonly known as the gaon burah. Such type of labour sharing arrangements is gradually being replaced by specific labour sharing arrangements, where two or more households agree to enter into such agreement independent of the other households in the village or the clan (Harriss-White, Mishra and Upadhyay, 2009). In recent years, it has been found that women in the villages are forming small self-help groups and are taking up agricultural work on payment basis. It has also been observed that there has been a gradual growth of the rural non-farm employment in the state of Arunachal, which is not induced by agricultural development or urban linkages, but is linked, closely with the expansion of public administration in the rural areas. This livelihood diversification which is observed in many parts of the state is not gender neutral. As and when the men folk are drawn into non-farm and urban employment, the burden of agriculture falls on the women folk. Women were found to be contributing higher working days in labour sharing in the villages bordering the urban areas. This paper also looks into the changing labour market and employment pattern in rural Arunachal Pradesh.
Small-scale Private Enterprises in India: Caste Differences and Social Inclusiveness

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The businesses sector in India predominantly consists of owner operated businesses without hired worker (Sahu 2017; Thorat, Kundu and Sadana, 2010). Such businesses have the unique features of contributing household members, small scale operation and indistinguishability of profit and wages. Another typical feature of the Indian economy is the traditional customary laws dividing the society on the basis of rigid occupational boundaries and rights (Thorat and Newman, 2010; Deshpande, 2011; Desai and Dubey, 2011), discriminating against the Scheduled Castes in property and business ownership (Thorat, Kundu and Sadana, 2010). Such discrimination has important consequences on the presence, scale and profitability from such businesses for social groups historically placed in different hierarchical positions. A sizeable literature based on the USA finds existing racial discrimination in entrepreneurship (Fairlie 2004; Ahn 2011).

Given the considerable disparity among social groups in India and growing importance of business sector in employment, it is important to measure the outcome gaps and its correlates to understand the inclusivity of opportunities. However, only a very few studies have examined this issue in Indian context (Deshpande and Sharma, 2016), mainly due to lack of data on earnings from private businesses. This paper uses a nationally representative household survey data to analyse the differences in earnings for small scale private enterprises owned by Dalits and Forward Castes (FCs) and, thus, reflects on the discrimination faced by the owners in running such businesses due to their social group affiliation. It differs from the previous study (Deshpande and Sharma, 2016) in a number of aspects. First, it presents the findings from a new data set (the IHDS data) collected during 2011-12. Second, it considers a better indicator of ownership of business, i.e. based on direct question rather than estimating from the number of hours spent on the business which could be misleading. Third, it compares SCST and non-SCST, and Dalits and Forward Castes separately, as the historical reasons and dynamics of discrimination are different for the groups.

Two decomposition methods Blinder-Oaxaca and Oaxaca and Ransom (1994) are used here to decompose the mean earnings gap from self-employment in non-farm business. Findings show that controlling for other factors marginalised groups have lower net earnings from household non-farm business. The observed characteristics explain around three-fourth of the gap while one-fourth is unexplained which could be partially attributed to discrimination. The difference in asset ownership explains 44 to 51 per cent of the earnings gap, while time spent by household members on the business explains 10 to 12 per cent of the gap. Education and urban location are also important in explaining the earning gap, however, they account for only 4 to 5 per cent of the gap. Comparing the results with the earlier study (Deshpande and Sharma, 2016) shows a higher share of unexplained factors.
Living Beyond Means in the Indian Punjab: Addressing the Question of Ecology in an Agriculture-led Development Strategy

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The question of ecology continues to remain a blind spot within both mainstream as well as heterodox approaches to development. In this broad context, the paper undertakes an analytical review of the agriculture led development strategy adopted in the Indian state of Punjab to unravel the extractivist logic that is rooted in the productivity fetish of mainstream development economics. Drawing on scholarly works and recent empirical evidence on the condition of natural resources as well as agricultural livelihoods in Punjab, we deconstruct the complex interaction between agriculture, environment and inequality in the state.

The role of agriculture in development of an economy is well laid out in the seminal work of (Johnston and Mellor 1961) – output growth within the agricultural sector created powerful production and consumption linkages which gave impetus to industrialisation within the economy. The Indian state of Punjab has been widely regarded historically as a rare success story of an agriculture-led development process on the basis of its dynamic agricultural sector. (Bhalla 1995, Chadha 1986, Mellor 1982) While preliminary evidence from various national databases establishes that Punjab continues to be the most agriculturally prosperous state in the country, a large number of scholarly articles (Bharti 2011, Gill and Singh 2006, Sidhu 2002, Singh 2017) draw attention towards a situation of widespread distress amongst the small and marginal farmers of the state since the early 2000s. In fact, five decades of resource and input intensive farming in the state have created a situation of an ecological as well as an economic crisis which jeopardises the future viability of farming in the state.

Despite the dire situation of soil and water resources in Punjab, the state government fails to correct mispricing of inputs and resources that drive the overuse of inputs and overexploitation of resources on account of a complex set of political economy factors. Ultimately, it is the smallholders who seem to be the worst victims of the ecological crisis as they are least capable of coping with the rising costs of cultivation even as the state government subsidises water for the large farmers through a regressive electricity policy. The situation of smallholders in the state is aggravated by a fierce competition for land as state support continues to keep farming profitable, which spirals up the lease rent for land.

A retrospective look at the Punjab case reveals how a quick turnaround of the fortunes of the state through a rural development strategy premised on an appropriation of nature has given way to an unequalising and exclusionary growth process, wherein a systematic process of extractivism of the state’s natural resources continues unabated to preserve the prosperity of a section of rural elites. Ultimately, a case is made for reformulating our conception of development within both mainstream as well as heterodox economics to adequately address the missing link of ecological limits.
Workforce Composition and Internal Migration in India

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Migration is crucial for the growth and development of an economy through efficient reallocation of human resources across regions and sectors. Using district-to-district migration data from the Census of India (2001), the article highlights the role of workforce composition of a district in one time period (1991) on the migration flow during the next decade (1992-2001). A unique database has been created for this purpose by reclassifying more than six lakh villages and towns to take into account the change in district boundary during the two time periods.

The analysis finds that the workforce composition of destination district is more crucial for determining inter-district migration than the origin district. Districts specialised more in non-household manufacturing sector and construction sector attracts more migration. On the other hand, districts specialised more household manufacturing, and trade and commerce attract less migration. The opposite direction of household manufacturing and non-household manufacturing in attracting migration is crucial for the highlighting the complexity of the manufacturing as whole.

Functioning of MGNREGS in the Barak Valley Region of Assam: A Case of Rent-seeking Bureaucracy and Functionary-Beneficiary Collusions

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The Mahatma Gandhi National Rural Employment Guarantee Scheme (under the NREGA) is the world's largest public works programme. A job card distributed to beneficiaries under the MGNREGA is a key document which not only provides rightful access to public works, but also ensures transparency in transactions of works and wages as well as ensuring public accountability. It also acts as gateway to access other entitlements, for example, opening bank accounts and getting Aadhaar based biometric identity. Therefore, the job card is an important document of both proof of identity as well as proof of address apart from its primary aim of providing work entitlement. In a situation where majority of rural households lack official documents of proof of identity, NREGA job card is a saver.

We studied the operation of MGNREGA in the Barak Valley Region (BVR) of Assam, which is one the poorest and low development regions of the state. A household survey of 313 households in the form of a baseline study was carried out in three districts (Cachar, Karimganj and Hailakandi) of BVR. A multi-stage sampling method was followed and data was aggregated at the Block level. We found that 92 per cent of our sample households surveyed had job card entitlement however 59 per cent of these households did not possess their job cards on the date of survey. Of those households who reported not possessing job cards on the survey day, 90 per cent reported that their job cards were with the Gram Panchayat (GP) and/or its functionaries and another 7 per cent had no information...
about their job card entitlements. While job card found in possession of any GP or its functionary without valid reason is a punishable offence under Section 25 of MGNREGA Act, it seemed to be a practice in our study location. About 49 per cent of the interviewed households reported that it had been under the custody of GP and/or the functionaries of NREGS followed by denial of job card (4 per cent), never got job card (4 per cent) and few (4 households) even responded saying that it is at the Block Development Office (BDO). In Hailakandi district alone, 88 per cent of those households who did not possess job card on the date of interview, put onus on the GP and its functionaries as the reason for not possessing their job card.

An important question that arises is - why are these job cards lying at GP office or with the functionaries? Section 25 of the Act also specifies that entries pertaining to employment and wages should be updated from time to time and, in any case, no later than seven days of the corresponding event date. Majority of the respondents reported that their job cards were taken on the pretext of updating entries, renewal and providing jobs but never returned. About 20 per cent of these household reported that they have never seen their job card followed by more than 12 per cent households who said their job card was not with them for last 3 months, 3-6 months (6 per cent) and 6-12 months (10 per cent). About 13 per cent of those households also reported not possessing their job cards for more than one year and another 34 per cent either could not recall or chose not to respond. Many reported that when asked for their job card, they were sent back many times, denied information, given false information and even threatened of not receiving future works and wages if probed further. Thus, GP functionaries in BVR have not only violated Section 25 of the Act, they have also denied citizen’s their basic right and access to other state provisions by illegally keeping job cards in their custody and without valid reasons.

We investigated the question of why the functionaries in BVR kept the NREGS job cards under their custody and what the objective of job card collection and storage for years was. The answer to this question is in the utility of job card as rent-seeking for the NREGS functionaries. Through this paper we investigate the rent-seeking phenomenon of petty bureaucrats in the BVR. We use the term ‘petty bureaucrats’ and ‘functionaries’ in this paper synonymously.

Changing Pattern of Employment and Wages across Gender in the Agricultural and Non-Agricultural Sectors in Rural India: Some Recent Evidence

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The rural-urban divide has widened in India in the recent years. Further, within the rural areas farm and non-farm income inequality has increased. In this context, we analyse the gender-based wage differences across agricultural and non-agricultural sectors. This paper attempts to understand the trend, pattern and magnitude of gender based wage differentials and intends to throw new light on policies
for poverty and inequality reduction and growth of employment and income. We have discussed and quantified the wage differentials across agriculture and non-agricultural sectors by various individual and household attributes. Using NSSO Employment and Unemployment data since last two decades, we have quantified the average wage differentials among agricultural and non-agricultural workers in the rural area since last two decades. To quantify the average wage differentials across genders, we have used the Oaxaca-Blinder Decomposition. In addition, the average wage gap across genders both in agricultural and non-agricultural sectors in the wage distribution is calculated using RIF Quintile decomposition analysis.

Our preliminary results illustrate that over last two decades the agricultural sector shows negative employment elasticity for most of the states in India, further there is decline in the share of income growth in agricultural sector and persistence of higher employment in agricultural sector. The estimated results portrays that the average wage of non-agricultural workers is higher than that of the agricultural workers and endowment factor plays an important role while examining the wage differentials. The socioeconomic characteristics also plays an important role while examining the wage differentials, as it is found that with same level of characteristics the workers belongs to female groups have lower wages as compare to the non-agricultural workers. Across the wage distribution the Oaxaca-Blinder quintile decomposition analysis presents that at the lower end the average wage differentials or wages are lower for the agricultural as compare to the non-agricultural wage earners. The decomposition results also depict that across the wage distributions major part of wage differentials is understood by the observable characteristics. Mostly, out of all explained wage differential features, the endowment factors in terms of education and occupational/industrial affiliation plays an important role while analysing the average wage differentials among agricultural and non-agricultural workers in rural India.

**Agrarian Change and Premature Deindustrialisation in Rural India: World of Women’s Work**

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The structural shift in India’s workforce has been very gradual and is still underway. Although the share of workforce in agriculture has come down over the last few decades, agriculture continues to employ just under half of the workforce in India. In addition, industrial growth as well as share of employment in the manufacturing sector has been stagnant for a long time, leading to worries on premature deindustrialisation in the country. Given a not-so-bright scenario, the status of rural India, and in particular the status of rural women needs to be looked into, particularly given the low female labour force participation in India, which has till now shown no sign of improvement. This paper therefore looks in detail at the agrarian ‘change’ in India as well as the issue of ‘premature’ deindustrialisation in terms of change in employment over time. Although there has been a decline in the share of employment in agriculture, spatial trends show an increase in agricultural labourers.
Agriculture still continues to be predominant in rural areas, which show significant evidence of deindustrialisation.

Amidst this scenario and given the growing concerns on India’s female labour force participation rate still on the declining segment of the U-curve, this paper focuses on overall spatial trends across district level for major states of India, especially in the case of women in the workforce using Census, NSS as well as the recent PLFS data, to understand the dynamics of women’s work especially in rural areas, given the worrisome state of affairs in both agriculture and manufacturing sectors. District level mappings for the major Indian states are described for agricultural activities as well as participation in manufacturing sector. The situation for women in these sectors is also seen, as is the case for rural India.

Given the concerns on labour force participation of rural women, the paper covers some important aspects of rural women. Rural women in the workforce are still predominantly in agricultural activities. As overall education enrolments have been increasing for females, this study tracks the trends and patterns of rural women in work in the recent decade. Under the still majorly agrarian nature of Indian economy in terms of employment, and emerging concerns of premature deindustrialisation and declining employment elasticity of manufacturing sector despite ‘economic’ growth, rural India will be more challenged. What does the ‘growing’ economy entail for the rural female? This paper argues that rural manufacturing across districts in India is showing high deindustrialisation in terms of actual decline in workers over the space of a decade. The scenario has only worsened over the last few years, with the PLFS data proving the fears of increasing precarity of rural women and their stagnant participation in labour market. Present levels of participation are also marred by the nature of jobs, essentially being of a casual nature or in self-employment, and regular salaried jobs lacking in provision of social security. Under the already tense scenario of job loss growth, this paper argues that it will not just be sufficient to focus on job creation, but active job creation keeping women in mind.

**Changing Rural Dynamics through Technological Intervention in Milk Procurement: A Case Study of Nirpur Village**

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Livestock plays a vital role in the economy; animal husbandry is the most important economic activity in rural areas. The dairy sector today provides 80 million farm households with the triple benefits of nutritive food, supplementary income and productive employment for family labour, mainly for women. Animal husbandry provides self-employment to millions of households in rural areas. Owe to the easy cash provided by animal husbandry components, small-scale farmers prefer it to crop production. Further dairying provides a support system to milk producers without disturbing their agro-economic systems. Rapidly growing markets for livestock products in general, and dairy products in particular (owing to rise in per capita incomes) are opening new avenues for enhancing rural incomes. Present paper attempts to analyse the change in rural life due to technological intervention in the
dairy industry. It is based on a study of 25 milk farmers in Nirpur village of Motihari district in Bihar. Since Bapudham Milk Producing, a non-government company, has been operative in Motihari, villagers in such small and poor village have got important means of earning reasonable income through milk animals.

**Status of Agricultural Workforce in India:**

**A Comparison of Three States**

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The development of any economy entails with it the structural shift of workforce to more opportune alternatives of livelihood. Many development economists have theorised this shift of workforce. According to Arthur Lewis, the workforce shifts from the traditional agricultural rural sector to the industrial sector (organised and unorganised). Others also argued that the transition of workforce is not only physical movement but transformation of workforce into human resource through education and skill development training. In a populous country like India, the workforce, much of which is engaged in the agricultural sector, requires attention and concern as the transformation or the shift of workforce is being driven to less remunerative and less promising employment opportunities. An overtime study of the workforce in the country, along with analysis of the workforce in the three selected states, Kerala, Punjab and Bihar (in descending order of their HDI index) gives an insight of the changes in pattern of workforce overtime (2001 to 2011) in the country, especially the agricultural sector.

It was observed that there was a unanimous shift in the workforce engaged as cultivators across the country, away from agriculture. This indicates the deep-seated process of depeasantisation which emerges from the unviable nature of small farming. However, contrary to the theories, the displaced workforce, usually unskilled, is joining the market of agricultural labour, which is often less remunerative. This also indicates the desperate state that the cultivators are in which makes them to take up labour job. With regards to the overall percentage of workers engaged in the household (HH) sector, it witnessed an increase in the urban areas but a decline in the rural areas, hence pointing a rural-urban shift. For the state of Bihar, the trend of shift in the cultivators and agricultural labourers was similar to the Indian scenario. The percentage of workers engaged in the HH sector witnessed an overall increase. However, the workforce in Bihar engaged in the other sectors was concentrated in rural areas. This could be attributed to the contribution of the MGNREGA which provided assured employment.

The size of landholding across the country could be understood as one of the reasons influencing the shift of workforce away from cultivation. It was observed, that the size of marginal land holdings in the country had declined which further marginalised the already vulnerable cultivators. Also, for the country as a whole, the size of operational land holdings of small farmers had declined. Only for the state of Kerala, the size of the large land holdings had increased unlike the other selected states. With regards to the number of land holdings, the number of marginal land holdings had increased.
which is worrisome as this section is facing evident economic distress pan India. However, Punjab exhibited a reverse tenancy among the smaller farmers as the number of smaller land holdings had declined. The trend of female work participation rate (FWPR) exhibited an improvement in the non-agricultural sector for the overall country. However, only for the state of Kerala, the females engaged as agricultural labour, exhibited declining trend thereby indicating an improvement in their economic well-being.

The overall declining number of cultivators, declining size of landholdings, increasing number of agricultural labourers and consequently marginalisation of workforce, especially cultivators is worrisome. With cultivation being the prime livelihood of majority of the people and unpromising alternative sources of employment, the status and future of workforce is an issue of grave concern which needs to be mulled over in order to avoid further marginalisation of the already vulnerable section of the economy.
Socio-economic Drivers of Rural Non-Farm Employment Variability in Maharashtra: Reflections from NSS Data

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Rural non-farm employment in Maharashtra has marginally grown in the post-liberalisation period as compared to that in India. Factors like gender, age, level of education, asset owned, household size, social group and location play an important role in determining access to various non-farm employment activities. The existence of a high degree of disparity in the socio-economic development, level of urbanisation and social infrastructure in Maharashtra makes it essential to understand the factors affecting participation in rural non-farm employment across the different regions in the state. Against this backdrop the present study attempts to examine the effects of individual, household and regional variables on employment in various high-skilled and low-skilled activities in rural Maharashtra and also understand the process of growth of rural non-farm employment in the six NSS regions of the state.

This study is based on unit level data of the 66th round of NSS on employment and unemployment. A multinomial logit model has been applied to explore the determinants for various low-skilled and high-skilled activities. The parameter estimates reveal that the more remunerative and high-skilled activities like cultivation, non-farm regular and self-employment are mostly taken up by rural males, older age individuals, individuals belonging to smaller and socially better-off households in terms of their social status, asset ownership and level of general education. On the contrary, most of the unskilled and asset poor rural workers end up in low-skilled non-farm jobs in this sector. From the data, it has been observed that in rural Maharashtra agricultural wage labour is preferred over casual non-farm employment which suggests that casual non-farm employment is taken as the last resort out of distress mainly in the Eastern and Central regions of the state. Thus, it can be argued that increased level of general education, smaller size of a household and better placed individuals in terms of their social status and asset ownership land up in more remunerative and high-skilled non-farm activities and the lack of these factors restricts the individuals to low-skilled non-farm jobs and majority of the low-skilled non-farm jobs in terms of casual non-farm work is taken up out of distress in regions with low level of urbanisation and infrastructure availability.

From the region-wise analysis, it can be argued that employment in rural non-farm sector in Maharashtra is both growth induced and distress driven. Once again it has been observed that individual factors like sex, age and level of education impact an individual’s decision to participate in rural non-farm employment. The study observed the importance of education in accessing rural non-farm activities where better educated individuals prefer to take up non-farm employment as compared to farm employment especially in better developed regions. It has been noted that smaller households diversify into rural non-farm employment in better developed regions while the larger households
diversify into rural non-farm employment in less developed regions. Based on the above observations, it can be argued that in the better developed regions of the state, rural non-farm employment is male dominated, preferred by educated and skilled individuals and those belonging to smaller households. On the other hand, rural non-farm employment in the less developed regions of the state is taken up by individuals belonging to landless households and marginal or small land owners and individuals belonging to larger households. Thus, a large presence of landless and marginal landowners in rural non-farm employment in the less developed and less urbanised regions, with many of them coming from larger households and a majority belonging to the OBC social group confirms the inference that rural non-farm employment in these regions of the state is distress driven.

It can be concluded from the above findings that rural non-farm employment has a low share in total rural employment in the state in the post-reform period till 2009-10. Therefore, it is necessary to focus on increasing the scope of this sector in the state. Opportunities for women should be created apart from focusing on providing them with the basic education and vocational training. In order to make a significant contribution to economic upliftment, regular and secure form of NFE needs to be made available. The overall development in Maharashtra is characterised by vast regional disparities, therefore, a special focus on the lesser developed and lesser urbanised regions is required to expand the scope of rural non-farm employment opportunities in a manner that the decision to participate in rural non-farm activities is out of choice and not out of economic compulsion.

Exploring Agrarian Distress and Dādan System of Labour Recruitment: A Study of Western Odisha

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Western Odisha has a long history of out-migration of labourers to faraway lands driven by agrarian crisis resulting from inadequate rainfall, poor means of irrigation and the feudalistic rural economic system. The Dādan system (cash advance for yield/produce), one of the most exploitative ways of labour recruitment mostly visible in the rural areas of Eastern India and Bangladesh is still prevalent and at its peak in Western Odisha, especially in the recruitment of seasonal labour for brick kilns of southern states.

This paper intends to study the mechanism of the Dādan system, and how the monetary advance and Sardars (brokers) play a key role in the process. This exploratory study is based on literature review, field observations and quantitative data collected from 301 migrant households through purposive sampling. The survey was carried out between July-November 2016 in Belpada, Bongamunda, Turekela and Khaprakhul blocks of Balangir district, a constant source of large-scale seasonal migration to the brick kilns in southern states. Individual consent was obtained before the study and research ethics were taken into consideration while conducting the interviews.

Results show that 31.56 per cent of the respondents are landless. Among the respondents who own land, 77.34 per cent own up to 3 acres and only 4.37 per cent have any mean of irrigation.
Respondents for their livelihood engage in multiple means like agricultural labour (77.41 per cent), cultivation (63.46 per cent), other casual labour (58.47 per cent), etc. 45.18 per cent reported that the works available in their village is less than 30 days. Two-third respondents got affected by drought in the previous year and less than one-fourth of them any compensation. 85.05 per cent respondents fail to save money and a whopping 98.01 per cent borrow money at the deficit time mostly from money lenders (78.86 per cent) and employers/brokers (53.36 per cent). The main purposes of borrowings are food, festivity expenses, daily and health expenses.

It was observed in the study that, a proper hierarchy prevails in the recruitment of migrant labourers in the region. Money flows from the brick kiln owners to the seasonal migrant workers through a stream of brokers locally known as Sardārs and second sardārs. Being from the same community or locality, the labourers and second Sardārs develop a mutual trust and make deals for the next working season.

Respondents reported that lumpsum advance which helps in debt repayment (62.13 per cent) and non-availability of work at native village (57.81 per cent) are the main reasons for opting brick kiln work. More than 30 per cent of the respondents are migrating for more than 10 years, 62.63 per cent migrate every year. Most workers don’t have any information about their employer and destination before migrating. The mean advance households receive is Rs. 48030.89.

The seasonal migration to brick kilns acts as a coping mechanism for people who lose every possible option at their native villages. In a backward region like western Odisha, the seasonal migration to brick kilns is completely for sustenance for a great part of the year where the survival chance at native areas is very lean. The study also covers information about wage rates by type of work, NREGS and difficulties faced at native villages.

**International Migration and Remittance in Rural India: A Study of Dapoli and Guhagar Villages in Ratnagiri, Maharashtra**

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This paper deals with international migration and the impact of remittance in rural areas through a study of two villages viz. Dapoli and Guhagar in Ratnagiri district of Maharashtra. This micro-study is an attempt to understand migrant and remittance position, and their effect on household well being, education, and health in source region. To predict the development scenario of remittance-receiving family, the migrant and non-migrant household sample has been collected for the study.

The study suggested that remittance has positive effect on social-economic variable of the family. It also has one of the significant features spend effectively on consumption basket such as food, healthcare and education aspect of family members. The study found that healthcare becomes highly significant...
Theme 3: Changing Pattern of Rural Labour Markets

compared to education expenditure and there is no female migrant from the sample area. Health is diurnal expenditure but education is a one-time investment for long-time conceptions. Education becomes more vital than health which leads to human resource development. There is less number of household having school going children resulted education become less significant than health care were children between the age group of 0-6 years and aging is causing factor. There are a good number of second-generation migrant households in the field. A migrant household is far better than non-migrant household and majorly left with either women-headed or wife headed household compared to male-headed household in non-migrant sample. There are lot many findings which suggested that attractive policy in the study field encourage sustainably household development for futuristic people.

Labour Market and Indebtedness among Rural Households in India: An Empirical Analysis

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Time-to-time, large-scale surveys show that while institutional credit has grown over the decades, agriculture has been diversified somehow by using advanced techniques of production; still farm suicide, agrarian distress and the problem of indebtedness from informal sources still persists in rural cloches and adversely affecting the rural labour market. Suicides are the result of the deep-rooted agrarian and rural distress rather than a temporary phenomenon associated with lack of institutional credit, draught and rainfall.

This paper provides an in-depth analysis of the nature and extent of rural indebtedness among various occupational categories in India using the unit record data from the 70th round of the NSSO data. Initially, we appraised briefly the general case of magnitude of debt and thereafter went for empirical analysis with regard to rural households to trace some of the more important economic and non-economic factors that delineates rural indebtedness by using an econometric model. The binomial logistic regression was used to examine the major socio-economic and demographic factors in influencing the probability of being indebted among various occupation categories.

Furthermore, the analysis confirmed several significant interaction effects between probability of indebtedness (response variable) and independent variables (predictor variables). Looking at household level data we identified age, family size, asset holding, repayment position of debt, availability of banking are the strongest predictors for debt burden. Our exercise found that, among the total labour force in rural labour market 53.7 per cent households were self-employed households engaged in various agricultural and non-agricultural activities and also the mostly indebted households. Average debt incurred by the rural household was highest for self-employed household. Extent of debt incurred by casual labour was lowest among the all occupation group.

Overall, self-employed in agriculture were found to be more indebted than the other category of households. Among the various determinants of indebtedness among the various category households, household size, asset, banking service and loan repayment were found to significant. It is natural that this occupation class, having high repaying capacity might have incurred bigger size of the debt burden.
Decoding Women’s Engagement as Labourers in Agriculture in Punjab: Narratives From an Ethnographic Study

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The present paper is based on some of the aspects of my doctoral thesis submitted to Jawaharlal Nehru University wherein I attempted to understand the implications of agrarian change and labour migration on women in agriculture. The paper is based on an ethnography conducted in a village of Punjab. The agrarian change and labour migration in interaction with other structural inequalities like caste, landlessness and unequal gender relations, as well as individual attributes and circumstances of women shaped women’s engagement as agricultural labourers. The increased participation of women in agriculture as labourers compared to men is studied from a social anthropological perspective, albeit also drawing from approaches followed in various disciplines such as sociology, economics and women's studies. The paper attempts to give a holistic view of the changing rural scenario and its implications on women, in particular, and argues for the relevance of ethnographies in conventional socio-economic research.

In this article, I argue that the feminisation of labour in the context of agrarian change needs to be studied from the perspective of those who experience and get affected by the change. Ethnography as a method as well as product is apt to understand the implications of feminisation from women's perspective. It offers the epistemological advantage of bringing together specific context, socio-cultural relations and processes, as well as the lived experiences, and their interaction.

It is well-established that the caste and class relations not only interact with gender and shape gender relations but also get shaped in the process. The article attempts to portray this complex interaction that shapes the lived experiences of women agricultural labourers (WALs). It reflects as to how gender relations change in the broader context of agrarian change and other existing inequalities such as caste and class that shape women's work identities as agricultural labourers.

The narratives of WALs reflect their understanding of gender roles and relations as they frequently referred to their gendered and caste identities, the respective phase of life, socio-economic situation, more often than not referring to landlessness, and circumstances that forced them to work as an agricultural labourer. Analysis of gender relations and interaction of other structural inequalities was situated in the differences approach.

It was apparent from the interviews conducted with the village inhabitants during the initial stages of fieldwork that there had been changes in the labour composition over the years. Earlier landless men, primarily belonging to the Scheduled Castes, worked as agricultural labourers in the fields of the landowner. The original male inhabitants of the village who earlier worked as wage labourers in agriculture now worked largely as wage labourers in the construction sector. Some even sought work in the nearby factories situated in nearby town. The original women inhabitants of the village (referred as ‘local’ women), as well as the in-migrant men and women now worked as agricultural labourers. The increased participation of 'local' women as agricultural labourers amidst such shifts in the agrarian
context required to understand the gender dynamics and interaction with other factors that shaped women’s entry or withdrawal from the agriculture sector as labourers in the selected village.

The new forms of labour arrangements in the wake of agrarian change affected the ‘local’ women labourers in more than one ways. Not only did they get far fewer wages compared to male and migrant agricultural labourers but they also did not have any bargaining power to get their wages raised as they were solely dependent on the farmers for agricultural work.

The article with the help of selected narratives reflects the interaction of individual characteristics of WALs with multiple layers of inequalities that shape their work identities in the selected context of agrarian change and migration. It thus suggests that there is a greater relevance of ethnographic studies in making sense of feminisation of labour in the wake of agrarian change as it not only reflects the lived experiences of WALs but also a holistic understanding of the context.

**The Agrarian Question and the Transition of Rural Labour in India: A Case Study of Two Villages**

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This paper aims to examine the extent and ways by which changes in agriculture in the neo-liberal period are changing the rural labour market in India. It is based on fieldwork conducted in two villages in the South Indian state of Tamil Nadu, which have been previously studied in 1993-95. Though agriculture in India has been subjected to strenuous research, not many studies have sought to systematically link changes in agriculture to changes unfolding in the rural labour scenario. This article, by rooting itself in the agrarian question approach, aims to fill this gap.

Agricultural production in the villages has witnessed major changes in the last twenty-five years. In this period, small holdings became numerous, cropping pattern changed, cost of cultivation shot up, groundwater irrigation became prominent, and the level of mechanisation increased. Concerning the labour process, the most important change the villages witnessed is the feminisation of agricultural labour force, which is an Indian pan phenomenon. We have recorded the labour hours expended by men and women in agricultural operations, and our calculations show that women are working more than 80 percent of the total labour hours in agriculture. Remarkably, this transition also envisages taking over by women of some of the agricultural operation which used to be done exclusively by men. Some of the agricultural operations like transplanting has almost entirely become a piece rate activity performed by women labour gangs.

Agriculture in the study villages is marked by prolonged crisis resultant of a complex interplay of neo-liberal policies, worsening ecology, and changing climatic patterns. However, the effect of the crisis on the rural population is differentiated by class, with larger farmers coping well and small and marginal farmers finding it hard to stay afloat. The profitability of agriculture has declined on account of the growing cost-return mismatch, which is more pronounced in the case of small and marginal farmers. Nevertheless, peasant households do not seem to be quitting agriculture. The lack of gainful off-farm employment inside the village makes them cling to their small parcels of land. The
continuing reproduction of the peasant households is facilitated by two simultaneous processes, viz, (1) male members combining the non-farm work with farm operations and (2) female members over-exploiting themselves by engaging in arduous unpaid labour. While pluriactivity of men belonging to peasant households is a long-noted feature in India, the usage of a system of exchange labour involving women seems peculiar for these villages. Exchange labour is noted neither in the previous study in these villages nor in the recent village studies done in other parts of Tamil Nadu. It may be seen that the burden of the agrarian crisis has been disproportionally borne out by women. Apart from working for long hours as family labour in their own household farms, the women members in the peasant households work as exchange labourers for the other peasant households. Our calculations show that as the land size operated by households increases, the usage of unpaid women labour becomes progressively smaller. This also underlines the indispensable nature of unpaid women labour for the survival of small farms.

Over the last three decades, the labour market in the villages has become more complex. Different types of formal and informal labour contracts prevail in the villages which vary according to the crops cultivated. Other than the usage of systems of unpaid labour as we discussed before, daily wage labour and piece rate contracts are the prominent form of labour arrangements in the case of paddy cultivation. As for groundnut, the labour arrangements involve labour hiring with fixed monetary wages and labour hiring with non-monetary wages in addition to family labour. Needless to say, all these labour is predominantly women. The labour arrangements differ within and across villages. Labour contracts and wage levels are different in the surrounding villages in the region showing the absence of a generalized labour market in the region.

The effect of agrarian crisis is gender differentiated. While men are faced with labour fragmentation, women have to subject themselves to over-exploitation to sustain reproducing the household.

**Determinants of Female Labour Force Participation Rates in India - A District-level Analysis**

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Globally, female participation in the labour force (defined as number of women in labour force as percentage of total women population) has remained nearly unchanged in the two decades from 1990 to 2010, at approximately 52%. However, it shows a great variation across regions from just about 19% in Middle East to 30% in South Asia, 59% in South Asia and Pacific and 65% in Sub-Saharan Africa. This is not the case with male participation rates, which shows little or no variation across regions, ranging between 70-80%. This also suggests the extent of gender gap in labour force participation across the regions.

In India, not only is the gender gap quite stark, but the female labour force participation also displays an intriguing trend over the years. While India’s economic growth has been increasing over the last two decades, the female labour force participation rate has fallen, especially between 2004-05
and 2011-12. Over this period, female labour force participation rate has gone down from 24.9% to 18.1% in rural areas and from 14.8% to 13.4% in urban areas. Compared to this, male labour force participation rate has barely changed from 54.6% in 2004-05 to 54.7% in 2011-12 in rural areas and 56.6% to 56.0% in urban areas. The downward trend in the case of female labour force participation rate has been explained by the process of urbanisation and structural transformation as households moved to urban areas and husbands shifted out of agriculture, resulting in a withdrawal of women from the labour force (reflecting an increased engagement in domestic duties).

While there a lot of literature on establishing the impact of some of the socio-economic characteristics like education, income, economic activity, religion, caste etc on the female labour force participation rates at individual level, this paper establishes this relationship by aggregating the individual level data for the districts of India. The paper also looks at some infrastructural parameters of the districts to see the conduciveness of districts for women to participate in the labour force.

The analysis in this paper suggests that the participation of women in labour force depends clearly on the overall economic status of the districts they live in. Women belonging to poor districts have less work opportunities, middle income districts see a higher proportion of women entering labour force and this proportion decreases again in the case of rich districts, where women tend not to work as there is no urgent need to work. This is despite the fact that richer districts have higher proportion of educated women. Vocational training does not guarantee a job to a woman as much as it does to man.

While lack of right opportunities contributes significantly to women LPR, but apparently the social system of the region they live in is the biggest determinant. Women are expected to stay to home and perform domestic duties, even if they are educated and vocationally trained. Their upbringing is such that even if there are work opportunities, many women opt not to work and stay at home as the sense of responsibility towards family overshadows their self-evolvement. Gender disparity in the entire social system is the key issue, the resolution of which is a long way to go.

Changing Pattern of Labour Use in Direct Seeded Rice Technology:
A Boon to the Punjab Farmers

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Direct seeded rice is a feasible alternative to conventional puddled transplanted rice with good potential to save water, reduce labour requirement and mitigate green house gas emissions. Though puddled transplanted rice is the most popular system but whether under the emerging scenario of acute
shortages of water and labor, it would maintain sustainability in future is highly uncertain in Punjab state. The study is aimed to highlight the changing pattern of labour use in resource conservation technologies in Punjab agriculture.

A sample of 84 farmers (30 adopters and 54 non-adopters) from two districts of Punjab were selected through multi-stage random sampling technique. Data was collected by directly interviewing the farmers through well-structured schedule. The variable cost per hectare for paddy cultivation was less on adopter farms as compared to non-adopter farms. A significant saving in hours of irrigation i.e. 45 per cent was achieved for irrigating one hectare of the DSR farm as compared to non-DSR farm. A significant saving of machine labour to the extent of 44 per cent for preparatory tillage was observed on DSR farms as compared to non-DSR farms. Direct seeded rice was effective in saving of irrigation water to the tune of almost half of the PTR farms. The per hectare water productivity on direct seeded rice fields was 1.27 kg per m$^3$ whereas on puddled fields it was 0.61 kg per m$^3$ which means that DSR technology resulted in the enhancement of water productivity of paddy crop. Binary logistic regression was used in which direct seeding of technology adoption was regressed with number of independent variables such as years of schooling, member of kisan club, training attended of DSR technology, source of information, operational size of holdings per horse power of electric motor used, age of respondents, ratio of members engaged in agriculture to total members in family and age.

The adoption of direct seeding of rice technology decisions were mainly influenced if the adopter was a member of kisan club and training attended of DSR technology which came out to be highly significant and positive. The estimated odds ratio for member of Kisan club and training attended of DSR technology was 11.76 and 6.3 respectively which suggested that one per cent increase in these variables will lead to increase in adoption by 11 times and 6 times. The important constraint in the adoption of this technology was non-availability of seed drill, high amount of weeds and lack of awareness. Subsidising the cost of direct seeding of rice per acre will increase the area under this technology as more farmers will go for its adoption. There is a dire need for capacity building of farmers for effective management of weed and pest in DSR.
TECHNICAL SESSION 3.6

Understanding the Dynamics of Female Labour Force Participation in Rural Labour Market in Bangladesh

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In the case of most developing countries, female employment has been found as rising with varying trends (Heath and Jayachandran, 2016). Bangladesh is not an exception. It has also experienced an increase in female labour force participation since its birth, though the rate could have been better. Over the past two decades, the average economic growth rate for Bangladesh has been 5.98 per cent (WDI, September 2019), accompanied by impressive progress on a number of human development indicators, such as fertility rate, infant and child mortality, maternal mortality and gender parity at primary level. Despite having consistent growth rate and achievement in several socio-economic indicators, there remains argument that the country has not been able to translate the growth experience in its labour market.

During the last two to three decades, the most significant change that has occurred is the rising participation of women, with the female labour force participation expanding from around 8 per cent in the mid-1980s to 36.3 per cent in the year 2016/17. However, for rural labour market, the rate of female labour force participation has been estimated to be 38.6 per cent (LFS, 2016/17). Given the patriarchal and conservative social structure of the country, such a trend in female labour force participation, especially in rural labour market, though impressive, should be analysed more critically for a number of reasons. Despite the increase, female participation rate is still much lower than that of males and the rate of growth of participation rate has slowed down over the past decade or so.

The female labour force participation rate has been lower as a result of both demand-side and supply-side issues. On the supply side, women’s labour market participation depends on a number of socioeconomic factors, including household income, age, marital status, education and household dependency ratio. On the contrary, from a demand-side perspective, factors including firm size, firm nature, technology used and location can impact the female employment. Besides, the expansion of women’s employment in certain economic activities can also be affected by some sector-specific issues. Raihan and Bidisha (2018) with the LFS 2016/17 data analysed both the demand and supply sides factors and found the importance of gender based factors as well as household factors on females’ labour market participation.

However, on the ground of quality of work, women are found to be concentrated in low paid and low productive activities and even in unpaid family work, resulting in inferiority of women’s position in the labour market. In particular, greater concentration of women in agriculture based activities and
low skilled jobs also highlight the gender based persistent inequality in the labour market, demanding further research in this regard.

Against this backdrop, this paper attempts (i) to explore the factors affecting the participation of both male and female in rural labour market in Bangladesh; (ii) to comprehend whether there is any gender based discrimination in the participation or not; (iii) to investigate the factors affecting the married female labour force participation in rural labour market in Bangladesh; (iv) to understand the impact of migration (both internal and external) and remittance on female labour force participation in rural labour market in Bangladesh; and (v) to provide important policy insights for the government and private sector in order to address the problems identified.

This paper is based on the Quarterly Labour Force Survey (QLFS) 2016-2017 of Bangladesh, conducted by the Bangladesh Bureau of Statistics (BBS). It is a rotating panel by construction and contains information of key labour market variables along with socio-demographic factors. From a methodological point of view, this paper estimates the probability of both male and female (those within the working-age group) participating in rural labour market through a probit model. The probit model is the most appropriate tool given that the dependent variable is binary (whether he/she is in the labour force or not). The results are decomposed using the Blinder-Oaxaca (B-O) Decomposition technique in order to see how much of the participation difference between male and female can be explained by the covariates. Besides, a separate probit for married females is estimated since marital status can have a significant influence on women's decisions regarding labour market activities. Finally, to understand the effect of migration on female's participation in rural labour market, the Propensity Score Matching (PSM) method is applied. In this econometric analysis, the households who have migrants and who do not have any migrant both are considered.

*Socio-Economic Reforms and Gender-Based Wage Disparity in a Developing Economy: A Trade-Theoretical Analysis*

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Gender inequality issues have been widely discussed in developing economies like India. It is considered as a prevalent issue in the labour market of these countries. The paper attempts to analyse the basic intersection of two vast theories - gender studies and international trade - that are not only an emerging issues, but also sensitive in terms of impact of international trade policies on gender-based wage inequality as well as on female labour force participation. In doing so, we developed a four sector, three factor General Equilibrium model with endogenised female labour supply function and non-traded female labour specific sector. In our analysis, we linked female labour force participation not only with female wage rate, but also with wage earning of the male member and the family's attitude towards female member working in wage-earning activities. Male wage rate is found to be inversely related to female labour supply, which is because households are assumed to be altruistic towards female
household work. In poor households female participate in workforce not by choice but due to economic compulsions to support their households’ consumption. Therefore, an increase in male wage rate would increase aggregate family income, thus, partially putting off the burden on female labour hours. Female labour participation is analysed for two informal sectors, namely, the traditional (backward) agriculture sector which uses primitive labour intensive technology, and an urban informal sector which produces female labour specific (female dominated) services such as domestic help servants, babysitters etc., which are consumed by the skilled well-off families in the economy. The stylised economy assumed in the model reflects dualism in both agriculture sector and the informal sector. Our paper obtained some counterproductive results as follows. First, it is obtained that an increase in foreign capital inflow worsens male-female wage inequality and results in decline in female labour force participation under a reasonable factor intensity condition, i.e. if the traditional agriculture sector is relatively less capital-intensive than the advanced agriculture sector, it clearly opposes the conventional belief that FDI will provide the economic stimulus to increase the scope of employment for women and thus improving the living standard of female workers. Second, liberal social values, through a change in family’s attitude towards women and allowing them to participate in the labour market, may not fruitfully impact the female empowerment without proper government intervention. Moreover, it worsens wage inequality and may ultimately end up with lower female labour force participation if cross income effect of male labour dominates the social impact due to gender awareness programmes. An alternative explanation for the U-hypothesis is discussed and derived which reflects dynamic of social transition with rising male per capita income. The main recommendation of the paper is that while adopting any economic or social policy to improve female labour force participation, the degree of family altruism towards their female working member must be taken into account that carries much larger weight for a country like India or its adjoining South East Asian nations where informal (unskilled) workers dominates the labour market. At the same time it must also be tracked out the implication for the destination sectors through which the new foreign capital enters into the economy and have related chain of effects on other sectors which then affects the male-female wage disparity, as it is evident from the paper that foreign capital in the advanced agriculture sector may not lead to favourable outcomes for gender-based wage disparity problem.

Gender Discrimination in Rural India: Evidence from NSS data

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The existence of a differential payment for labour market services between men and women is taken as a universal phenomenon in almost all the countries regardless of the nature and structure of the economic system. In this context, paper tries to answer the following questions: Are there any significant income differentials between males and females in wage employed and self-employment activities in rural India? To what extent is the income variation explained by the prevalence of gender discrimination in rural areas? Has the extent of gender discrimination increased in the post-reform
period? The contribution of the study is manifold. To the best of our knowledge, no other studies have used the expanded decomposition method developed by Madheswaran and Attewell (2007) and non-linear decomposition method developed by Nielsen (1998) to measure the extent of job discrimination and employment discrimination in rural India. Besides, analyzing gender-wise income differentials in self-employed activities gives significant contribution to the study on gender in rural areas. The present study uses unit level data collected by National Sample Survey Organization (NSSO), India. The employment and unemployment surveys were conducted during 1983, 1993-94, 2004-05, 2011-12, and a recent one in 2017-18 (July, 2017 to June, 2018). These quinquennial rounds are referred as 38th round, 50th round, 61st round, 68th round and PLFS survey respectively. Separate analysis was done for wage employed and self-employed activities.

From the analysis on wage employed in labour market, study found that female workers are in low paid job in the rural areas. In 2018, female regular rural workers earnings was 34 percent lower than their male counterparts, while it was only 19 percent in the urban areas. This gives evidence about significant gender discrimination in regular rural labour market. There has been almost 8 percent decline in gender wage gap in regular rural labour market from 2005 to 2018. On the other hand, in casual rural labour market, female earnings have been 41 percent lower than that of the male. There is almost 8 percent increase in gender wage gap in casual labour market from 2012 to 2018. Interestingly, from 2012 to 2018, gender wage gap in regular rural labour market has shown a decline for illiterate, secondary and higher secondary, graduate and above degree education. In our econometric analysis, initially single equation method was applied and earnings were predicted from the characteristics of all workers while including gender variable as a predictor. Unfortunately, this approach yielded a biased result as it assumes that wage structure is the same for both male and female.

In order to overcome this limitation, the paper employed different approaches of decomposition methods to estimate the extent of gender discrimination in the rural India. Using Blinder-Oaxaca decomposition method, it was found that in both regular and casual labour markets, the gender wage gap is largely attributable to discrimination in the labour market. In the regular rural labour market, both raw gender wage gap as well as discrimination coefficient have increased from 2012 to 2018. While in casual labour market, raw wage differential is increasing from 2012 to 2018, but the extent of gender discrimination is declining over the years; while the result of Oaxaca and Ransom (1994) Decomposition Method shows that in 2018, in regular rural labour market, overpayment to male is 59.7 percent and underpayment to female is 57.4 percent. On the other hand, in casual labour market, overpayment to male is 43.8 percent, and underpayment to female is 45.3 percent. In sum, there is nepotism or preference towards male in regular jobs, while there is rampant discrimination against female in casual jobs. Applying Madheswaran and Attewell (2007) expanded decomposition method, paper found that raw wage differential is very high for service; teaching and nursing professionals in which female are mostly crowded in implying that the presence of wage discrimination against female in these occupations. Besides, the extent of job discrimination is considerably higher than wage discrimination in occupation like plant and machine operator, craft and related trade and sales related activities, which are regarded as male centric job in rural areas. This reflects clear case of occupational segregation in rural
areas. Moreover, the results of Nielsen (1998) non-linear decomposition analysis show that there exists unequal access to employment in the labour market. The extent of difference in probabilities of getting employment between male and female is 0.088 in log points. The decomposition of gross difference in employment rate between male and female shows that discrimination accounts for 67 percent of the differences in employment, whereas endowment difference accounts for 33 percent. Applying quantile regression decomposition method of Machado and Mata (2005), it was found that in 2018, the raw gender wage gap among regular rural workers was 0.91 at the 10th percentile and it declined to 0.72 at the 25th percentile. In other words, the gender wage gap at the 10th percentile is higher than that of 25th percentile of wage distribution. It gives evidence of ‘sticky floor effect’ in the regular rural labour market. Moreover, in casual labour market, both raw wage differential and discrimination component were found to be higher up to the median wage quantiles implying that women at the lower end of the overall wage distribution experienced larger wage gaps compared to women at the upper end. On the other hand, the analysis on self-employment activities in the rural areas showed clear case of gender discrimination. Results show that income of female is significantly lower than their male counterparts, which persists irrespective of levels of education. Besides, in non-agricultural self-employed activities, about 91 percent of gross income differentials is explained by gender discrimination; out of which, 11 percent of gender-wise income differences is due to nepotism towards male.

**Exploring the Decline in Rural Women’s Labour Force Participation in India**

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The early Marxist scholarship argued that the feminisation of the agricultural labour force was an extension of the class struggle in the rural countryside. Capitalist development in agriculture led to proletarianisation of small and marginal farmers which subsequently led to a supply-driven increase in women agricultural labourers, who entered the workforce to sustain the economic conditions of their households. Share of women in the total labour force peaked in 2004-05 to around 33 per cent and trends since 2004 have shown a decline in women’s labour force participation, particularly in agriculture. There is growing literature that has been trying to explain this declining trend in rural women’s labour force participation, but most of these explanations are complementary to each other. The first explanation has been that of social mobility of households which has led to women “withdrawing” from the workforce. Here, there have been two posited effects that the decline has been attributed to – the income effect and the education effect. Some argue that patriarchal and caste norms that enable women to withdraw from paid work and bind them to domestic and own-farm activities as household incomes rise. The feminist scholarship has long challenged the idea of a non-worker and highlighted that rural women dropping out of the paid workforce means an increase in their social reproductive burdens. Given that competing theories attempting to explain the decline in women’s LFPR already exist, this paper tries to bring certain nuances to the fore which may help
strengthen some of the hypotheses in the existing literature and challenge the premise of some of these theories.

This paper tries to locate the social and economic position of women who have moved out of the paid workforce. One of the objectives of this paper is to describe the changes in the nature of employment of women vis-à-vis their social and economic locations. We try to examine which sections of rural women have moved out of the wage labour force, which sectors have seen the highest decline, and whether women have dropped out of the paid workforce to tend to unpaid domestic duties and unpaid self-employment in agriculture and allied sectors. Further, we also try to explore if the normative understanding of women’s role in society based on caste-based patriarchal norms have any role to play in the decline of women’s LFPR. This paper uses data from the 59th and 70th round of the All India Debt and Investment Survey (AIDIS).

This paper finds that the share of women agricultural labourers sharply declined between 2002 and 2013; but unlike men, there was no commensurate increase in casual non-agricultural workers. There was an increase in women reported as self-employed in agriculture and women engaged in non-agricultural salaried employment. Further, we find a uniform decline in ST women agricultural labourers, however, a significant share of that decline can be explained by an increase in self-employment in agriculture. The fact that women have moved out of casual wage employment to unpaid self-employment in agriculture can be seen even in this paper, but that it is a result of social mobility is what has been questioned.

### Determinants of Females’ School to Work Transition: An Empirical Analysis Using Household Survey Data in South Asian Countries

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The current young generation is the most educated generation ever in world history, thanks to initiatives on promoting universal education. However, challenges exist in transiting from school to work. Although many young people in developing countries leave formal school education after completing primary school, they often face challenges in obtaining a job. While the international unemployment rate for working age is 6 per cent, for the age group of 15-24 year-olds it is 13.9 per cent, which indicates that young people are more likely to be unemployed than the older cohort. Furthermore, females are less likely to enter into the labour market. In South Asia, labour force participation rate for ages 15-24 is 49.96 for male and 16.93 for female, even though school enrollment gap has been decreasing. Being unemployed or inactive is not only a loss for the youth themselves but also for society. Youth’s transition from formal education to work is a critical phase and influenced by many factors.

Therefore, this study aims to identify the determinants of females’ labour market transition from school education, especially focusing on past education history, household characteristics and local labour market condition using cross-sectional household survey data from South Asian countries. This study uses primary two datasets. One is World Development Indicators to capture overall situation of South Asia on youth’s schooling and labor market situations. Another one is the dataset of the
Demographic and Health Surveys (DHS) which has been collecting representative data on basic information on education and work, health, HIV, and nutrition in over 90 countries for more than 30 years. Although DHS’ main focus is on demography and health, they provide household survey data of individual characteristics including education and labour market participation especially on female. This study uses the currently available datasets of last ten years (phase V to VII) in 6 countries This paper contributes in two ways. First, it uses a rich cross-country dataset of two million individuals living in developing countries and calculates and investigates how structural change affects youth’s decision making in finding a job. Second, as making labor market decisions is influenced by both demand and supply side factors. Both factors are included in one econometric model.

This study shows that the school attendance rate gradually decreases while the labour force participation rate increases as youth become older. Comparing female and male, females are more likely than males to neither work or attend school. The results show that overall post education history is significantly positive indicating that those who have longer education history continue education. Moreover, education plays a vital role in avoiding neither attending school nor working.

**Changing Rural Female Workforce in India: Are they Investing their Labour in Building Human Capital?**

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The present paper examines the changing scenario of rural female workforce in India. The decline in female labour force or workforce participation rates in rural India since late-1990s has been raising concerns and drawing attention of scholars and policy makers. There has been continuous decline in female labour force or workforce participation rates especially in rural India during the period (Chowdhury, 2011; Rangarajan et al., 2014; Thomas, 2012). In fact post-reform period in India has witnessed a decelerated rate of growth in employment/workforce despite its economic growth moving higher trajectories (Rangarajan et al., 2011&2014)). In this regard, some scholars have observed it as jobless economic growth (Ghose, 2013; Kannan and Ravindran, 2009). One must also note that a part of decelerated rate of growth in employment is due to decelerated growth in population (Motkuri and Naik, 2016; Motkuri et al., 2019). It is so, because, the growth in workforce/employment depends on population growth and workforce participation rates (WPR). When WPR remains constant at a level, the growth in workforce completely depends on population growth.

In case of women workforce in India there is a double impact in the recent decades. The growth in rural female workforce is decelerated fast during the last couple of decades owing to deceleration in its population growth accompanied by decline in their participation rates (WPRs) as well (Motkuri et al., 2019). The deceleration in population growth is observed for both the male and female population in India in general and rural areas in particular. But the decline in WPR is specific to females, particularly those of rural areas. Herein, one could make out that a substantial part of the decelerated rate of growth in workforce in India in the recent decades is due to fast decelerated growth of female workforce which in turn is largely due to decline in their participation rates.
In this backdrop, investigations have been initiated exploring the factors behind such decline in labour force or workforce participation rates of females in India particularly those in rural areas. Explanations emerged from the earlier investigations/studies are: increasing demand for education of females and their enrollment in educational institutions, income-effect on distress-driven participation, discouraged-workers hypothesis (see Abraham, 2014; Kannan and Ranvindran, 2012; Rangarajan et al., 2011; Unni and Ravindran, 2007). Further, some studies have emphasised on continuous marginalisation of women work in the Indian socio-cultural context and thereby the information collection agencies and their investigators inability to capture the large profile of economic activities that many Indian women could engage themselves (Mazumdar and Neetha, 2011; Hirway, 2012). The present paper examines factors compelling the women to withdraw from the labour force or labour market participation. It is looking into the dimension of women’s role in nurturing the human capital at their household level.

The present paper is based on four different sources of data: Census, National Sample Survey Office (NSSO), National Family Health Survey (NFHS) and India Human Development Survey (IHDS) and using the method of data triangulation. The decennial Census and quinquennial rounds (i.e. EUS - Employment and Unemployment Surveys) of NSSO provide information situation of employment in India.

The paper draws the following conclusions. First, when labour force participation of women happens under distress-driven condition it is mostly in menial and manual works. Most of these works has an attached social stigma. Subsequently after relieving from such distress-driven conditions withdrawal of women from labour force is obvious. Second, with the increasing educational development of women, they look beyond agriculture for better opportunities which may not be available in this state of economy. Also, mechanisation of agriculture must be pushing women out of labour force. Third, the substitutes for women work at home including homecare, childcare and reproductive care are either not so prevalent or not affordable in the country at present. In this changing rural economy and labour market conditions, women who have attained some education, are perhaps either forced or willfully withdrawing from the active labour force and investing their time and labour in care related works at home.

Women’s Employment in India: Analysis of Distributional Change with Survey Data

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This study analyses the changes in the distribution of working age women by their activities in usual principal status and also the employment distribution over two survey rounds on employment and unemployment in 2004-05 and 2011-12 by taking into account the household specific factors and personal characteristics. The study is motivated by the fact of declining trend in women participation even during the high growth regime in India. We also investigate the role of underlying household specific factors and personal characteristics affecting employment decision of the women. In analyzing
Theme 3: Changing Pattern of Rural Labour Markets

the pattern of employment distribution we hypothesise that social status in terms of ethnicity, in many cases, determines the type of activity performed by a person, given other factors remain the same.

In this study, the first hypothesis to be tested is that the persons in vulnerable social group are not in gainful employment in terms of pay and job related other benefits. In the survey data used in this study provide social status of households in four categories: schedule tribes, schedule caste, other backward caste, and others consisting of higher castes households. There are some social customs which may have some influence in making decision on labour market participation, particularly by the women.

The distribution of working activities is analysed in terms household specific and person specific factors by estimating multinomial logit model with a pooled cross section data constructed by taking two samples in two different time points from the same population. We have taken labour force participation in different activities, a multiple category, as a dependent variable and education, experience, household’s economic condition, and sex, social status and year dummies as independent variables. Among different personal specific factors the level of education of a person is assumed to be more important in determining the shape of the distribution across different activities. We estimate multinomial logit model separately for rural and urban India because the employment characteristics are different in rural and urban locations.

Domestic workers were the dominating group among working age women, irrespective of their level of education. The share of self-employed workers was relatively high among women with lower level of education than those with higher education level. While the share of domestic workers increased, the share of regular wage workers declined for women with education level graduate and above, although marginally, during 2004-05 and 2011-12. This study observes that the probability of entering into the wage-employment activities have decreased and participation in the home-based activities have increased compared to self-employed activities with the rise in consumption expenditure per capita. The level of education has a favourable effect on wage employment as expected. In case of home based activities the participation of the SC, OBC and general caste workers are more than ST workers.
Changing Patterns of Women Employment in Rural India:
Explaining through Socioeconomic Constraints

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This paper attempts to examine the women labour/work participation trends and the magnitude of the type of employment in different economic sectors in India. Further, it also estimates the relative contributions of socio-economic factors in women workforce and explores the causes.

It is based on a study of data from 50th, 55th, 61st, and 68th Employment and Unemployment Survey to Periodic Labour Force Survey from 1993/94 to 2017/18 by National Sample Survey Office (NSSO). In the first part of the analysis, this study explains how and why the female workforce is decreasing, particularly in rural areas across the districts. Subsequently, study estimate pattern of employment across the economic sectors. Though the second part of the study examines, the relative contributions of socio-economic conditions in women workforce have been estimated by using marginal effect (logistic regression).

The results of the study reveal that the female workforce in the rural areas since the neoliberal paradigm is almost stagnated and the declining trend has been shown since 2004/05. It has been founded that, 45.3 million female labourers withdraw from workforce during the high economic growth period of 2004/05 to 2017/18. While estimated the type of employment, it has been found that 15.8 million employment decline from self-employed women workers followed by the casual workers 11.2 million and slightly increases have seen into regular salaried employment (2.4 million) during 2011/12 to 2017/18. Though the primary sector becomes most vulnerable for the women employment, study shows that 19.7 million rural women left out from agriculture during 2011/12 to 2017/18. On the contrary, the total aggregate employment opportunity in the tertiary sector witnessed an increase of 1.8 million between the period 2011/12 to 2017/18. Moreover, while examining factors affecting the women workforce, it is closely associated with the undergoing structural changes in the economy and household socioeconomic constraints such as education, income, and domestic responsibilities founded statistically significant to affect workforce participation.

The study has highlighted the significance of social, cultural, and economic constraint behind low and declining women workforce participation in the rural labour market. The social constraints create barriers to improve macroeconomic policy environment such as domestic responsibilities of women are increasing, which leads women to pullback from workforce. While examining the cultural constraint, the patriarchy, customs, gender disparity on bearing/rearing child and division of labour on the bases of gender are creating cultural barriers for the women to contribute in labour market. Finally, analysing the economic aspect, the education status would be a bonus for women to pull them up along the upward slope of the “U” in near future. Likewise, the increasing household ‘income’ would be an
opportunity to increase spending on women’s skill and training, which helps women to gain working knowledge and they re-enter in the workforce to substitute household income.

**Inter-state Migrants in Kerala: A Study on Work, Employment and Social Security of Construction Workers**

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Kerala is a state which is known for its success in achieving high human development despite relatively low per capita income. The state has experienced high levels of emigration to the Middle East and abroad, this emigration has created both wealth and job opportunities at home. As a result the state is able to provide relatively well paying jobs. Inter-state migrants have become one of Kerala’s wealth creators and their numbers have increased exponentially. It is a workforce consisting mainly single males aged between 18-35 years and 60 per cent of them work in construction sites, manufacturing sectors, hotels and restaurants, agriculture sectors and as domestic servants. However, they do not get the benefits of social security schemes and rather they are ignorant about it. They are not unionised and they are unaware of their labour rights and obligations. The migrants live in unhygienic conditions and poor living environment.

This study looks at the type of work that the migrant workers are employed in terms of decent work agenda as per ILO. It tries to explore the decent work agenda in the context of internal migrant employment. The concept of Decent Work is based on the understanding that work is a source of personal dignity, family stability, peace in the community, government accountability and economic growth that expands opportunities for productive jobs and enterprise development. It also examines the specific vulnerabilities and working conditions of the migrant workers. The hardships, risks and costs for poor migrants compromise the development impact that their earnings will otherwise have for them and their families. The study aims to examine the work performed by migrant workers in the light of guaranteeing right at work, extending social protection and promoting social dialogues and social justice. The paper analyses how the social security schemes of the Kerala state for the migrant workers address the issues of social security and welfare.

**Patriarchal Controls and Women’s Decision to Join Labour Market**

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Mainstream economics celebrate economic man who is rational and guided by self-interest. Whereas, in patriarchal culture, women are being constructed in the image of being selfless and caring wives or mothers. This contradiction is more severe in countries like India where, due to presence of Caste as an institution, women are subjected to strict surveillance and notions of purity and chastity. Especially in case of upper caste women, the respect of the family is tied to a woman's body. Hence, women face strict controls on their freedom of movement with regards to time and space. They also face severe character assassination if they do not submit to patriarchal surveillance. We analyse how patriarchal
culture influences the decision of women to participate in the labor market in the first place. We find what gendered regulations are faced by women when they decide to enter in the labor market. Our objective is to analyse whether the decision of entering the labour market is a free decision or is it influenced by cultural and gender process.

In this paper we will discuss in detail how the choice of career made by a woman does not end up being a free choice but rather guided by gendered regulations in their personal life. We will discuss how these gendered regulations put constraints on the choice of career which a woman makes. We will also discuss how it affects their earnings in the labour market.

In our discussion on gendered regulations in participation in labor market we will see how feminine jobs like teaching as a career choice among women is a gendered career choice guided by patriarchal ideology that if women take up teaching career then they can take care of both housework and job after marriage. Hence, this career choice is not a free choice but it is made while keeping in mind the gender roles in household. Next, we will discuss how surveillance faced by upper caste women to protect their purity and chastity affects their career choice adversely. We will also discuss how convincing women to get married at a time they wish to focus on their career act as constraints to their career prospects.

**Declining Female Work Participation in Rural Karnataka: Evidence from PLFs and Time-Use Survey in Two Villages**

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The paper attempts to understand the patterns of rural women work participation in Karnataka. It analyses the trends in the female work participation rates of women in rural Karnataka between 2011-12 and 2017-18. These trends are analysed by different parameters like age-cohort of working women, education levels of the women, and social group composition of rural women workforce. Secondly, the paper disaggregates the distribution of women workforce in agriculture by sub-sectors to look for the reasons for explaining the decline in work participation. Thirdly, few narratives based on the village-level case studies have been employed to substantiate the patterns that emerge from the data analysis.

The paper employed the data from two official sources on employment in India - Employment and Unemployment Surveys (EUS), and the recent Periodic Labour Force Survey (PLFS) of 2017-18. The data period is between 2011-12 and 2017-18. Apart from the official sources of data on employment, we have also employed village-level case studies from the time-use survey conducted by the Foundation for Agrarian Studies in 2017-18, Bengaluru. The organisation had conducted time-use surveys in two villages in Karnataka for a small sample of rural women belonging to different age-groups and socio-economic profiles. The two villages were located in Kolar and Mandya districts, respectively.

The paper argues that the declining trend in rural work participation rates of women is persisting as per the recent data estimate. It applies to women belonging to different age-cohorts and social
groups. Nevertheless, the fall in economic participation is worse for younger women (15-29 years) old. Many studies attribute social norms (marriage, childcare), educational enrolments as reasons that act as barriers for younger women to participate in productive employment. A similar association was noted in our analysis, as well. Interestingly, there is a higher proportion of women belonging to 15 and 29 years of age who have completed technical education, diploma, and graduation. A tabulation of these women and the unemployment rates for them showed that 38 per cent of them were unemployed. These women are either still seeking a skilled-employment in the non-farm sector, or have dropped out of the labour force. These two reasons also emerged strongly from our case-studies. The paper argues that the discouragement effect (due to lack of skilled work) was a significant factor in explaining the trend among younger women. Our case-study also revealed that persistent failure in finding a qualified job has also resulted in dropping out of the labour force. In such a scenario, they end up spending more number of hours on domestic duties. It is reflected in our data analysis as well, where we found more than 50 per cent of younger women is engaged in domestic duties only. From the village data, it was found that the women belonging to Scheduled Caste (SC) households had to engage in agricultural work to sustain the needs of the family, despite being educated up to higher secondary level. However, this trend does not come out clearly in the secondary data.

Lack of employment generation in the rural sector also added to woes of the women who were seeking work. This reason is often ignored in the literature, and precedence is given to the social norms and practices. The study found that the decline in work participation rates of women above 40 years had to do with the contraction in agricultural work opportunities. Even today, 77 per cent of women in rural Karnataka engaged in agricultural work, of them, 90 per cent work in crop production (PLFS 2019). The negative rate of growth in the crop sector between 2016 and 2019 explained the distress in the agrarian sector of Karnataka (GOK 2019). There have been many cases of farmers’ price realisation crisis. As a response to the increasing cost of cultivation, cultivators opted for mechanisation of crop operations, which meant the further displacement of women from the workforce. In the two surveyed villages, we found that mechanised threshing of finger-millet (ragi), and rice had reduced the demand for women hired workers. The Scheduled Caste older women who engaged primarily in agricultural operations suffered hugely with these changes in cultivation practices.

The declining trend in women's work participation is disturbing as it is against the principles of inclusive growth and development. The paper does not argue against technological advancements, instead argues for alternative opportunities for women to find productive work.

An Empirical Analysis of Construction Workers in Gujarat

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This study attempts to estimate first, total labour in rural India to get an idea of how far rural sector provides employment to those who are fully engaged in it. In this context, this study would attempt to explore the trends and patterns of employment in Indian labour market, particularly workers from agricultural to construction sector. Agriculture sector made a negative contribution towards increase
in jobs, whereas construction sector has been playing a significant role in creation of employment. Majority of rural workers are moving towards the urban sector. Continuously rising migration from rural to urban sector and labour shortage in some of the rural areas has raised some substantial questions, whether Gujarat has reached Lewis Turning Point? The major sources of secondary data used would be NSSO, Employment and Unemployment Situation in India: NSS 61\textsuperscript{th} round (2004–05) and NSS 68\textsuperscript{th} round (2011–2012) on Employment and Unemployment in India; published and unpublished documents of Government of India and Government of Gujarat, published books, articles from scholarly journals, and online information etc. The main priority would be assigned to primary research materials. Some strategies would be adopted to collect quantitative and qualitative data. The findings of the study suggest that since beginning of 21\textsuperscript{st} century, India has faced the least labour shortage in rural sector, particularly in plantation, harvest and peak period of agriculture. As a result, the scarcity of labour compels rural sector to compete for workers and wage rate of workers has started to increase in both rural and urban sector. However, process of wage increases and labour absorption in both rural and urban sectors is very slow and surplus labour is still available in rural landscape. It is the old workers who have stayed in rural areas that are in surplus labour. With the current trend of migration and expansion of both rural and urban sectors, in the near future, India may face labour shortage in rural areas. The paper concludes that sustainability of economic growth in India requires upgrading the labour market to accommodate the merging of the agriculture and construction sector.
Subjective Well-being of North East Workers and its Correlates: Some Behavioural Insights

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The literature on well-being is large and diverse. Earlier studies till about the 1940s focused on material well-being based on per capita national income. Well-being in later studies has focused on multidimensional aspects of well-being. Material well-being in the form of income and wealth is important because migrants leave their native places with the prospects of earning higher income in the host regions. Besides, they also bear the cost of reallocation which should be compensated with better earning opportunities in the host region. Studies conducted on well-being of migrants focuses largely on cross-country analysis. While some studies show that material well-being is enhanced through migration, there is much less consensus on subjective aspects of well-being. This paper is an attempt to understand the subjective well-being dimensions and its correlates among the North East workers in Bangalore. The results of the study are based on a pilot survey of 90 North eastern states’ workers.

The paper examines the link between various correlates of subjective well-being of North Eastern migrant workers in Bangalore. Subjective well-being is defined as ‘a person’s cognitive and affective evaluation of his or her life’. The cognitive element refers to the evaluation of life as a whole as well as in specific domains such as life at home and at work. The affective dimensions relate to emotions, moods and feelings and are largely short-run emotional responses as experienced during the day. We use the Day Reconstruction Method (DRM) proposed by some studies since it helps us to look at peoples ‘beings’ and ‘doings’ in market as well as non-market settings through an understanding of their time use patterns. The affective dimension is measured through net affect which is the difference between positive and negative emotions. A positive value for net affect indicates that positive emotions outweigh the negative emotions.

We begin by examining the association between subjective well-being and socio-demographic and work-related characteristics. More specifically, we focus on how quality of job and work life balance has a bearing on subjective dimension of well-being. Apart from these, we also examine the links between other quality of life indicators such as health status, housing quality, social fairness, environmental quality, personal security and social networks on subjective well-being. We also examine the correlation within different dimensions of subjective well-being i.e. the association between cognitive evaluation and affective emotions. Among the socio-demographic characteristics, we consider gender, marital status, educational level and income. Work characteristics include quality of life and work life balance. Quality of job includes conditions at work, opportunities for growth, employee benefits and risk at work. Self-reported health status is captured through both physical and mental wellness questions. Sleep quality is measured by the hours of sleep the respondents reported for the previous night.
Net affect value is generally found to be low among the migrants indicating that they experience fewer positive emotions in their day to day lives. We find that males report marginally higher net affect than females. The net affect varies for married and single workers as well with results suggesting that married workers experience fewer positive emotions than their single counterparts. We also find that net affect varies with levels of education where higher educational levels are associated with higher positive emotions.

The correlation between health status and subjective well-being - namely, net affect and life satisfaction - is positive and statistically significant. Quality of job is positively correlated with life satisfaction but not with net affect. On the other hand, sleep quality is positively correlated with net affect but not with life satisfaction. With respect to work life balance, we find no significant relationship with either net affect or life satisfaction.

Finally, for the following quality of life variables - namely health status, quality of job and sleep quality - we found that there are statistically significant differences between men and women. Particularly, we find gender differences in sleep quality, health status and quality of work with men experiencing better outcomes on each. We also find a positive correlation of health status with sleep quality as well as with quality of job. Since quality of job are the conditions offered by the employer at work, a positive association between it and health status highlights the importance of good working conditions on the health status of workers. All other quality of life indicators, are positively correlated with life satisfaction but not with net affect.

Some behavioural insights can be employed to analyse the results from the paper. Variables associated with life satisfaction and affect are distinct. Quality of work is associated positively with life satisfaction but not with net affect. This may be explained by hedonic adaptation which suggests that people adjust quickly to changes in their circumstances. People adapt to the work conditions, good or bad, and it has less effect on their day to day emotions. However, when people make a cognitive evaluation of their lives as a whole, the salience of their working environment increases which is explained by the positive association between life satisfaction and quality of work. On the other hand, sleep quality is positively correlated with net affect but not with life satisfaction. Studies have shown that poor sleep quality induces tiredness which in turn influences emotions and moods during a given day. However, with regard to cognitive assessment of life satisfaction, it may not have a role to play.

Gender differences in sleep quality and health status could be explained by time use patterns of women suggesting ‘double burden of work’. This is because social norms dictate women to be heavily engaged in domestic and care services while also simultaneously participating in market activities. On the other hand, the differences in quality of job experienced by men and women suggest some kind of occupational segregation which needs to be explored further.
Female Labour Force Participation Across SAARC Countries Using Dynamic Panel Model

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The journey of women in India can be traced back as powerful deity of respect and reverence in Rigvedic and ancient age to subject of vulnerability in modern society. Much emphasis has been laid on transforming gender equations in India by adopting revolutionary campaigns using behavioural Economics and social messaging system. The recent campaign tagged as BADLAV (Beti Aapki Dhan Lakshmi Aur Vijay Lakshmi) stresses upon gender equality envisages ideas for utilising the power of role models from Indian mythology to create the social norm that “women are equal to men”. This paradigm shift in the social structure of Indian society is imperative in building parity between men and women though it is difficult.

Women’s contribution to economic development is generally undermined and unrecorded in countries like India where majority of women are deployed in household activity. According to Lewis (1953), shift of women’s work from household activities to commercial employment or inter sectoral shifts of employment of women can be considered as one of the most important notable features of economic development of that country. Female Labour force participation rate (FLPR) in case of India is very low and has been declining continuously. The FLPR was 31.94% in 2000 which has fallen to 24.67% in 2018 (as per ILO Statistics modelled estimates). Falling FLPR keeps the overall labour participation rate very low which has fallen to 54.25% (2018) from 59.62% (2000) as per the ILO modelled estimates. On account of current economic slowdown and surge in unemployment rate it is expected that there will be further fall in LPR in India.

The paper examines the trends of female labour force participation and gender disparity across groups of countries and the SAARC Nations. The objective of the paper is to examine the relationship between FLPR of age group of 15-64 yrs and Log of GDP per capita along with the lag of GDP per capita, Fertility Rate, Survival rate and their lag effect, life expectancy, and average years of schooling which includes primary, secondary and tertiary schooling over the time period 2000 to 2018. The panel data has been created by taking the time series country wise data from International Labour Organisation statistics (ILO modelled estimates). The study tries to analyse the effect of the Log of per capita GDP, Human Capital stock for female population and other variables using GMM estimates on Dynamic Panel Model setup for SAARC nations (excluding Bhutan and Maldives). This study uses the lag value of the Log of GDP per capita as instrument variable to get efficient estimator in a Dynamic Panel Model setting.
Potential of Dairy Industry with Special Reference to Generating Employment and Improving Livelihood of Farmers in India

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Indian economy is still known as the agrarian economy as more than 50% of population is involved in a primary occupation such as agriculture and allied activities. Dairying has played a significant role in providing a livelihood to farmers. About 80 million rural Indian households are engaged in milk production with a very high proportion being landless, small and marginal farmers. According to a recent report presented at the International Dairy Federation's World Dairy Summit, India's dairy sector over the next decade, the sector is expected to create two crore jobs annually.

The dairy sector has seen a growth of 6.4% annually in the last four years compared to the global growth rate of 1.7%. Still, India contributes only 0.01% to the global dairy export market. Despite being ranked number one in milk production, the per animal productivity is 1,806 kg a year, whereas the world average is 2,310 kg. Therefore, the Government of India has undertaken Rashtriya Gokul Mission which would enable farmers to adopt technologies such as embryo transfer technology, creation of a facility for sex-sorted semen production and genomics selection, would help to improve the productivity of the industry and livelihood of the farmers. Therefore, the study analyses the challenges faced by the dairy industry in generating employment and expanding their business other than issues related to infrastructure, productivity, animal husbandry, and technology. The study finds that firms in the dairy industry undertake the production of value-added products to earn profits yet have to face inadequate advertisement as a prominent hurdle. Researchers have utilised secondary data of 17 years for quantitative analysis and a case study with an interview has been done. The analysis includes testing the hypothesis with single factor ANNOVA and the multivariate regression equation which shows that the dairy industry has the potential to generate employment and revenue over the years. The study has taken four variables for preparing a model, these are the number of workers, the number of factories, wages to workers and profits. The model has tested the assumptions of multivariate linear equation and as the equation satisfies all the conditions, it inferred that the model is the multivariate linear regression equation. The R-square of the study is 97.1% and the adjusted R-square is 96.5%.

In the interaction of the case study, it was found that lack of advertisements resulted in restrained sales, and limited the income to the farmers. Therefore, the study suggests that the government should create one window of information and advertisements for dairy firms and intervene as a facilitator for their growth and expansion on domestic as well as international levels.
Women and Nature of Work in Rural India: Can a Change be in the Offing?

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The present study makes an endeavour to assess, on the basis of NSS data, whether there has been any change in the nature of women’s work in rural India in the post-global era. The comprehensive study clearly points out that there is a strong possibility of change in favour of rural women only if the state takes proper initiative in this regard. The quite revealing and intriguing results thus call for suitable policy implications.

It is divided into three distinct parts. The first part endeavours to revisit the employment scenario and reveals that demographic transition, seems to negate the possibility of demographic dividend in rural India owing to a continuous fall in female work participation rates (wprrs) in usual activity (principal status) for 15-29 (years) age group mainly in an otherwise situation of a rise in real GDP per capita (US $).

A brief appraisal of accepted definitions of ‘work’ and ‘labour force’ as per NSS data in the second part looks into the answers of a set of probing questions directed towards females who along with their usual (principal status) engagement in domestic duties pursue certain activities grouped into three broad categories. Activities (category I) relating to agricultural production like maintenance of kitchen garden, work in household poultry, dairy etc. are reckoned as work while activities (category II) like processing of primary products produced by the households for household’s consumption can be considered as ‘economic’ according to recommendation of an international standard. Since considerable concentration of women is found in either of these two categories viewed individually or as a whole, necessity for a suitable estimation process to include the bulk of otherwise ‘missing women’ in the computation of female work participation rates using formal definition of ‘work’ stems in. However, there lay some other activities (category III) for own consumption but resulting in economic benefits to the households like ‘preparing cow dung cakes’ and ‘sewing and tailoring’, which are not recognised as ‘work’.

The third and final part indicates that a change of nature of rural labour market for females can be in the offing. It is divided into two sub-parts. The first sub-part analyses the causes behind the rise in the proportion of outside labour force in population for both the working age groups.

For 15-29 (years) age group this happens due to a rise in both the statuses viz., ‘Attended Educational Institutions’ and ‘Engaged in Domestic Duties’. Also, among females who ‘Attended Educational Institutions’, proportion of those with educational level’ secondary and above’ increases over NSS Period.
For 30-59 (years) age group it results owing to a rise in ‘Engaged in Domestic Duties’ exclusively. In fact, proportion of females among total females of this category is maximum for this age group.

Though less than 15 (years) population proportion declines over NSS periods, among them proportion of females who ‘Attended Educational Institutions’ which is otherwise less than 30% during 1993-94 increases continuously and stands at 62.5% during 2011-12. It is interesting to note that for the females ‘Engaged in Domestic Duties’ numerical strength of this age group is almost negligible.

The above three observations taken together seem to indicate two important inferences.

First, a handful of females in 15-29 (years) age-group intend to raise their level of education to join labour market later on, hopefully, as regular wage/salaried employees. Second, a bulk of females in both 15-29 (years) and 30-59 (years) age groups, with the rise in their educational level, perhaps to a moderate extent, seem to prefer ‘getting engaged to domestic duties’ to ‘joining labour force’. They get actively engaged in child care and other household chores. This holds good to a greater extent for 15-29 (years) age-group for majority of the NSS periods. This fact viewed in an atmosphere of improving healthcare situation points towards enhancement of human capital of their children and seems to get reflected in the rise of educational level with a consequent fall in workers’ participation of less than 15 years age group.

The second sub-part of the third part delves into the answers to another set of probing questions directed towards the women usually (PS) engaged in domestic duties but are willing to work at household premises. It is this intriguing analysis that completes our understanding relating to the possible change in the nature of rural labour market for females. One, thus, notices that:

1. If those engaged in domestic duties majority are compelled to do so on most of the days as they do not have ‘any other member to carry out domestic duty’. Needless to mention that ‘Social and religious constraints’ play an important role to a greater extent for 15-29 (years) age group. Interestingly, during 2011-12, a little more than one-third of women (majority of whom are currently married) ‘Engaged in Domestic Duties’ are willing to work at their household premises. This proportion is higher for 15-29 (years) age group and increases, barring 2004-05, over NSS periods.

2. ‘Dairy’ and ‘Tailoring’ account for more than 50% of women’s preferences. However, ‘Dairy’ loses its dominance gradually and ‘Tailoring’ ultimately emerges as the main activity taking account the preferences of more than one-third of females, for both the age groups, for 15-29 to a greater extent.

3. These females are in search of ‘regular jobs’ on ‘part-time’ basis after fulfilling their daily household duties. A continuously increasing trend for ‘Tailoring’ exclusively makes it the most important activity for which training’ along with ‘easy financial loans’ are mainly required.
Changing Trends, Patterns and Determinants of Rural Non-farm Employment in India

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This paper explores the recent trends and patterns and determinants of rural non-farm employment in India for the period of 1983-2018. It also analyses the factors determining the rural non-farm employment decision of males and females in India. It outlines trends and patterns of rural non-farm employment along with the quality of employment in rural non-farm sector in India. We find total employment has been continuously declining in rural India since 2004-05. Rural non-farm employment shows increasing trends but it is not sufficient because it didn't capture declining agricultural employment in rural India. Since increasing rural non-farm employment is below the declining agricultural employment. The major determining factors for the growth of rural non-farm employment are lower level of education, technical education, lower occupation (sales and service worker, agriculture worker and elementary worker), and different regions of India except central region, lower economic groups and recent time period. This rural non-farm growth is slow as compared to declining agriculture employment in rural India. To increase the growth of rural non-farm employment, both govt. and private investment is needed in rural India.

Women’s Wages and Wage Rates

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This paper examines trends in wage rates of women workers in rural India. According to the Rural Labour Enquiry report of the National Sample Survey Organisation (NSSO 2011), about 37% of rural households in India are labour households. 49% of all male workers and 70 % of all female workers in India are casual wage workers, with over 90% of women workers participating in agriculture. Agriculture is the single largest employer of women in India, and agricultural labour the largest occupation. A majority of the population is, therefore, dependent on semi-skilled and unskilled manual work, especially in the agricultural sector. Income poverty is much higher among manual worker households due to under-employment and low levels of wages. The wage rate for agricultural labour is thus a key determinant of women’s earnings and well-being of manual worker households.

This paper undertakes an empirical analysis of the trends and gaps in wage rates for male and female workers in rural India with respect to the following aspects. Firstly, this study uses data for the period 1998-99 to 2016-17, from the Wage Rates in Rural India (WRRI) reported in the Indian Labour Journal. A major finding from this study shows that the period from 1998–99 to 2006–7 was one of stagnation, but from 2006-07 up to 2014-15, rural wage rates for men and women across occupations and States grew at a significant rate. This growth was above 5.5% per annum for most large States, and across all occupations, agricultural and non-agricultural, and for males and females. For major agricultural occupations, data show that there was a higher growth in wage rates for female labourers than male labourers at the all-India level. For sowing/transplanting/weeding occupations,
the growth rate of female wages was higher than that of male wages in nine States. The steady growth of wages for agricultural and rural labour ended in 2014–15 when wages started to decline. Secondly, an important feature of labour market discrimination against women is the gender wage gap. The rural labour market is characterised by sharp disparity between wages for male and female labour. This disparity in wage rates has either been stagnant or declined at the all-India level over time. The study shows that between 1998-99 and 2005-06, the gender gap in wage rates was stagnant at the all-India level, but in the period of growth (2006-07 to 2013-14), the wage gap declined only marginally. In the last three years, the gender gap in wage rates has shown a considerable increase at the all-India level. Thirdly, there is substantial variation in gender disparity in wage rates across regions. The ratio of female to male wages varies from 96% in Haryana to 63% in Tamil Nadu. Wage disparity is relatively large in the southern States of Karnataka, Andhra Pradesh, Tamil Nadu, in Maharashtra in western Indian, and in Meghalaya in the north-east, in comparison to Bihar, Gujarat, Haryana, Manipur, and West Bengal. This paper will examine the factors that lead to regional variation in gender disparity of wage rates. A study by Jose (2018) shows that variations in the gender wage gap can be explained by the variation among female labour force participation rates. Other studies attribute the gender gap in wage rates to the level of wages and implementation of the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS). However, the gender gap cannot be attributed to a single cause as changes in the pattern of land use, cropping pattern, mechanisation, urbanisation, and non-farm employment may also be responsible for the gender differential in wage rates.

Productivity, Income and Employment of Craftswomen in Mahbubani: Crafting the She-economy Through Household Survey

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The economy of Bihar has been showing signs of resurgence and one of the important growth areas has been handicraft and handloom sector. This paper involves undertaking a survey with a sample of 37 Madhubani Painting craftswomen of Madhubani district. The survey was conducted to analyse the changes in the socio-economic factors due to the interventions like Jeevika, undertaken over the past decade with the households of Madhubani craftswomen. It illustrates the effect of collecting the craftswomen in Product Groups (PG), imparting them with the required type of training, providing them with the seed money for sourcing of raw material and finally providing them with orders as well as giving the platforms to sell the products. The survey reveals that the interventions have brought about a significant socio-economic change in the said households. The overall sales have risen dramatically which has led to a substantial increase in the negotiation power of the craftswomen with the middle men, who, till few years back paid meagre sums of money for the painstakingly made Madhubani products. The findings of the study illustrate that with due diligence and structured approach, a languishing craft can be resuscitated and along with it the entire community can be uplifted by way of increased income, steady employment, social networking and wellbeing.
Rising Horizons of Rural Marketing in India

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The rural market in India has a vast demand base and size. It is a country of diversity, and approximately 70% of the Indian population resides in villages. The economic development of the nation is contributed mainly through these villages by the production generation fruits, vegetables and grains, etc., leading towards the generation of capital and earnings of foreign exchange. From the total population, a total of 68% still reside in rural areas of our country, hence, providing exceptional opportunities for organisations to high their customer base. Until recently, the focus of the marketers in India was on urban consumers. As we relate and compare the rural consumers to the urban consumers’ counterparts, they have less disposable income and consumption rate level regardless of which they still have their wants and needs just like urban consumers. Due to increase in literacy rate, development of media and communications, urban migration, availability of credit and micro-financing schemes, technology (television and radio), rising globalisation, tax concessions and loan availability, etc. are the factors which have increased the demand and supply to the rural consumers in many ways. Therefore, it has nowadays emerged as an essential growth engine of the Indian economy. Agricultural marketing includes estimating, inciting and transforming the purchasing power of rural consumers’ efficient and operative order to create maximum satisfaction level among the rural consumers and achieving the desired organisational goals. Marketers need to come up with innovative ideas to tap the potential of rural and agricultural marketing. The motive of the paper is to explore the companies such as HUL, ITC, Godrej entering and making an impact in the rural market and Indian economy.

Hence, the objectives of the paper are to study the challenges and opportunities in rural marketing and to explore the scenarios of the agricultural market. The research methodology adopted for the study is exploratory research design. The aim of the study was to inspect the plots of the rural market and the challenges and opportunities encountered in agricultural marketing for which a systematic review of the literature was conducted by collecting and studying 50 research articles and papers published in national and international journals SCOPUS and EBSCO database.

This present paper is an attempt to study the scenarios of the Indian rural market. An effort has also been made to identify the opportunities and challenges faced by marketers who are entering this competitive and dynamic agricultural market. This paper aims to understand the initiatives undertaken by companies for rural marketing development and growth.
The female labour force participation rate (FLFPR) in India is one of the lowest in South Asia. Among the seven South Asian countries, Pakistan (23%) and India (34%) were found to have the lowest FLFPR, and Bangladesh (58%) showed the highest FLFPR in 2010. The female labour force participation rate in India has not only remained low, but has also been declining in the past three decades; and the decline is found to be sharper among rural women. FLFPR has declined from 34.20% in 1983 to 25.30% in 2012 among rural females and a reduction in the share of females in the labour force from 37% to 30% in the same time period. However, in the urban areas both the participation rates and the share of females have remained more or less stable.

This decline in female participation rates has been systematically established in the literature. Most studies bring out that the fall is owing to some supply-side factors. First, that the increased enrolment of women in secondary and higher education in the country is cited as pulling down the participation rates among women. Second, the increase in real wages has strong income effect as women tend to withdraw from the labour market as the living conditions improve. However, some studies dispel the supply side factors as the main explanatory factors of the decline in the FLFPR. Yet other scholars have argued that education could not be a plausible explanation for the decrease in FLFPR as the reduction was seen across all age groups and not just among the younger age groups. Secondly, of the 38.83 million who withdrew from the labour force during 2004-05 to 2009-10, only 27% is accounted for by the enrolment for education and rest were found engaged in domestic chores. Some studies have countered the income effect explanation for the withdrawal of the female labour force due to rising real wages. Based on the income effect interpretation, the areas with higher wage rates would experience a larger decline in the FLFPR. Examining district level data for the year 2004-05 and 2011-12, studies have found a weak relationship between the change in the real wages and FLFPR's.

Similarly, at the household level, if the income effect was stronger one would have expected a decline in the LFPR in the higher consumption quintiles, but the empirical evidence shows that the decline was experienced across consumption quintiles with a sharp decline in the bottom two consumption quintiles.

Since supply-side factors are limited in explaining the decline in FLFPRs, a few studies have attributed the decline of FLFPR to the demand factors arguing that the decline is due to the lack of jobs because of poor performance of agriculture and diversification of rural jobs, mechanisation of farming operations. Another study argues that the decline in WPR due to lack of job opportunities that should be reflected in the increase in unemployment but that doesn't seem to be that case. Instead, they are recorded in domestic duties in status code 92 and 93 in the national sample survey data. In the further follow-up questions on the women attending domestic duties (who have reported status
code 92 and 93), the majority of them, i.e. around 92% have reported spending most of the time on domestic duties and of the 92%, about 62% reported have no other member to carry out domestic duties. Further questions in the schedule were asked for the reasons for further pursuing the domestic duties with the three options; (non-availability of work-1, by preference-2, others-9); 18% were reported non-availability of work; more than half (51%) reported by preference and 31% gave others as the reason for continuing domestic work. This implies the time allocation as a major reason in taking up the domestic work and women have reported preference in the absence of a member to carry out duties in the house and taking up domestic duties becomes a necessity. We argue that the absence of jobs in the rural area’s triggers migration to urban or other rural areas. Given the out-migration for work is male-dominated, it affects the labour market participation decision of left-behind members especially of women who often take-up the household responsibilities in the absence of male members. A few studies have hinted at out-migration affecting the phenomenon of declining FLPPR, but have not empirically verified it. One-third of the households in rural India reported out-migration of a member and one-fifth of the rural households out-migrate for work-related reasons. Given the fact that India has second largest internal migration in the world after China and domestic remittances are a source of finance to a large number of households in rural areas, it is pertinent to analyse migration and remittances as a plausible explanation to decline in FLFPR in rural areas.

Out-migration of a family member(s) affects the households in two closely related features - the absence of a productive member and receipt of remittances. Different mechanisms are theorised as to how an absence of a productive family member through migration and the inflow of remittance receipts affect the labour market outcomes of left-behind members at the origin. Remittance inflows increase the household income by lifting budget constraints, raise reservation wages and through an income effect reduce the employment participation of remittance receiving members. Before the household starts receiving remittances, the out-migrating male member may induce the left-behind members to participate in the labour market to compensate the forgone income or pay the migration-related expenses. Since migration may have a positive effect on the household labour supply until they receive remittances and the decline the participation rates. To distinguish between the two effects, we have divided migrant households into remittance receiving and non-remittance households and analyse the change in the labour market participation of left behind members separately.

Furthermore, the cross-substitution of labour differs across gender. In a traditional society, women tend to participate less in market work and more in household production. Migration and agrarian transition in developing countries depict a gendered pattern; with industrialisation and urbanisation, men are found migrating to distant places to avail employment opportunities in non-agriculture leaving behind agriculture at home. Men’s mobility unlike women’s is not restricted by social norms to shoulder reproductive activities; hence men can migrate.

The absences of the male household head or other male members leave women with greater household responsibilities; hence, the latter tend to withdraw further from the labour market. If women participate in the labour market, it is mostly as small producers or wage labour in agriculture. Women’s participation in agriculture as own-account workers is the consequence of male out-migration.
abandoning agriculture. In the absence of male members in the household, women have to undertake the responsibility of production activities. Another study argues that women have increased their participation in agriculture over time taking charge of household survival and also sought to reap economic opportunities in commercial agriculture.

Since the changes may not just be reflected by the overall participation rates, we are also analysing the changes by employment types in self-employed, regular, casual work as market work and the effect of migration and remittances on the household duties.

Pattern of Women Migration, Remittances and the Role of Emigration Policies in Kerala

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Migration is a process of movement of people from one place to another. Now-a-days migration is a common phenomenon. At present, a wide range of people like to make a move from native place to the abroad. There are several reasons behind the movement of people. Majority are leaving from native place for achieving better living standard. Migration can make several changes among people; they try to find new jobs or new ways out of their native place for achieving something in the life. Our labour market has both male and female labour participation. Also, the process of migration has the role of the gender. During 1960s and 1970s, migration is considered as a male dominated phenomenon. Since 1980s, female participation in migration is increased. At present, female migration is a most debatable process. Women give more importance to jobs in their lives. For acquiring good jobs, migration is a better option. As a patriarchal society, female migration is constrained and undermined. But, at present, Indian women has been migrating increasing both as dependent family member and as independent workers. Migration is an important factor, that helps to achieve the dreams of the parents to improve the standard of living and migration offers a chance to women who do not have the ways to change the prevailing strict social norms that govern family life in Kerala. This paper tries to analyse the pattern of female migration and the flowing of remittances into the state. And also look into the role of government to issuing emigration policies for make the movement of people become easier to the abroad. So, present paper focus on women international migration, remittance and the influence of government emigration policies on women migration.

Internal Migration and Development: Comparing Migration Intensities Among different States in India

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A wave of optimistic thinking about the relationship between migration and development has emerged over the past two decades. This paper reviews and synthesises recent migration trends, human
settlement and critiques, arguing that they constitute a ‘new migration-and-development pessimism’ the main contentions of which are: (1) the new optimism is not really new; (2) it is partially driven by hidden political and economic agendas; (3) it is distorted by simplification and exaggeration. Migration has greater impact in shaping the economy. It has both positive and negative impacts on human development. On the one hand, it brings cash which may or may not bring improvement in living standards. If we add both, the outcomes of migration result in, rapid accumulation of assets and a faster escape from poverty for the better connected and better educated and on the other hand it adversely affects the oppressed class where exploitations are the worst. This paper examines the connections between migration, poverty and welfare of households in the states such as Andhra Pradesh, Bihar, Gujarat, Odisha, Rajasthan Uttar Pradesh and Punjab. It also examines the link between development and migration intensity through simple correlation using a range of demographic economic and social variables, results reveal clear associations between indicators of national development. Human and social capital is the main factors contributing to the success of migrants. Human capital with government support can improve living and working conditions of migrants. The objectives of this study are to understand/find the changing pattern of motivations behind the migration of rural household members and the effect of rural.

We discuss the patterns of migrants that have divided by age, gender, caste and tribe. The study uses some secondary data from other papers and migration data from census 2011. It uses statistical analysis along with graphical presentation and tables in the results. The analysis is carried out from the perspective of migration from rural to rural areas and rural to urban areas and their linkage to education and economic development in their households in their original living area. The study also differentiated with scheduled caste and scheduled tribe migration to different regions disaggregated by gender. The most important aspect to notice is the type of work the migrants are doing in enumerated area. A correlation and covariance analysis have also been carried out in the analysis. The result shows that the pattern of migration is distinct among different social groups. The heterogeneous effects of migration often cancel each other out, leading to insignificant effects of migration when the average effect on all migrant households is estimated. The probability of migration is higher for younger and more educated individuals, but places where level of literacy is higher, better medical facilities, better access to water and sanitation are less likely to produce migrants.

**Drifts in Sectoral Employment and Rural Labour Markets in Agriculturally Developed Region of India**

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The Indian economy is basically an agrarian economy and even now nearly 64% of workforce directly or indirectly engaged in agriculture. While contribution of agriculture to GVA (Gross Value
Added) has been declining, agriculture still remains the lifeblood of the rural economy by employing almost half of the population. According to Periodic Labour Force Survey, 2017-18 about 71% of the population in India belonged to rural areas. The breach between job seekers and employment opportunities in agriculture has been splayed and non-farm sector has become an increasingly important source of livelihood in rural India. Rapid rise in household income, sustained economic growth, increase in population and changing lifestyle especially during last decade has brought significant changes in the pattern of consumption which has shifted consumption towards high value foods leads to changed production patterns. Due to this changing demand there has been a shift in agricultural production towards high value commodities. These activities have spill over effects and externalities on increasing employment in transport, marketing, storage, insurance, hotels, etc. So, the diversification in consumption, income, expenditure and demand has translated into diversification of labour employment gradually. This has drastically impacted the pattern of labour employment and workforce especially in countryside India. This basically starts with the transition from a primarily agrarian economy to non-farm one in the developing economy like India.

Against this backdrop, the present study unwinds the issues related to the changing pattern of rural labour in India and Punjab. It examines the trends and pattern of rural labour diversification and analyses the underlying factors for these changes across sector and across gender. The state of Punjab, which is well advanced in agriculture has experienced many changes in form of labour employment structure in last few decades, due to high mechanised and capital deepening methods adopted in agricultural sector. Therefore, the present study selected Punjab state for analysing the changing trends in rural workforce. To realise the objectives of the study, both primary and secondary data were used. The present study is based on the data from eight major quinquennial rounds of the National Sample Survey on Employment and Unemployment Surveys during 1977-78 to 2011-12 and Periodic Labour Force Survey (PLFS) 2017-18. Data regarding Punjab was based on a field study in Punjab during the year 2012–13.

The transformation may not be of concern as the shift is mostly driven by the middle and top deciles of population. The substitution away from agriculture to other non-farm activities is expected when income increases as spill over effects of agricultural expansion in a developing country. However, in the recent years, there has been an increase in shift amongst the poor which reflects the distress and points towards their vulnerability in the recent times of rising prices. It was observed that in countryside the maximum shrink was observed in agriculture (-20.3 percentage points) sector during 1977-78 to 2017-18 in India. In the rural Punjab also, all other sectors expanded with this outflow of workforce from agriculture sector. Major gainer sectors were manufacturing, construction, transportation, service (24.4 percentage points). The portrayal of least workforce absorption within household industrial sector shows a sorry-state of the Punjab’s distress economy. So, largely, two alternative theories have been developed out of this situation of increasing rural non-farm employment. On the one hand, it has been argued that this diversification is due to push factor or driven by agricultural distress, and on the other hand it is argued to be driven by agricultural growth and complementarities between agriculture and allied sectors.
Results at all-India level revealed that, within the period 1977-78 and 2017-18 the overall rural employment in agriculture sector declined radically from 84.3% in 1977-78 to 64.1% in 2017-18. Whereas, rural employments in non-farm sector like industry, construction and services amplified in India. There is no doubt in the fact that structural transformation of rural India would necessitate shift from farm-based, subsistence, non-wage, and irregular work to off-farm remunerative wage labour over time. There was deceleration in the total WPR for rural India from 44.4% to 34.6% with a marginal decline in male WPR (3.6%) and drastic decline in female WPR (15.3%) during 1993-94 to 2017-18. It shows that, during 2017-18, in rural areas, about 55% of the male and 73.2% of the female workers in usual status were engaged in the agricultural sector. The proportion of rural male workers engaged in the agricultural activities gradually fell from 80.6% in 1977-78 to 66.5% in 2004-05, and then to 59.4% in 2011-12, which further decreased to 55% during 2017-18. Among female workers, the proportion engaged in the agricultural activities decreased from 88.1% in 1977-78 to 83.3% in 2004-05, and then to 74.9% in 2011-12 which further decreased to 73.2% in 2017-18. The WPR of females based on the usual status was 60% of the WPR of males in 1993-94. Rather than moving closer to the WPR of males over time, it further declined to 34% of the male WPR in 2017-18.

Results of analysis across Punjab, confirmed that the process of de-peasantisation in Punjab accelerated post-liberalisation and had geared since the mid-1990s. The study unravelled that in Punjab, about 14.39% of the farmers had left farming since 1991. A considerable proportion of farmers were pushed out of agriculture because of its non-viability and joined other sectors like wage labour. Thus, there is a need to look into the viability of the farming sector, particularly small farmers, so that the workforce from farm to non-farm sector can be transmuted with pull factors for growth and development. It is a matter of further detail investigation that the existing development model of India where the economy is diversifying is from agricultural to straight service sector growth is healthy or not. As in major developed economies of the world, growth and development has gone through a process of expansion in agricultural sector, followed by industrial boom and then tertiary or service sector. The study further discussed that an approach which comprises of agrarian progress, human capital development and rustic progress is obligatory for breaking the chains of present steadiness. In addition, policy modifications that are real rather than superficial are also necessary.

**Changing Rural Labour Market in Tamil Nadu: A Census Data Analysis**

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This paper analysed the changes in India’s rural labour market and three districts of Tamil Nadu from 1991 to 2011, using data from the Census of India. The result shows a large decline in the size of the main cultivators and an increase in the size main and marginal other workers in the three decades after 1991. The combined sizes of agriculture labourers are decreased. The findings of this paper suggest
that a structural transformation of the workforce away from farm sector to non-farm sector begin in many parts of rural Tamil Nadu. The male work participation rates are declining the rural and their performance has continuously improved for female workers. There is an absolute decline in the size of the work force engaged in agriculture and an increase in rural non-farm sector. There is an urgent need for public investment and specific government policies to enhance agricultural incomes, stimulate rural enterprises, and help create new rural non-agricultural jobs for growing rural workers. In the absence of such policies, it is certain that the country will face distress of unemployment, migration, poverty among the rural population.

Indebtedness, Income and Expenditure of Agricultural Labour Households in Rural Punjab: A Study of a Village

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During the era of liberalisation, privatisation and globalisation policies, agriculturally advanced areas of the country like Punjab, has been entrapped into vicious cycle of debt of especially farmers and agricultural labourers. There is a growing literature in India on the importance of non-farm sector in rural income and employment generation. In spite of the growing significance of non-farm incomes, it must be emphasised that a very high percentage of rural households is depended on agriculture. During the era of high growth, the rural households attained high living standards, which also led to their social and cultural obligations being more expensive in India, the rapid productivity gains of the green revolution raised labourers’ wages. However, despite decades of investment in new agricultural technology and rural development, poverty and indebtedness continue to plague rural areas. The paper examines various aspects of indebtedness, income and expenditure among agricultural labour households in rural Punjab. There is a general consensus that the adoption of new technology had reduced labour absorption in agriculture. The uneven regional growth was mainly responsible for the low absorption of labour within agriculture. The growth of output was also slow to generate adequate employment opportunities.

The study is primarily based on the primary data and relates to the year 2013-14. However, the secondary data have been used and collected from published sources. The primary data have been generated through a comprehensive sample survey of 162 labourer households spread across the village through a well-structured questionnaire. During the village survey, information was collected from the respective Panchayats, Numberdas, Patwaris, Education inhabitants and elderly people of the village. Similarly, during the household survey, information obtained from the members of the selected households through personal meetings.

The present study has been organised into five parts. First part deals with the socio-economic conditions in rural Punjab and Part II analyses the socio-economic profile of Chotian village, which highlights the demographic, social and economic characteristics of sampled households. Part III
Theme 3: Changing Pattern of Rural Labour Markets

examined the indebtedness and IV deals with Income, Consumption and Capital Expenditure of labourer households. Finally, the summary, main findings and policy suggestions have presented in the last part of the study.

Growth pattern of the economy of Punjab has not adhered to growth theory, which suggests the reduction of economy’s dependence on agriculture and shift of surpluses of both labour and capital resources to the industrial sector. Punjab economy is still depending heavily upon agriculture both in share of GSDP and workforce. Source-wise and holding size-wise analysis among the labourer households reveals that over all, they were indebted towards non-institutional sources. The farm size revealed that amount of debt was also linked with the farm size. A majority of households receive income from multiple sources. Major part of income of labourer households derives from farm activities. Labourer households of the village have simple subsistence consumption pattern.

There is need for rethinking, reorient and reformulate agrarian and development of a new set of policies pull-out all sections of the rural society particular labourers from the mess. Formal credit institutions should extend for the fulfilment of required credit needs at low rate of interest and the activities of non-institution credit agencies should check. There is need to improve the functioning and lending practises of the existing commercial banks and strengthens the functioning of cooperatives hamstrung by bureaucratic controls.

Government should support for non-productive credit needs like consumption, education and health for which they cannot postpone. There is need to arrange a mass campaign against intoxicants and extravagant expenditure on social feasible. Civil society institutions including NGOs, religious organisations, labour unions and political parties have to sensitisate and educate rural Punjab on social evils.

Analysis of Income of Informal Labour Households and Marginal Farmers in the Border Districts of Punjab: A Case Study

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The study is based on the primary survey of border districts of Punjab i.e. Pathankot, Amritsar, and Ferozpur Based on 500 respondents. The major conclusion of the study is that about 85.4% of the sampled households are living in semi-pucca houses and only 4.6% of them are residing in pucca houses and still 10% households are living in katcha houses. Further regarding the housing condition, it has been found that a large majority (about 76.4) of labour households live in a house of dilapidated conditions, only 6.4% live in houses with good condition and 17.2% live in dilapidated houses. The study shows that majority (65.6%) houses only have two rooms and 21 percent houses have only one room and 13.4 percent have three rooms. The study also shows that 71.4% houses have joint kitchen with rooms and only 25.6% houses have separate kitchen. Future, study also shows that 82.2% houses have bathrooms in dilapidated conditions and only 3.4% bathrooms are in good conditions. The age group of 16-30 and 31-45 years constitutes 35.6, 31.2% women labour in sampled border districts of Punjab.
Considerable difference between the income of females and their spouses have been found i.e. 17,886.19 and Rs. 53,703.58, respectively, are the maximum earnings of the females and males who are engaged in agriculture farm activities. It has been found that annual consumption expenditure of an average sampled household is Rs. 94,692.69, out of which 55,867.96 is on non-durable goods, followed by services, durable goods and socio-religious ceremonies. The highest proportion is spent on non-durables goods, followed by services, durable goods and socio-religious ceremonies. The asset poor labour households are generally found to be borrowing more from non-institutional sources like money lenders, large farmers as they do not have adequate collateral which is necessary to borrow from institutional sources at reasonable rate of interest. Out of per household debt of about Rs. 80,927.72, the amount raised through institutional sources is merely Rs. 4930.59 (6.1%) and remaining Rs. 75,997.13 (13.91%) is from non-institutional sources. Maximum amount of debt Rs. 47,253.9 is at highest rate of interest between 22% to 28%. The purpose wise distribution of debt shows that maximum amount of debt is taken for domestic needs, marriages and socio religious ceremonies and healthcare.

The analysis of the assets for rural women labour households shows that, out of all the assets, the dwelling house is the most valuable. An average sampled household is having the value of this asset worth Rs. 196,198.12. The next important valuable asset is motor cycle/scooter/bicycle whose estimated average value is Rs. 5,663.49. Due to high rate of illiteracy and lack of awareness among these women, their participation in political activities has been very low and 72.2% women are not aware about their standard working hours and Minimum Wage (Amendment) Act 2017. There should be more emphasis on non-farm activities in rural areas. Banks and other financial institutions have to come forward to finance these activities to the people who are unable to provide these collaterals. As the study observed that the gap between income and expenditure is the main reason behind the incidence of indebtedness among the households of informal labour, there is need for proper implementation of MGNREGS, strict implementation of Minimum Wage Act and National Food Security Act. The most important purpose of raising loan is domestic needs, marriage functions and health care. Actually, with irregular and low income and without any assets and social mechanism to fall upon in the times of contingencies of life, taking loans from non-institutional sources is the only option for them. This points towards the need of a well-knit social protection system, which should take care of the genuine expenditure on necessities.

An Analysis of Rural Employment Scheme in Haryana

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Majority of the Indian population lives in rural areas, so the development of India is largely depending upon the development of rural areas but in the way of rural progress there are many challenges like poverty, unemployment, backwardness, illiteracy, low growth rate of agriculture etc. To achieve the evolution in rural areas in 1966, the green revolution had been started to solve the problems of farmers and increase the productivity of their lands but unfortunately, the green revolution further creates the
inequality among the farmers. There is a two-way synergy between three variables; they are economic growth, income poverty reduction and human capital formation. This two-way synergy produced by the employment creation. The employment is the basic and necessary step not only for generate income but also for raising the standard of living. The entire benefit of getting employment is distributed between the whole family which further increase the education level, health and consumption expenditure for all the family members. MGNREGS is a one of the biggest rural labour employment-schemes, which provides 100 days of work to rural people. It touches the social and economic life of rural people both in the way of direct or indirect. The main objectives of the current study are to evaluate the rural employment scheme among the rural beneficiaries of Sirsa district of Haryana with the help of multi-stage random sampling from 120 sampled beneficiaries’ household. Under MGNREGS in Sirsa District of Haryana in 2016-17, the major works are related to land development, water conservation and harvesting, canal works and river cleaning in which only safe drinking water and first aid facilities provided to the beneficiaries. The majority of the beneficiaries got work up to 40 days and only single household has been found from all sampled households who availed the 100 days of work under MGNREGS. The beneficiaries utilise their income earned from MGNREGS on food and non-food items. The conditions of timely wage payments have improved as compared to the previous years due to the proper paper work done by the accountant. In Sirsa district, majority of the women beneficiaries, they stated that this scheme changes their social and economic conditions by providing equal work and wages. Apart from this, beneficiaries stated that non-cooperative attitudes, political interference and lack of people participation are the major problems responsible for the poor implementation of MGNREGS. The other basic reason for the poor implementation of MGNREGS is lack of awareness about provisions of scheme because majority of the beneficiaries are either illiterate or having low level of education. For the further progress of MGNREGS, first of all government should create awareness among the rural people about the rules and regulations of this scheme and it should be connected to private works which further generated more work therefore the working days of the beneficiaries will be enhanced and with this, government also raised the level of worksite facilities and reduce the discrimination among the workers while providing the work.
TECHNICAL SESSION 3.10

India’s Experiments with Right to Work:
A Case of MGNREGA

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The contours and manifestations of social policy have been constantly debated in the global context. Social policy has been defined by Marshall and Boulding as “policy of governments with regard to action having a direct impact on the welfare of citizens, by providing them with services or income.” It forms the basis of a welfare state and there has been a lot of contestation about identification of different elements of this multi-dimensionality concept. Social policy is considered to be the one which utilises political power to supersede the effects of a free-functioning market so as to produce socially beneficial/welfare results rather than merely focussing on efficiency and growth outcomes. The notion has been conceptually complex owing to its political economy underpinnings and its inter-linkages with broader economic policy.

Much of the debate has focussed on outlining the boundary between social and economic policy. The inter-linkages between the social and economic policy are uncontested but social policy dominates the discussions regarding welfare. It is important to underline that an economic policy targeted at the welfare of the citizens of a country falls within the purview of a much broader social security framework that aims to provide for the basic needs of its citizens. Hence, for any economy, at any stage of social transformations, particularly in the global south, social policy is extremely important.

This paper focusses on right to work as a significant social policy and analyses the experience of the same in the context of India’s experiment through the National Rural Employment Guarantee Program 2005. Globally, countries have tried to address the issue of provision of ‘adequate and decent employment’ through varied experiments. These, in developed countries have largely come in the form of ‘rights at work’ through a plethora of labour laws or via provision of social security benefits in the form of unemployment allowances. The Indian experience is, thus, unique in this regard.

The right to work is an essential fundamental right enshrined in the Indian constitution. It is an important social policy because it aims to meet the broader welfare objectives of development; the right to work emphasizes economic, social and cultural development (Universal Declaration of Human Rights). It is a major ‘Active Labour market Policy’ targeting head-on the problem of ‘jobless growth’ and providing social security to the rural agrarian community without hampering the incentive structure for workers. This paper aims to critically analyse this social policy through the lens of the right to work. Existing literature suggests that this experiment has provided a feasible solution to alleviate a vast spectrum of challenges ranging from unemployment, rural-urban migration, inequalities in the ownership of assets across castes in India. The present literature also identifies this programme as crucial for the vulnerable groups particularly women; their participation rates in this program have been much higher than the national average. However, other problems regarding the quality of work and ‘decent work’ along with severe implementation issues have emerged. The analysis of this unique
policy experiment is, hence, essential particularly in the global south wherein such concerns are important impediments to growth and socio-economic welfare.

**Women’s Work in Sericulture: A Case Study of Two Villages in Karnataka**

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Sericulture is an important economic activity in India, given that India is the second largest producer of raw silk in the world after China. The leading states producing mulberry silk in India are Karnataka, Andhra Pradesh, West Bengal and Tamil Nadu. In fact, sericulture is also being promoted as a commercial, village-based industry by the government of Karnataka through loans for sericulturists, and a regulated market for cocoons. Sericulture is a suitable occupation for marginal and small farmers given relatively low investments, shorter production cycles compared to agriculture, higher assured prices, and high employment generation (Sarkar et al, 2017). In addition to being an important occupation in the rural regions of some states, sericulture is also a large employer of women, both as family labour in own production enterprises and as hired labour in large-scale enterprises.

Through primary data collected in two villages in Karnataka, the paper shows that sericulture is a home-based production activity, which is carried out by female members of the family to a large extent. However, the scale of production and thus women’s participation in it varies between the two villages belonging to different agro-ecological regions. Further, there are interesting class and caste intersectionalities in the sericulture practices in the villages, and there are distinct differences in the scale of sericulture between rich peasants and other socio-economic classes.

Going beyond women’s participation or self-employment, this paper tries to understand the schism between women’s participation in sericulture and how such participation translates to financial empowerment and agency in decision-making. For households that undertake sericulture, what control and agency do women exercise in the household enterprise? We try to understand women’s involvement in the major decisions on sericulture taken by the household, including decisions on production, purchase of inputs and sale of outputs. We also assess women’s access to and use of the incomes they receive from sericulture. We find in our paper that most women had almost no market interactions – whether for purchase of inputs or selling produce, in either village. They, however, have a fair idea of reasonable price for produce and profitability in production.

We have tried to explore the work participation and income generation from women’s self-employment in non-agricultural activities like sericulture. Given that sericulture is a home-based production activity with a significant use of family labour, how far are women from these households participating in important decision making. Through case studies in the study region, we try to understand the importance of factors such as years of schooling, age and caste in determining women’s role and participation in sericulture activities.
Expansion in Higher Education and Female Labour Market Outcome in Rural India

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In developing country like India, labour market plays a central role in determining economic and social progress. Since it has been observed that the labour market outcome is getting affected by numerous factors which is creating a potential mismatch in the labour market. Though, higher education has a great amount of influence on the labour productivity and it is also one of the major determinants in enhancing the labour market outcome. The expansion of higher education has been tremendous over past few decades. India, being one among the few fast-growing economies of the world and recognising the economic benefits of higher education, increased the allocation for higher education in the Eleventh Five Year Plan by nine-fold. This has led to a substantial increase in the population attending higher education institutions (HEIs), the number of HEIs, and private and public expenditure on higher education. The secular increase in education and schooling years has been accelerated by the recent expansion in tertiary education in a large number of countries, especially since the late 1980s to early 2000s.

This growth has not been even across countries and gender, nor has its impact on the composition of the labour force and on labour force participation (LFP) rates been uniform. Amongst the total population, women tend to be less often part of the active population, and if they are, they are more often found in low-pay and unstable positions. There are different factors leading to the low female labour force participation such as gender bias, school drop-outs, marriage and low wages in the labour market etc. A study highlights that Indian females suffer from low socio-economic status and labour market inequalities. The massive educational expansion has become a reason for the change in various institutions, its curriculum, stability in higher education; and the relationship between higher education and changes in labour market. The general thought regarding expansion of education is that it certainly leads to more skilled labour and increased productivity but it has a negative consequence too which interrupts the demand and supply in the labour market thus, affecting the employment situation. Studies have examined the relationship between the educational development and employment status in china and found that the educational development in terms of expansion of education and changes in educational structure has a positive effect on the employment.

The socio-economic groups and gender disparity are another major concern which affects the individual’s education level and also their employment status. It is a general scenario that socially dominating groups always gets a better chance at both getting education and also participating in the
Theme 3: Changing Pattern of Rural Labour Markets

labour market. Apparently, employment distribution is skewed in favour of the socially better off sections. A study has concluded that in case of Indian labour market the upper-caste Hindus have better employment status than the socially disadvantaged groups. Contrary to this, another group added that the returns on education are high for the socially disadvantaged groups. Nevertheless, the level of education in these disadvantaged sections are low due to less availability of schools in that particular region which results into not getting better opportunities in the labour market so, they go on opting for the self-engaging economic activities which increases the proportion of self-employment in marginalised social groups.

The relationship is circumstantially debatable; therefore, it leads to questioning the human capital theory that does higher educational expansion necessarily leads to a better female labour market outcome. As the labour market consequences of this expansion leads to the situation such as ‘over-supply’ of graduates and ‘skill mismatch’ which eventually diminishes the wage premium because employers have a wider range of similarly qualified people to choose from. The wage premium depends on the interaction of demand and supply. Moreover, for females the labour market scenario has always been partial in comparison to men also, in terms of employment status and earnings as well. So, there are concerns regarding the unproportionate growth between the level of education and the respective outcome of the female labour force participation. The present work tries to address the following research questions:

1. Does expansion of higher education increase the participation of female in labour market, and what is the nature of this participation?

2. Does expansion of higher education reduce gender wage discrimination or under what circumstances higher education play important role in female labour market return?

For this study, we have used NSS employment and unemployment unit level data for 1993-94, 2004-05, 2010-11 and 2016-17. We have used usual status method to measure the female labour force participation over period. The survey collected data on gainful and non-gainful activities undertaken by individuals and on wage earnings of employees during the seven days preceding the date of the survey. On a nation-wide basis, very few sources collect information on wages or on incomes accruing to workers. The IHDS data also provide these information’s, quality is still questionable. The analysis in this paper is restricted to adult males and females more than 15 years of age.

To estimate the rate of return to education separately for men and women in an unbiased fashion, we will employ the standard Mincerian semi-logarithmic earnings function to investigate the determinants of earnings, but we modify it to take account of the possibility of sample selection. To correct for the possibility of sample selection, we estimate selectivity corrected earnings functions using the Heckman two-step procedure.
Growth of Rural Non-Farm Employment in Punjab: Trends, Composition and Way Forward

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Development of non-farm sector and generation of employment in this sector becomes very essential when the growth of agricultural sector reaches its plateau in any economy. Prof. Lewis (1954) in his economic growth model suggested mobilisation of surplus labour from agricultural sector to urban based industrial sector but this has led to many other problems in urban areas. Whereas other economists like Mellor (1976), Vaidyanathan (1986) etc. suggests for the expansion of non-farm sector within rural areas to absorb this surplus labour. This paper argued that the growth in agriculture has not been utilised for the expansion of non-agriculture sector which is the main reason for distress in this sector. Agriculture sector of Punjab is still dominant with highest workforce but employment elasticity in the agriculture is negative. There paper addresses the significance of rural non-farm activities in Punjab with two objectives: First, what are the trends, composition and growth rate of these non-farm activities in the state? Second, what is the extent of gender disparities in workforce participation rate in this sector?

From the analysis it has been found that growth and development of rural non-farm sector and creation of employment in this sector can be a remedial measure for rural economy of Punjab which is facing severe crises at present. As data reveals that Punjab’s rural work force intended to get out from agriculture sector from last two decade and there is a need to provide opportunities for them in non-agricultural sector. It has also been found that majority of rural non-farm workforce is engaged in construction and efforts should be made to expand and widen this composition through establishing agro-based small scale industries in rural areas. Diversification of agriculture will work into two ways on one hand agriculture will provide raw material to industries like that of jams.pickle/Juices/Papers/Squashes and on the other hand it will also create jobs for rural workers. Existence of high gender disparities which consequently, result largely marginalisation of women from rural employment is a serious matter of concern in the state. Findings reveal that women participation in non-farm sector is quite low as compared to that of their male counterpart parts. While their participation in manufacturing, construction and other service sector activities is significant, this also reveals that women are capable enough to adjust themselves in all emerging non-agricultural activities. As females are insensitive towards agriculture work, they should be oriented towards secondary and tertiary sectors. For this, there is a need to set up educational, health and other service sector related activities in the rural areas.

In the end it is worth mentioning that non-farm sector can be a panacea for revival of economy of Punjab and its diversification. Overall increasing proportion of non-agriculture employment in the state is a good sign for diversification of the rural economy. Inclusive development of non-farm sector should be ensured with proper planning and it can be helpful for prosperity of rural economy.
of Punjab. As this study dealt with trends, composition, growth and gender inequality in rural non-farm sector of Punjab, separate study is needed to examines whether these activities are productive and providing quality employment in the state or not.

**Causes and Consequences of Rural-Urban Migration: Findings from Field Experience of Punjab**

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The study showed that rural-urban migration in Punjab has been influenced by many “push” and “pull” factors along with individuals’ demographic (age, gender, etc.), risk-bearing capacity, education level, work competencies/skills, etc. It also revealed that mostly young, educated and skilled workers from the poor/backward rural regions went for out-migration. This study tried to capture various ‘push’ and ‘pull’ factors by allowing the sampled migrants to state multiple responses. Among the push factors, the data showed two most dominant causes of rural-urban migration in Punjab – first is the ‘poverty (unable to feed self and family including mounting family debt)’ that cornered 46.88% responses; and second is the ‘lack of income/employment opportunities (including lack/loss of employment)’ that pushed them to the urban areas stated by 44.49% responses. ‘Forced shifting (due to communal tensions/riots/caste conflict/escaping from social stigma)’ was cited as a cause of migration by just 4.78% migrant responses. ‘Dislike for agricultural work or no/less agriculture land/low agricultural income’ as a cause of migration was stated by just 3.58% migrant responses. Just a tiny proportion (0.28%) of migrant responses stated that ‘displacement from the previous occupation/residence due to the natural disasters’ was the real cause of their migration.

Among the pull factors, the analysis clearly found many dominant causes of migration. First, 39.25% responses (35.78% responses among the self-employed migrants compared to 43.07% responses among the salaried/wage earner migrants) revealed that migrants preferred to move present places for better employment/income opportunities (including enhancing/upgrading living standards). Second, 28.90% responses (32.50% responses among the self-employed migrants and 24.95% responses among the salaried/wage earner migrants) stated that they preferred to migrate in urban Punjab for fulfilling desire for own/children’ advancement. Third, 18.05% responses (16.83% among the self-employed category and 19.40% among the salaried/wage earner category) stated that they came here by accompanying family member/s (including marriage, etc). Fourth, little more than one-tenth responses (10.24% overall; 11.41 percent among the self-employed category and 8.96% among the salaried/wage earner category) went for ‘in search of better education of own/children’. ‘For independence from family/attraction of urban amenities of life’ was a cause of migration for just 3.04% of migrants’ responses (3.48% among the self-employed category and 2.56% among the salaried/wage earner category). Just 0.51% responses of migrants came here to ‘help/provide care for immediate family member/relatives/friends at destination’.

Average per household income/earnings of sampled migrants showed wide variations by type of employment and occupation/work. For instance, in the case of self-employed, per household monthly earnings were the highest among the professionals – doctors, lawyers, etc. (Rs. 35,143), followed by
owners of business (Rs. 25,871), owned taxi operators (Rs. 19,862), independent mechanics (Rs. 17,333), office workers - typist, operator, etc., (Rs. 16,280), shopkeepers (Rs. 15,643), own auto operators (15,474), tailoring/stitching (Rs. 13,194), own construction work (Rs. 12,947), street vending (Rs. 11,284), hair cutting/making services (Rs. 10,604), own cycle rickshaw (Rs. 9,767), loading/re-loading work (Rs. 9,808), cleaning/sweeping (Rs. 8,786), and cobbler (Rs. 8,591). In the case of salaried/wage earners, per household monthly earnings were the highest among the professionals – doctors, lawyers, etc. (Rs. 39,250), followed by office workers (Rs. 17,780), transport workers (Rs. 13,019), salesman at shops (Rs. 12,423), domestic workers (Rs. 12,148), repair shop workers (Rs. 12,108), construction workers (11,081), factory workers (Rs. 10,554), hotel-cum-restaurant workers (Rs. 10,392), helpers/attendants (Rs. 9,638), and loaders/de-loaders (Rs. 9,223).

Counting the select social security benefits enjoyed by these migrants, a bitter picture emerged as 8.80% migrants enjoyed EPF/CPF benefits, 6% migrants accessed ESIC benefits, and 0.02% migrants had protection from occupational hazard/risk work. Further, 7.08% migrants in the self-employing group and 38.85% migrants in the salaried/wage earners observed weekly-off days. A very low proportion of salaried/wage earner migrants enjoyed other kinds of leaves – casual leaves (8.20%), medical leave (19.62%) and earned/maternity leave (13.40 percent). Interestingly, more than two-fourth migrants (54.60%) admitted receiving extra payments whenever they did extra work.

Regarding the remittances, 61.20% migrants (50.42% among the self-employed and 11.15% among the salaried/wage earners) were found to be sending remittances at home during the last one year preceding the survey. Regarding the amount of remittances, the field data revealed that per household remittances varied greatly across different types of occupations and state of origin of migrants. Per household remittances sent back homes by the migrants belonged to Punjab state vs. other states showed much variation. For instance, a self-employed migrant belonged to Punjab state remitted Rs. 5,187 per household compared to Rs. 4,735 per household sent by a self-employed migrant of other states. Similarly, a salary/wage earner migrant household belonged to Punjab state remitted Rs. 6,215 per household compared to Rs. 4,429 per household sent by a salaried/wage earner migrant belonged to other states.

Social Networks, Memberships, and Occupational Mobility in India: Findings from Indian Human Development Survey (IHDS) 2011-12 Data

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Economic growth and distribution are critical concerns for policy makers. Distribution of income is usually measured using inequality coefficients like Gini coefficient. Though current inequality might be of serious concern, future income inequality is reflected by the level of mobility in the current period. The mobility across the dimensions of income, occupation, and education are of importance to the policymakers. This study investigates the extent of intergenerational occupational mobility among households in India using a large-scale nationally representative survey data. The study estimates the
influence of demographic factors (age, gender, caste, education), location of the household (urban or rural type of areas), economic status of the household (whether a household is BPL or not) and social network variables (whether the household has a contact in various social networks and memberships of the household members in some different social groups) on inter-generational occupational mobility. The study particularly explores the impact of social networks and membership groups/associations on intergenerational occupational mobility.

The analysis is based on Indian Household Development Survey (IHDS) data conducted at all India level (2011-2012), collected by NCAER and University of Maryland, USA. We consider the sample of data that contains household heads in the age range of 20 to 65 years. This comes to a sample that comprises of 31,559 households with information of occupation of household head and the father of the household head. For the analysis, we updated the National classification of occupation (NCO) 1968 codes to NCO 2004-05 to reflect the appropriate occupational categories. Ninety-nine NCO 2004-05 occupational codes were then submerged into broad seven hierarchical categories of occupations: elementary activities (1), agricultural labour (2), lower status jobs (3) and higher status jobs (4), farmers (5), clericals (6) and professionals (7). Higher values of the occupational categories are associated with higher standing on the social status. We model intergenerational occupational mobility as the transition of the occupation of the household head from that of his/her father. An upward mobility would mean moving up the occupational status and downward would mean moving down the occupational status from his/her father. We use multinomial logit to model mobility.

We find that all levels of education of the household head are positively associated with mobility and is statistically significant at 1% level of significance, son with one higher level of education increases their chances of upward mobility by 7%. Being a BPL household decreases the chances of upward mobility by 4%, significant at 5% level of significance. As compared to male-headed households, female household heads have 28% higher probability of upward mobility, significant at 1% level of significance. Households belonging to OBC and SC categories are more likely to move upward in occupational ladder compared to their fathers. Age of household head does not affect occupational mobility. Upward mobility is prominent in case of eastern regions of India as compared to northern states. Households with higher assets level in terms of wealth affect their investment in their children’s education and upbringing and further leads to chances of upward mobility employing in better occupations by 9% as compared to the households with less or no wealth.

Comparative Assessment of Female Labour Force Participation between High and Less Developed Districts of Himachal Pradesh

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The economic analysis of Female Labour Force Participation has attracted noteworthy attention since the ground-breaking work on labour in the 1960s. The contribution of woman in economic activities now has become the burning topic of interest among the galaxy of researchers and analysts for the
formulation of policies in the developing economies. Within India, the state of Himachal Pradesh has carved out separate niche for itself in development discourse due to its impressive performance over the years. Over the years, Himachal Pradesh has made great strides in reducing extreme poverty within a generation while at the same time-sharing the endeavours of the prosperity even with disadvantaged group (i.e. women’s) who were historically left behind. It has emerged as one of the states which has achieved remarkable growth, especially in the last two decades, which has been accompanied by best human development outcomes in India. The main objective of the present paper is to examine the comparative scenario of female labour force participation between the high developed and less developed districts of Himachal Pradesh. Firstly, we will give an overview of the labour force participation scenario in Himachal Pradesh from 1983 to until 2011 and after that attempt has been made to through the light on the comparative assessment of female labour force participation between high developed and less developed districts of Himachal Pradesh. For the rationale of appraising the female labour force participation of highly developed and less developed districts, we have engrossed the F-test and T-test for the empirical investigation of data. The findings of the study show that there was statistically significant mean difference between rural and urban areas of highly developed districts regarding cultivators, and there were no significant mean differences between rural and urban areas of high per capita income regarding total female workers, agricultural labourers, household industry and other workers. While, there were significant mean differences between rural and urban areas of less per capita income regarding total female workers, cultivators, agricultural labourers, household industry and other workers.

**Status of Women Agricultural Workers in India: Potential and Challenges**

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In the agricultural labour market in India, women do a large share of the work, but from a subaltern position – without fair access to income, land rights, or even decision-making authority – that reflects structural issues of society. This is a feminisation of agricultural ‘labour’, rather than feminisation of the agricultural management. Women’s participation in agricultural labour is higher (higher than male workers), and their economic status and overall quality of life have improved, but that has not improved their capacity to bargain or make farm management decisions. Policymakers should aim to further such participation, but farmers’ income may not have any influence on the welfare of women agricultural workers. If farming in India is to thrive and provide its farmers fulfilling lives and citizens affordable food, these concerns need to be addressed.

In considering these questions it is important to note that for many rural people in India there is no easy way to make a living. Rising overheads and natural disasters, such as drought and crop diseases, make it increasingly difficult for smallholders to make profit, but the non-farm sector offers
opportunities only to those with advanced education or ‘good connections’. Men are increasingly leaving their villages to look for better paying jobs in cities, but the work they find is rarely secure or long-term, and they shuttle between non-agricultural informal employment and agricultural labour. In their absence women step in to perform agricultural work. The impact of this ‘feminisation’ on the social and economic organisation of rural India is assessed through this discussion of the changing aspirations of rural women and their perception of livelihood options.

An important concept that the study finds is the need to redefine activities. There is ample discussion in of the unpaid labour of women in the literature, but ‘women as helper’ is a concept that needs to be considered carefully while reporting sex-wise activity status on the field. A particular work or activity has various sub-activities or sub-components, performed mainly by women. Women perform most farm and non-farm tasks, but this is completely overlooked. One particular activity on the field or in non-farm activities has many layers; if these are not considered carefully, the coding of ‘activity status’ is gendered.

Livestock as an occupation, especially dairy farming in Gujarat, appeared as one of the major sources of income for women, however control over income from dairy is minimal among women. While their work in dairy activities is exhaustive, but as the money is collected by men prohibits their control over dairy income. The institutional-level support in the form of dairy cooperatives enhances dairy farming in Gujarat and seems to improve women’s income. However, in West Bengal women reported to have better control over the income but the share of the income from animal raring is insignificant.

Around one-third of the women reported that they would not like to be associated with farming anymore. Policies need to focus on empowering those women, especially with other non-farm activities. This study finds that the aspirations of women farmers are changing – they want to explore non-farm, home-based activities apart from farming. They spoke of their interests and capabilities in activities such as starting small businesses and preparing and selling home-based packaged food products, but they need to find a sustainable market for their products.

Despite this gloomy picture, however, gender relations are not static; they change along with economic and social conditions, and in this there may be room for optimism. Education has had a positive impact in equipping women to contribute to decision-making within the household and men to recognise the value of women’s work and their right to pursue their own interests and desires. The agricultural work undertaken by women in many households has earned them the sincere respect of their family and community. In rural India making major decisions about income and farm business is still widely believed to lie in the male domain, but this study suggests that some were becoming more involved and/or informed in this aspect of life. The findings of this study are relevant for policymakers looking to improve the well-being of rural women in India. Although this study is one among many that consider women and their contribution to Indian agriculture, its focus on the country’s subjugated voices makes for a timely contribution to the existing literature.
MGNREGS, Sustainable Development, Financial Inclusion and Poverty Reduction

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The purpose of a historic social welfare programme or public policy initiative like MGNREGS was to bring revolutionary changes in the face of rural economy. Apart from employment generation it has multiple impacts. The purpose of this paper is to study the different dimension of secondary impact of MGNREGS. MGNREGS is effective in creating public assets. The purpose of this paper is to judge the relation between the assets generated by MGNREGS with food grain production and assess the sustainability of the scheme. Simultaneously, we are judging the financially inclusive character of the scheme and its effectiveness in reducing poverty. The entire study is based on secondary data and which is cross sectional in nature and is varying over time. The data are collected from different official sources. The study is based on 17 states across India and the time period is varying from 2008-09 to 2016-17. A panel regression model is formed to judge the sustainability of the scheme and along with that graphical studies are done to analyse the financially inclusive character of the scheme and its effectiveness in reducing poverty. In order to do the panel regression, we consider the following variables- food grain production is considered as a dependent variable, while material expenditure incurred in MGNREGS, MGNREGS wage and cropping intensity (percentage) are considered as an independent variable. The result of the regression shows that all the independent variables are statistically significant in nature and the entire model is also statistically significant at 5% level of significance. The result of the panel regression model shows that the assets generated by MGNGRES has a complementary relation with food grain production and therefore the scheme is sustainable in long run. The nature of assets generated by MGNREGS is being displayed graphically. It also shows the conducive relation of the assets generated by MGNREGS and food grain production. The list of permissible works within the framework of MGNREGS included -micro irrigation, water conservation and harvesting, drought proofing, works on individual land, rural connectivity, renovation of traditional water bodies, land development etc. The figure of food grain production is clearly displaying a steadily increasing trend in the post MGNREGS phase. MGNREGS has also increased the wage rate of male and female labourer participating in the agricultural sector. Thus, it is effective in rationalising the wage rate prevailing in the agricultural sector and reducing the gender disparity of wage in the agricultural sector. MGNREGS made it mandatory for all the beneficiaries to open either a bank account or a post office account. The figure shows that over the years significant number of populations do have a either bank account or a post office account. So MGNREGS is effective in making a sizeable number of rural populations as an integral part of institutional financial system. Apart from that the scheme is effective in reducing rural poverty. The figure is clearly displaying that trend in the post MGNREGS phase. The paper can be effective in assessing the utility of such a huge scheme by considering the different dimensions of it. It is clearly reflected in our study that MGNREGS has the potential in transforming the rural economy in totality.
Structure Changes in Rural Labour Market in Assam: Does it Ensure Well-being or Indicative of a Crisis Ridden Economy?

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Every individual in a society looks forward to productive, decent, and sustainable livelihood. One of the key challenges that Indian as well as economy faces today is to provide decent and sustainable jobs to its rising labour force. High economic growth however failed to generate momentous impact towards generation of sustainable livelihood in rural areas as the agriculture sector is already overcrowded and strained. This has pushed a large section of people into distress situation. Data reveal that other than the services sector, the percentage contribution of agriculture and allied activities (agriculture, forestry, fishing, mining and quarrying) and industry sector is more or less static. There is scope to believe that the shift to a large extent for jobs in urban areas as a survival or subsistence strategy. Thus, a large part of the increasing labour force is getting absorbed in non-agriculture activities. In many contexts the shift to non-agriculture jobs is a short-term measure and primarily to supplement household income. Rural labour market has shown sign of a deepening crisis with increasing underemployment and disguised employment especially in agricultural activities. The result is shift of people to non-agriculture sectors even to distant places in informal activities. But, most of the non-farm activities are comes under unorganised sector both in India and Assam. Although, the economy of Assam is predominantly agrarian, rural non-agriculture-based practices are not new in the state. In spite of the huge potentiality of the non-agricultural activities for creation of gainful employment in the state the sector was not able to generate enough employment opportunities for the growing labour force in the State. Traditional livelihood practices have become increasingly unsustainable; people having such occupations now have turned into wage-earner. Moreover, relatively higher share of rural women workforce in agricultural activities in the state also reflects women substitutes’ man over their previous agricultural employment (feminisation of the agriculture sector). Here, assumptions can be made that as male workforce has left agricultural activities, female household members choose to engage themselves with agriculture activities as opportunity costs of not engaging in agriculture activities is high in a situation where there are little alternatives to get engaged in activities of their choices. Such engagement may occur under constrained situation and could be termed ‘feminisation out of compulsion’. So, the question is whether shift to non-agriculture activities ensure well-being to the rural poor and to what extent the shift to the non-agriculture sectors – rural as well as in urban areas help to ensure a living which is productive, decent and sustainable; and if not, what are the underlying factors?

Thus, distress in rural Assam is not only caused by changed structure of agriculture sector; precarious and unorganised non-farm activities also contribute in deepening the crisis to a significant extent. The growing de-peasantisation, rising casualisation and marginalisation in both agriculture and non-agriculture activities results in catastrophe in their livelihood. Studies reveal several factors that are contributing to the agrarian distress in the states in India; the determinants are not only natural, but are complex sets of policy and regulatory factors. To pull out the people from such complex and vulnerable situation, emphasis must be put on to enhance their capability along with the protection of traditional livelihood systems of rural people in the state.
Remittances and Small Enterprises in Backward Region

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Remittances sent by migrant workers to support their household members left behind are especially an important source of financial support for many families in backward regions. Further, it is seen that while a very large proportion of remittances is spent on consumption, a very small proportion is also saved or used for productive investments. A heavy out migration of Hyderabad-Karnataka region is rooted in complex socio-economic factors. This region in comparison to other regions of Karnataka state remained rural and backward area in character. The development of irrigation projects and industries to absorb increasing population is not up to the mark. The result is that people are mainly poor and have moved out for livelihood purpose. The migrant living in big cities send home some money for his family members. This financial assistance or remittance is used for the development of petty or small business/enterprises in villages by the migrant families. The information regarding the use of remittances for the small business/enterprise’s development was collected from the migrant’s households in rural areas of Hyderabad- Karnataka region. For this, 46 migrant households from Yadgir district and 99 migrant households from Gulbarga district were interviewed. Thus, total sample size comes to 145 migrant households in Hyderabad-Karnataka region.

It has been brought to light from study results that 24.14% migrant households started ‘kirana shop’ out of the remittances. Followed this, 13.10% migrant households each started ‘pan shop’ and ‘jeep/car/auto rickshaw’ on rent, 9.66% migrant households each have opened ‘mobile and accessories services’ and “flour mills”. It is observed from the study that 40.69% ‘brother/sister’ of migrants involved in business/entrepreneurial activities. Followed this, 38.62% ‘head’ of the (he/she) migrant households are running business/entrepreneurial activities. There is evidence from the study findings that 48.28% migrant households invested Rs. 30,001 to 40,000 followed by 36.55% migrant households invested Rs. 20,001 to 30,000 as to start business/enterprises. Migrant households who have invested Rs. 10,001 to 20,000 constitute 11.03%. Further, the study results exhibit that majority 88.97% migrant households were able to earn up to Rs. 5,000 per month due to business/enterprises activities. Whereas, these activities contributed additional income Rs. 5001 to 10,000 per month in case of 8.97% migrant households and more than Rs. 20,000 in case of 2.06% migrant households. As observed from study, it is found that majority 86.90% migrant households stated that ‘to find jobs for members of the family’ within/outside the village was the main reason to establish business / enterprises out of remittances received from the migrants. Thus, migrant households at native place are involved in small trading/enterprises which increased their household earnings and created job opportunities to family members.
TECHNICAL SESSION 3.11

Changes in Lifestyle of MGNREGS Workers in Peravurani Block, Tamil Nadu

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The Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) is an important segment of Indian rural economy. It is one of the rural development-programmes implemented by the Government of India. The rural development programmers intend to reduce the poverty and such as food, shelter and clothing of the rural population. The government of India has taken various steps to reduce rural poverty in India such as Small Farmer Development Programmes, Droughts Area Development Programmes and Food for Work Programme, Minimum Needs Programmes, Rural Labour Employment Programmes, Integrated Rural Development Programmes, National Rural Employment programmes and Assurance on employment etc. The MGNREG programme main aims at enhancing livelihood security of households in rural areas of the country by providing at least one hundred days of guaranteed wage employment in a financial year to every household whose adult members volunteer to do unskilled manual work. The National Rural Employment Guarantee Act (NREGA) was notified in 200 districts in the first phase with effect from 2nd February, 2006 and then extended to additional 130 Districts in the financial year 2007-2008 (113 Districts were notified with effect from April 1st 2007, and 17 districts in UP were notified with effect from May 15th 2007). The remaining districts have been notified under the MGNREGP with effect from April 1, 2008. Thus, MGNREGP covers the entire country with the exception of districts that have a hundred percent urban population. As on August 2019, 691 districts covered all over India under this scheme for generation of rural employment. Totally, about 26 crore workers are benefited under the MGNREGS. Totally, about 26 crores workers are benefited under the MGNREGS. The MGNREGS in Tamil Nadu, the scheme was launched on 02.20.2006 and was initially implemented in six districts. Viz., Cuddalore, Dindigul, Nagapattinam, Sivagangai, Tiruvannamalai and Villupuram from 02.02.2006 onward and in four more districts viz. Thanjavur, Tiruvarur, Tirunelveli and Karur from 01.04.2007 onwards. From April 1, 2008 onwards, scheme was extended to the remaining twenty districts of the state which are; Ariyalur, Dharmapuri, Perambalur, Pudukottai, Ramanathapuram, Namakkal, Vellore, Thoothukudi, Virudhunagar, Selam, Erode, Tiruchirappalli, Kancheepuram, Theni, Tiruvallur, Madurai, Nilgiris, Kanyakumari, Combatore, Krishnagiri and Tiruppur. As in July 2019, 31 districts are covered in the MGNREGS. Under this scheme, beneficiaries in the state are 1.22 crore rural workers. This paper analyses the changes in lifestyle of MGNREGS workers in Peravurani Block of Tamil Nadu. In this study, life style
refers to standard of living, expenditure pattern, pattern of children education, health treatment and economic conditions. This study used both primary and secondary data, for analytical purpose. The researcher collected primary information from the three panchayats in Peravurani Block. Total register workers of these panchayats, were 2363. From which, 100 workers were selected through the systematic random sampling method. Finally, the primary data were collected from the 100 MNGREGS workers with help of structured interview schedule. The study had also used secondary data, collected from Panchayat office, Population census report, published materials like journals, newspapers, Books etc.

**Discriminatory Rural Labour Market: Reality Check in the Varanasi District of Eastern Uttar Pradesh**

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India has witnessed an impressive GDP growth rate of over 6% since the 1980s. Growth has been particularly rapid since the post-reform period of the 1990s. This high growth has contributed to a sustained increase in per capita income and a decline in absolute poverty, as also a modest improvement in the standard of living. However, this rapid economic growth has not significantly transformed the labour market and employment conditions in the country. While the improvement in employment conditions has been rather modest, the traditional low-productive employment continues to be a dominant feature of the economy. The overwhelming majority of workers are still engaged in informal and low-paid jobs. Moreover, the female participation in the labour market has been quite low, as reflected by a declining trend over the years from 1983 to 2011-12. The Indian labour market is constituted by features like high unemployment and under-employment rate. This feature is unevenly distributed across different socio-religious groups as lower castes and females are more likely to be suffering from lower economic participation. The labour market outcomes of economic systems should be studied in the context of the development experience of that economy.

The issue of labour market discrimination has also received less attention in mainstream discourse on labour studies in India. The differences in the wage determination process in the public and private sectors may result in earning differentials across socio-religious groups. Given such a situation, an individual calculates the expected lifetime earnings and when non-monetary returns being equal, he/she has an option to choose between the public and private sectors depending on which sector yields a net advantage. With the preview of the above background the present paper tries to study labour market discrimination and poverty issues in the two villages of Varanasi in Eastern Uttar Pradesh in India.

The findings of the study make clear that, the average daily wage for all type work of SC is less than Upper Caste. The difference in the average wage earning among the social groups for same types of work may be the case of discrimination and poverty. The study also shows the difference in the average wage earnings among the people living above the poverty line and below the poverty line. Result shows that the lower caste people are not getting equal opportunity in the labour market,
which seems a serious issue. Policy makers should frame an appropriate plan to address this issue and work for indiscrimination in the labour market and job creation in the rural areas.

The findings make clear that, the average daily wage for all type work of SC is less than Upper Caste. The less average wage for same work shows discrimination. As we have seen the average wage of above poverty line people is higher than the people who live below poverty line. We found the same trend for female in the study area. Hence, our hypothetical statement ‘Lower caste and female workers suffer from wage discrimination in labour market and are the reason for poverty’ is applicable in the study area.

**Low Employment Opportunities for Women:**
**A Case Study From 3 Districts of Odisha**

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Women’s share in the labour market is less as compared to men in India as well as in the world. It is less than one-third of the total labour force. An individual’s participation in the economic activities increases his/her status in the household and also in the society. Women as a group fail to get this opportunity. Often the labour market inequalities are explained with lower access to resources by females, i.e. due to the lack of adequate/equal opportunities, skill, and education females are left behind their male counterparts. The feminist economist frame work, consider that the gender inequality outcomes are not due to individual labour/employer’s choices or ignorance or prejudice; rather it is structured into market forces by discriminatory practices inherited from the past and by the bargaining power exercised by the powerful market actor (with asset) to pursue his interest.

Though studies revealing lower female work participation rates (FWPR) in India are numerous, but the analysis of the same using feminist economist model is very few in number. This paper tries to fill up this gap; for this it takes a study from Odisha. As relevant secondary data are not available, it has collected data from sample households of three districts, Jharsuguda, Cuttack & Kalahandi. A sample size of 50, from urban areas in each district is taken; from the Jharsuguda, Cuttack and Bhawanipatna Towns. Hence, in total 150 households constitute our data source.

The paper tries to find out the barriers to female entry into the labour market. It finds that there are certain occupations which are male dominated (ex- Engineer, Doctor, Business, and Clerk) and some female dominated (ex- Maid, Beautician, Teacher). The male dominated occupations require greater skill, training and educational facilities. The low education status of female compared to male reduces her ability to participate in the male dominated occupations. The families invest huge amount of resources for male’s education because the returns are higher from it. But when the question comes to female’s education the families neglect because there are no returns from it. Despite being educated the greater household work burden including care activities reduces her time to participate in paid activities, because of which she remains out of the labour market. Further, her participation in paid activities should be in consultation with her husband or the elder member of the family, who impose
restrictions on the movement of her, the type of work in which she should engage herself, the time of work, and place of work depending on the status of the family. The decision of the families regarding female employment depends on the society, which categorises the jobs as ‘good jobs’ and ‘bad jobs’, it divides the duties between male and female within the household. The existing society is shaped by the culture. Three districts have different types of culture existing and the paper further finds that how cultural differences affect society’s mindset towards female employment.

**The Women-Owned Informal Enterprises in India: Performance, Condition and Challenges: An Overall Picture from NSS 73rd Round Database**

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In the last few decades, almost all developing countries are giving special importance to the ‘inclusive growth’ strategy to counter the problem of unemployment and chronic poverty in the economy. However, inclusiveness in every aspect is important to achieve far-reaching development. Along with caste and religion, gender is also a very important component of society. Despite a widespread concern regarding inclusive growth, a large number of the women labour force are still being ‘out of the shadows’ from the ‘sphere of the job market’. That unpaid female working force are contributing a major role in the economy but they are not even counted as a part of the labour force. In most of the cases, it has seen that, officially, the women family members are even encouraged to hold the ownership of the informal enterprises but in reality, they work as the subordinate of the male counterpart. Despite the ownership, those women segment has no command on major decision-making. Although an ample amount of the researches has already been done about the performance and characteristics of the informal sector in India, the condition and the position of the women owned enterprises is still an open question. In this study, we are trying to portray the condition of the women owned enterprises in Indian context from NSS 73rd round Unit level Database. More precisely, we are trying to examine the performance of those enterprises, which are led by women. However, from the latest database (period 2015-16), the proportion of the women owned enterprises is significantly lower than its men counterpart. In the Informal sector, there is huge heterogeneity across sectors, products, location of the firm and so on. Due to that heterogeneous nature, there are many socio-political-economic factors responsible for these kinds of poor results. Even it has also observed that the expansion of women owned enterprises are very much restricted. Due to social barriers, most of the women are unable to expand their production units. In most of the cases, they are operating their units within the households with the help of the family members only. Sometimes, the women member of the family promoted for the ownership by the male member to opt for some special government facilities/schemes. From the standpoint of the inclusive growth, this study would be going to be a very useful contribution to the literature of the informal sector. Despite a vast representation, we failed to cover some basic ground level reality, due to insufficient time i.e. why these firms are not flourishing properly? Why they are relatively weaker for competing the formal firms as well as male owned informal firms? What are the
social and institutional barriers for the firm’s expansion and integration? In addition to that, towards the end of the paper, there are some open and unanswered questions, which could lead to further enquiries.

**Changing Structure of Rural Employment in Bihar: Issues and Challenges**

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The structure of economic growth is a key factor facilitating the structural transformation of the economy with respect to output and employment both as it happened in the developmental experience of developed economies. This is, however, not true for the present developing countries and similar is the situation in India. The service sector has by-passed in its contribution to the national income while major work force remains employed in the agriculture sector.

Bihar, being the heart of the country, Indian prosperity is related to Bihar’s prosperity. Therefore, the present paper is focused on studying the situation of a Bihar on its journey of structural transformation in post-bifurcation period with special reference to the annual report of Periodic Labour Force Survey (PLFS) 2017-18. The broad objective of the paper is to understand the employment scenario and whether the employment is following the established pattern of transformation. Precisely, the present study is an attempt to understand the pattern of structural transformation in Bihar and employment dimension particularly in rural areas. The study focuses on the Bihar economy post-bifurcation.

This study is important because not only has Bihar’s economy changed, but there have been changes in its growth prospects as well. According to the latest Periodic Labour Force Survey (2017-18), unemployment rate has reached to more than seven percent, revealing an increase of nearly 3.5% from 68th NSSO round of Employment and Unemployment. Overall, LFPR has fallen for both male and female while females are withdrawing from the labour market at a much faster rate. In terms of structural transformation, the findings reveal that there is a shift away from agriculture in states GSDP while the workforce remain stagnated in the farm sector, clearly the non-farm sector was unable to draw people out of agriculture. Among the non-farm sector, the constituents of secondary sector that contributed most in the states GSDP had not generated employment while construction that generated most employment showed a negative contribution to GSDP. Similarly, the tertiary sector that contributed most in the states GSDP were unable to attract work force up to the same level.

Since Bihar is mostly rural, the paper is an attempt to analyse employment pattern focusing on rural areas as an improvement in employment opportunities in rural areas would help in reducing unemployment in the urban areas. One of the main observations is that the female participation in labour market is much lower than the male. Further, agriculture is the main sector that employs rural female workforce while non-farm sector is dominated by male workforce. Thus, the paper strongly suggests policy initiative to make rural female join the economic activity in the village particularly non-farm sector that would require vocational and basic skills training to female in rural areas enabling them to find employment in rural non-farm sector. To sum up, the need is not merely to increase labour
force participation, but to emphasise on rural labour market particularly rural female labour force and provide opportunities for decent work that will, in turn, contribute not only in empowering rural females or rural unemployment but would lead to the overall economic progress of Bihar.

Soil Erosion by River Brahmaputra and its Impact on Rural Labour Market: An Assessment of Morigaon District of Assam

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Soil erosion by rivers is causing lots of problems across the world. The river-bank erosion is displacing the people from their inhabitants and from the occupation. It has both economic and social consequences. This soil erosion took away the livelihood of people by evacuating agricultural lands and homesteads. They are forced to migrate to other places due to which they suffer from economic crisis, namely loss of occupation and loss of property. They are at the risk of poverty and sometimes involvement in criminal activities. The river-bank erosion is a worldwide phenomenon which is witnessed in all major rivers. But in terms of devastation the prominent ones are the Brahmaputra, Ganges and Mekong Rivers of Asia, the Mississippi-Missouri River System of North America, Amazon River of South America and the Nile of Africa. However, in terms of the number of people affected from river bank erosion the Brahmaputra comes first. The estimate done by Water Resource Department of Assam showed that the state has lost 7.4% of its total land due to bank erosion by Brahmaputra. The Brahmaputra had covered an area of 3870 sq. km. in the period 1912-28 when first surveyed. By eroding its banks, the Brahmaputra has increased its occupied area by 57% to 6080 sq. km. in 2006. It eroded its banks at the rate of 80 sq. km. per year which wiped out 2500 villages completely and affected five crore people. In the five-year period itself, between 2010 and 2015, the Brahmaputra had completely washed away 880 villages, partially eroded 67 villages and making 36,981 families homeless.

The Morigaon district is situated in the middle of Assam. The entire north boundary of the district is covered by river Brahmaputra. But the river is shifting towards south. As a result, the river is causing large-scale bank erosion in the last four decades, particularly after the construction of Kaliabhomora Bridge on the Brahmaputra in the year 1981. Soil erosion severely affected the three river adjacent revenue circles, namely Bhuragaon, Laharighat and Mayong. As per data of the District Revenue Department, Morigaon in the year 2001 the Brahmaputra had eroded completely 56 revenue villages in the three circles while 37 revenue villages were partially eroded. But in 2010 the number of completely eroded villages rises to 67. The government of India revealed in the parliament in 2019 that as many as 18,425 people have become landless in Morigaon district in last five years due to soil erosion. The victims of the Brahmaputra river-bank erosion have to migrate to other parts of the district, state or even to Dimapur of Nagaland to settle down. They settled down in river embankments, reserve forests, government lands. Few settle down in other villages and marginal areas of towns by purchasing cheap private lands. After losing the original occupation they have to become landless manual labours,
construction labours, rickshaw pullers, agricultural labours etc. Few people move to as far as Kerala, Gujarat and even to Dubai in search of jobs.

The objective of the present study is to analyse the impact of soil erosion by river Brahmaputra on rural labour market of Morigaon district of Assam. To achieve the objective the present study is based on descriptive analysis method.

The major findings of the study are:

i. 15.5 % of villages of the district is already eroded by the River Brahmaputra.

ii. After losing the property and agricultural land rich farmers become landless manual labour.

iii. Supply of labour increases suddenly in a particular area which put pressure on the existing labours.

iv. Education of the children affected due to erosion as the people have to migrate to another place. The children are forced to enter into the labour market by giving up studies. It has the impact on long run productivity. Their scope for future development stops.

v. River bank erosion raises the demand for lands in erosion free areas which induces the people to sell their lands in lure of higher price. After selling lands these people refrain from labour market for quite few times.

Religion and Women’s Work in India

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The doctrine of secularisation theories implies reduction in the influence of religious beliefs upon the different aspects of social life with the occurrence of modernisation and improvement in the level of education. However, it is seen that the acceptance of women’s participation in paid work differ across the religious communities. Therefore, it is interesting to consider the influence borne by the affiliation to a religious community upon the work participation of women. Our analysis concluded continuous deterioration in the rate of work force participation for the females (rural and urban combined) across all the religious groups throughout the period of study (even in the most recent period 2016-17). In the urban areas, the Christian women have recorded continuous improvement in the rates of work force participation during 1983-2012. Also, the females of all the religious groups have lagged behind their male counterparts in the matter of growth of work force in India all through the period of study. Also, there is no denying to the fact that the WPR for the rural females has been greater than her urban sisters in all the years and across all the religious groups. The exception to such a trend has been noted for the women workers of the religious group ‘Others’ for the first time in 2016-17. It has been observed by us that, both in the rural and urban areas, WPR for the females was the highest among Christians in all the years of study. However, women belonging to the Muslim community have recorded the lowest values of WPR, both in rural and urban India, all through our study period. Again, the EUS data confirmed the presence of Muslim females in farming operations in lowest percentage in all the years taken into consideration. The dominant presence of Muslim women of the rural and urban areas is seen in industry during our study period; mainly found involved in the manufacture of beverages and tobacco
related products Parallel to this, Christian women living in the rural and urban areas are seen engaged in major proportion respectively in growing of rice and paid domestic activities respectively during 2011-12. The rural and urban women of the religious group Others are seen working in raising of cattle and buffaloes and in primary education respectively in the concerned year. As the reasons behind the poor work participation rates for the Muslim women were evaluated econometrically, it is seen that marriage has acted as an important deterrent with regard to the work force participation for the women of the Muslim community - both in the rural and urban areas. Further, the education-employment linkage has moved in the opposite direction so far as the females of the Muslim community are concerned both in rural and urban areas.

**Patterns of Demographic and Economic Dependency in Rural India and its Impact on Households Consumption: An Evidence from Periodic Labour Force Survey**

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The demographic structure of the population has an important role in determining the labour force participation in an economic activity and hence the consumption behaviour of a household. Demographic dependency ratios based on age demarcation are widely used indicators to understand the impact of changing demographic structure on an economic growth. However, this measure has certain limitation as it does not measures the impact for those who falls under working age but not actually out of labour force or population actually not under working age but actively employed. Therefore, in this paper, the prime objective is to calculate the employment based economic dependency ratios along with demographic dependency ratios to understand the relations between them. Further, decomposition of these dependency ratios has been done to measures the contribution of various factors on the dependency ratios. In this paper, I have proposed sectoral dependency ratios based on the employed workforce among the sectors and its trends among the state groups. An empirical estimate has been performed to test the impact of these dependency ratios on the household consumption and expenditure behaviour. Periodic Labour force survey data has been used for the overall analysis along with for sectoral classification National Industrial classification-2008 has been used.

The analysis reveals that most of the working age population between age group of 15 and 29 are out of the labour force because of the increasing education attainments. More than 50% of the female population of working is engaged in the domestic works and, hence, not available for workforce. Unemployment dependency is the least but unemployment rate among young labour force is highest particularly among southern states. There is a positive correlation between employment and Age based dependency ratio meaning that there is a need for such public policy towards some balancing mechanisms. However, increasing female labour force participation and late retirement would be a conducive way to check the abrupt relationship. Farm sector dependence are still prominent in most of the states; however, union territories state are the only states have higher service sector dependency and less farm sector dependency. Whereas, western states have the highest agricultural dependency and
Theme 3: Changing Pattern of Rural Labour Markets

Least for both industrial and services sector dependency. Most of the workforce aged between 30 and 44 years are highly active workforce among all sectors. But the workforce age distribution patterns are slightly different among the state groups and shows that high-end aged workforce are highly skewed towards farm sector and workforce within young age bracket are actively engaged in service sector followed by industry sector. The empirical results reveal that there is a significant negative impact on household consumption and expenditure for a larger household size. In case of dependency relations, only southern states have shown significant relationships for the farm dependency. We found no any significant relationship for industrial sector dependency and the household consumption for any state groups. And only western state groups have no significant relationship in case of service sector dependency. In a nutshell, the study found that southern states are significantly performing better than the all other states.

Dependency on Agriculture and Exclusion from Self-employed in Non-Agriculture of Schedule Tribe

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Most of the development economics models suggest that structural transformation is the path of growth and development, and the development structure of the maximum number of developed countries have this characteristic. The growth rate of the Indian Economy in the post-liberation era has increased significantly, with the share of industry and service sector in GDP increasing tremendously but that of agriculture, employing the largest share of working people decreasing over time.

Scheduled Tribes (STs) constitute about 8.6% (104,281,034) of the Indian population. About 90% of the tribal communities that live in and around India’s forest areas of 63.5 million hectares. The maximum numbers of ST groups derive their livelihood from agriculture and forest and rest are engaged in manufacturing, construction work, plantation, mining and quarrying amongst other services. Hence, most of the marginalised groups like STs are excluded from the process of development due lack of access to education which is essential for Structural Transformation. This paper is an analysis of exclusion faced by the ST in the Indian labour market in terms of opportunities in the process of structural transformation from agricultural to non-agricultural sector.

This study includes the Unit level Data is taken from NSSO fiftieth round (1993-94) and sixty-eighth round (2011-2012) schedule 10 of employment and unemployment to find out the (1) Changes in occupational distribution of STs and household type-wise changes (between 1993-94 to 2011-12) (2) Sector-wise change in education level of working people (between 1993-94 to 2011-12).

(a) Aggregate all India, by the social groups-- SC, ST and Others (For rural and urban areas). (b) North East States Versus Central Belt (For Schedule tribes only) and (3) Current Situation of education levels of working persons (2011-12). To take into consideration the regional variation among STs the states which are included for analysis are, North-Eastern States (Sikkim, Arunachal Pradesh, Assam, Meghalaya, Manipur, Tripura, Nagaland and Mizoram) and Central States (Orissa, Bihar,
Madhya Pradesh, Rajasthan, Gujarat, Maharashtra, Andhra Pradesh, Karnataka and West Bengal). To make change comparable between 1993-94 and 2011-12, in case of 2011-12, newly formed states Jharkhand and Chhattisgarh are clubbed into Bihar and Madhya Pradesh, respectively).

In the post-liberalised and globalised era where significant proportion of population benefited from the structural transformation, marginalised group like ST are excluded from the better opportunities. Almost 90% of STs are still living in rural areas, who are still dependent on agriculture, which is backward in nature due to lack of required inputs and low productivity. Traditionally STs are self-employed in agriculture and depend upon agriculture produce and forest by products for survival. In the name of development and forest conservation (development projects like dams, national parks, forest protected areas and mining in mineral resource rich areas) many have been displaced resulting in forced migration and casualisation of labour both in rural and urban areas.

In case of self-employment RNFS, STs are excluded because of lack of required skills and education. On the other hand, in case of RW/SE only those who are well educated and economically sound is benefited because of government affirmative action policy like reservation. If we compare STs of North east and Central belt, education is better in the Northeast, which leads to a better outcome in form of participation in SENA and working as RW/SE.

Findings of empirical study of factors determining working as a self-employed and regular wage and salary earning are (a) possession of land has a very significant influence SEA. (b) Education have positively linked with working as RW/SE and negatively with the SEA and SENA. (C) Probability for STs is lower for being as SENA and SEA as compare to others.

**Employment Generation of MSMEs in Karur District, Tamil Nadu**

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The Micro, Small and Medium Enterprises (MSMEs) sector have emerged as a highly vibrant and dynamic sector of the Indian economy over the last five decades. It contributes considerably in the economic and social development of the country by development entrepreneurship and generating major employment opportunities at moderately lower capital cost, next only to agriculture. MSMEs are balancing to large industries as ancillary units and this sector contributes significantly in the comprehensive industrial development of the country. The MSMEs contribution to the development of the economy can be perceptibly seen in three areas, viz., number of units, employment generation
and Production. The MSMEs have registered a remarkable growth in number of units, production, and employment. Karur district is an economically and industrially developing district of Tamil Nadu. Karur is a textiles hub of Tamil Nadu. It is also known centre for bus body-building and allied industries like spare parts. The number of industries has increased over the years. For this people migrate from another district to Karur District. Instead of people from Karur going out of District earlier, now people from other District and other state migrating to Karur for employment purpose. The study aims at analyse the growth of employment generation of MSMEs in Karur District of Tamil Nadu. This study is completely based on the secondary data. The data collected from District Industrial Centre (DIC), District Statistical Department, MSMEs census reports, published material like journals, books, newspapers and so on. The number of MSMEs, amount of investment and employment generation has increased over the years in India, Tamil Nadu and Karur District. Growth of MSMEs have been considerably increased and also risen the employment potential in Karur District during the study period. There is a positive correlation between the amount of investment and employment generation of MSME in the Karur District. This implies that investment and employment are moving in the same direction. Hence, it is concluded that there is proportional increase in the employment generation with the amount invested on MSMEs in the District due to favour of government policies.

**Female Workers and Transformation of Rural Economy into Urban Economy**

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Recent years have witnessed the shift of majority of working population from farm employment to non-farm employment in many rural areas. This has resulted in emergence of 2532 new census towns in 2011 Census. Rural economy has been transformed into urban economy. Majority of working population are engaged in non-farm employment in these settlements. 2011 Census has classified these rural areas as urban areas on the basis of certain criteria. In addition to two demographic characteristics, the main criterion states that at least 75% of the male main working population engaged in non-agricultural pursuits. This criterion excludes female workers. We must investigate the occupation pattern of female workers in these newly classified urban centres which were previously rural areas. The impact of transformation of rural economy into urban economy on occupation structure of female workers needs to be analysed to understand the gender dimension of shift of working population from farm employment to non-farm employment.

As per 2011 Census, West Bengal reported largest number of new census towns (528), followed by Kerala (362), Tamil Nadu (265), Uttar Pradesh (201), Maharashtra (152) and Andhra Pradesh (134). Among these states, Andhra Pradesh reports highest female workforce participation rate in rural areas (44.6%). Census towns of Andhra Pradesh have been selected to understand the occupational pattern of female workforce in the framework of transformation of rural economy into urban economy.
Census towns of Andhra Pradesh which are situated far away from the nearest class I city, more than 100 kilometres, have been selected for the study. Influence of big cities on economic transformation, from rural to urban, is less as compared to census towns which are near to class I cities. Eleven census towns have been selected for the study. The main data source is 2011 Census.

In 2011 Census, Andhra Pradesh reports 134 new census towns. 50 census towns reported sex ratio above 1000. 65 census towns reported sex ratio in the range of 950 to 1,000. Only nine reported sex ratio less than 900, but above 860. The average sex ratio of all 134 census towns is 997. These data indicate census towns of Andhra Pradesh perform well in case of sex ratio. Further, in Andhra Pradesh, female workforce participation rate is high in rural areas as compared to other Indian states, particularly states which reported large number of newly classified census towns. 11 census towns are far away from the nearest class I city, from 100 kilometres to 167 kilometres.

Among these eleven census towns, percentage of male main workers is much higher than percentage of female main workers, except three census towns where the difference is below 10% point. The difference is above 20% point in three census towns. Percentage of main cultivator workers is less below 10%, among both male and female workers. A substantial percentage of female workers are agricultural labourer in eight census towns, above 20%. Among these census towns, the figure is as high as 34.09%, 48.06% and 45.98%. Interestingly, the corresponding figure for male is below 15% in all census towns, except four census towns. A substantially higher percentage of female main workers are agricultural labourers as compared to male main workers. Percentage of female main household workers is substantially high in five census towns, 17.2%, 26.54%, 28.18% 39.51% and 42.0%. In these census towns specific commodities are manufactured. In Siddipet, brass and aluminium products are manufactured. In rest of census towns, it’s below 5%. In case of male workers, only one census town report high percentage of male main household workers (25.62%).
Is Non-farm Employment Eking Out a Subsistence Living?
Evidence from Structural Transformation in Rural India

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The main purpose of this paper is to critically evaluate the pathway of rural structural transformation in India focusing on employment share and its dimensions and to unfurl the mysteries and miseries behind the non-farm sectors specific to the rural India using two studies on the Indian case of rural transformation, (a) Rural India 1970-2005: An arduous Transition to What? (b) Changing Structure of Rural Economy of India: Implications for Employment and Growth, one international report on rural development, all of which analyse the issue from long term basis and 61st and 68th rounds of employment-unemployment survey (EUS), NSSO and Report on Fifth Annual Employment-Unemployment Survey (EUS), 2015-16 published by ministry of labour and employment. The study put forward two hypotheses: (a) services sector in terms of both output and employment and manufacturing in terms of employment only are going urban-biased unevenly in rural India and (b) the growth in employment in non-farm sector is by large construction sector-biased and hence there is a 'construction trap' looming over the bubble (private) housing sector and a 'services trap' with workers straddling pluri-actively among many works. It tries to look at the ST from rural perspective and asks whether the rural areas in India should or do follow the urban pattern in the same in non-farm transformation or not.

It is clear that adopting services economy-wide as an Indian alternative in lieu with IMF guidelines without giving much attention to the non-farm sector in the rural economy of India, especially manufacturing and services will have far-reaching setbacks in the rural employment. As manufacturing sector can't absorb the necessary labour, as it made but worth not an increase from 8.1 in 2004-05 to 8.6 in 2011-2012, let alone the surplus labour in the rural farm sector, quality services as a choice should make sense in the rural economy too, not the export led urban services alone. The farm sector-augmented manufacturing like agribusiness and agro-industry should bourgeon in the rural non-farm sector as it is quite natural that while share of agriculture in GDP is falling, these two are expected to grow rapidly. The massive penetration of the rural workers towards construction sector and to a great extent fewer quality services like trade and transport sector with pluriactivity more than manufacturing can't be acclaimed as a signal of expanding opportunities in the non-farm sector. There should be proliferation for domestic demand for quality labour and services, security and regularity in the rural economy too. Moreover, it is a matter of concern that services and no doubt manufacturing do not grow as it is anticipated to be in the rural India as they are withdrawing towards the urban economy while pace of urbanisation is slow and more than 70% workers are rural in India. However, there is negation for this from the experience of rural structural transformation taking place in Kerala of late having converging with each other share of 31.4, 31.9 and 36.6 for primary, secondary and tertiary
sectors respectively against all India figures of 64.1, 20.4 and 15.5 for the same. Except manufacturing in the urban sector, Kerala performs well in the transformation in all subsectors but more pronounced in the rural areas.

Since more than half of the decline in rural employment can be explained by the female withdrawal from farm and non-farm labour, the experience of Kerala female labour that they can make use of the opportunities wherever they find it advantageous more than males can be a replicate for rural female workers in other states. For accomplishing that, backward states should promote second schooling or back-to-school and formalise it district-wise as happened in Kerala. Since analysts are unanimous in considering land reforms and education as cornerstones of fast and successful rural transformation and if not the former, the latter, education, can be a ‘second best’. Admitting this favourable work condition, disadvantages in pluriactivity born out of inability of living from only livelihood persuade the rural workers in entire rural India to hold multiple jobs eventually deteriorating work-life and work-leisure balance and it is commonplace all over the country. Thus, there are evidences for eking out a subsistence living by non-farm employment from degressive structural transformation of rural economy in times of highly volatile internal and external economic conditions. It is not a wonder if we happen to say this type of structural transformation has caused exclusion more vividly pronounced than inclusion.

The results find out that there are evidences, unlike the past attempts considered the transformation brought in expanding opportunities for rural workers and the non-farm income rose in favour, for being trapped in eking out a subsistence living from within the data and the surroundings and economic scenario prevailing in rural India having serious implications on gender dimensions of rural structural changes. There are experiences in negation to this, for example, from rural Kerala. However, it seems like some type of exclusion being more highlighted than inclusion after rural structural transformation.

An Analysis of Income and Consumption Expenditure of Rural Households - A Case for Bathinda District of Punjab

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The present paper is an attempt to assess and analyses the levels and pattern of income and consumption expenditure of rural households of Bathinda District. For the purpose of the study, one village from each tehsil has been selected on random basis. Thus, in all, three villages have been selected from the district for the survey. A representative proportional sample of 220 households has been taken up for the survey. Out of total 220 households, 131 households belong to farmers, 51 households belong to agricultural labour, 16 households belong to non-agricultural labour, 11 households belong to artisan and 11 households belong to other households.
The study reveals that an average sampled rural household earns Rs. 287,821.98 annually in the Bathinda district. However, there are considerable variations in the income levels of the different categories of rural households. It is Rs. 426,990.6, Rs. 103,409.09, Rs. 102,954.50, Rs. 95,593.75 and Rs. 70,931.37 for the farm, artisan, other, non-agricultural labour, and agricultural labour households, respectively. The analysis shows that agricultural labour and non-agricultural labour households are poorer than the farm, others and artisan households in the Bathinda district. The farm business income is the most important component of household income for the farm households. For the agricultural labour and non-agricultural labour households the most important component of household income is hiring out labour in agricultural and non-agricultural sectors. The artisan households earn major part of their income from artisan works. Since the family size varies from one category to other categories. There are considerable differences in the range of average per capita income and the average household income of these categories. The per capita income earned by the farm households is 6.28 times more than the per capita income of the agricultural labour households. On the other hand, the average household income earned by the farm households is 6 times more than the income earned by the agricultural labour households.

The study reveals that annual consumption expenditure of an average sampled rural household is Rs. 304,894.58. An average household belonging to farm households spends as much as Rs. 416,030.05 annually, whereas the annual consumption expenditure for the artisan, other, agricultural labour and non-agricultural labour households has been recorded at Rs. 180,438, Rs. 175,418.18, Rs. 126,137.06 and Rs. 129,160, respectively. The consumption expenditure of the farm households is higher as compared to the other categories of rural households. This is due to the ownership of means of production. The farm households own more productive resources so their consumption expenditure is significantly higher than the other categories of rural households.

For an average sampled rural household, the non-durables consumption expenditure accounts for the major proportion of the total consumption expenditure followed by the expenditure on durable items, marriages and other socio-religious ceremonies and services. Among the non-durables, food grains are the important item of consumption. Among the durables, major share goes to house construction; addition of rooms and major repairs accounting 17.98% of the total consumption expenditure. Education is the most important item among different services. The analysis provides that in general, there are many similarities in the consumption pattern of the agricultural labour, non-agricultural labour, artisans and other households. Consumption pattern of these categories is subsistence nature. A large share of total consumption expenditure by these categories is allocated to non-durable items, distinctly followed by the other items of consumption. The farm households have a different pattern. For the farm households, the highest proportion of consumption expenditure is accounted for by durable items, closely followed by the other items of consumption.

The study further reveals that farm households are having more per capita consumption expenditure as compared to the other categories of rural households. The per capita consumption is the highest for the farm households followed by the other, artisan, non-agricultural labour and agricultural labour
households. Thus, even when the family size increases from the farm households to the agricultural labour households the per capita consumption expenditure remains relatively high for the farm households.

Since the average propensity to consume is greater than one, the average household in the sample incurs an annual deficit of Rs. 17,072.88. The highest deficit of Rs. 55,205.69 is incurred by the agricultural labour households. The farm household has a surplus of Rs. 10,960.55. This implies that the agricultural labour, non-agricultural labour, artisan and other households try to maintain a minimum level of consumption whether they can afford it or not. The field survey brought out the fact that to overcome this gap these households have to take loans from various non-institutional sources at the higher rates of interest.

### Concept of Economic Reform on Indian Labour Market

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Economic Reforms is the changes by the government for improving and increasing the growth rate of the economy. When we are talking about the economic reformation, we cannot forget about our labour market because labour market is the human capital of our country. The first National commission on labour was set up on 24 December 1966, this commission submitted its report in 1969 after realising the all fact problem of labour, for both the sectors organised and unorganised. Under the chairmanship of Ravindra Verma the second commission on 15 October 1999 was set up, this commission submitted its report on 29 June 2002. It is very important to have a wage fixation, for the labour because according to the economy it is a lowest paid job. For this a Minimum wage Act 1948 was set up, duty of this act is to update the wage according to variable Dearness Allowance (VDA) which is related with consumer price index. This VDA has to revise at every six months on 1st April and 1st October.

The Act aims to prevent exploitation of labour, according to the survey of NSSO (National sample survey organisation) 2004-05 there were total 45.9 crore labour in both the sectors organised and unorganised, out of this 2.6 crore were in organised sector and remaining 43.3 crore, it means 93% of the total employment were in unorganised sector. This Act also need the proper guidance of Government (centre and states) to fix a minimum rate of wages for the labour of our country, and also review and revise the same at intervals not exceeding five years.

After the economic reform on labour market, labourers were given the rights by law of Government. Some rights are as follows:

- Right of work of one’s choice.
- Right against discrimination.
- Right to security of job.
- Right to organise and form trade unions.
- Right to participation in Management.
Changing Employment Conditions in the Rural Labour Market During Post MGNREGS in West Bengal

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The rural labour market has undergone changes during the post MGNREGS in West Bengal due to increasing non-farm employment opportunities in the rural areas, increasing connectivity and increasing mobility of rural labour force etc. MGNREGS was implemented in West Bengal 2006. Besides providing employment security to the rural labourers, it creates upwards pressure on rural wage rate; improve purchasing powers of rural labourers etc. The agricultural sector growth rate is declining in West Bengal and overburdened. The non-farm employment opportunities in West Bengal increases in construction sector and low paid self-employed service sector. Workers mainly engaged in low productive non-farm activities. The manufacturing sector in West Bengal has suffered due to various problems and as a result employment opportunity in manufacturing sector are very limited.

The objective of this paper is to discuss the structural changes of employment of rural labourers in West Bengal and also to discuss nature and scope of non-farm employment opportunities in West Bengal. The area of the study is West Bengal. This study is based on secondary data mainly from NSSO reports, literature etc.

During the post-MGNREGS, there is increasing tendency of rural wage rate in West Bengal. But there is increasing tendency of casualisation and informalisation of workers. The non-farm employment played important role in increasing income of rural labourers and reducing poverty in west Bengal. But the growth of non-farm employment concentrated in construction, transport and communication.

Female Labour Force Participation in India: An Overview

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This paper is related to female labour participation in India and provides a description of nearly two decades of patterns and trends in female labour force participation in India. It examines and assesses the contribution of various demographic and socioeconomic factors in explaining the female labour force participation decision and the recent the drop. The analysis finds that female labour force participation dropped by 19.6 million women from 2004–05 to 2011–12. Participation declined by 11.4%, from 42.6 to 31.2% during 1993–94 to 2011–12. Approximately 53% of this drop occurred in rural India, among those ages 15 to 24 years. Factors such as educational attainment, socioeconomic status, and household composition largely contributed to the drop, although their effects were more pronounced in rural areas. Specifically, the analysis finds a U-shaped relationship between levels of
educational attainment and female labour force participation. The decomposition of the contribution of these various determinants to the female labour force participation decision suggests that stability in family income, as indicated by the increasing share of regular wage earners and declining share of casual labour in the composition of family labour supply, has led female family members to choose dropping out of, rather than joining, the labour force. The findings of this paper suggest that conventional approaches to increasing female labour force participation (such as education and skills and legal provisions) will be insufficient. Policies should centre on promoting the acceptability of female employment and investing in growing economic sectors that are more attractive for female employment.

**Sectoral Composition of Female Employment Trends in Odisha: A Study of Census 2001-2011**

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This paper is an attempt to show the sectoral composition of female employment in Odisha by census data. Though Odisha is an agrarian state, it is necessary to know the women participation in different sectors, especially in agriculture sector. It is important to know whether the women prefer to enter into the labour market for work such as; in agricultural sector or they shift to the industrial sector which is a significant dimension of women labour force participation to increase their rate of contribution in the current economy. The simple percentage method has been used and data source involves the census data of 2001 and 2011. The women participation in different sectors can be studied by the behaviour of structural change in the economy and variations in women work participation in different sectors. In this regard, the paper portrays the sectoral composition of women employment in Odisha and how it is changing over the period of time. There are some structural change theories of development which illustrates close relationship between changing composition of sectoral shares in GDP as well in employment. This issue will be examined in case of Odisha. Based on statistical analysis some of the findings of this paper discuss that female employment is a part of human resources for each country and across the districts of each state. But, the participation in labour market is different from place to place, caste to caste and sector to sector across the districts of Odisha. According to the census 2001 and 2011, huge numbers of female have been participating in different sectors as main workers and marginal workers. Before 2001 census period, females were participating more in agriculture due to lack of education and fully dependent on agriculture sector in Odisha. But, after 2001 census period, the share of female workforce participation has increased in manufacturing, non-manufacturing and service sector in Odisha. The economic reform has boosted up the female education, awareness and women empowerment which leads to participate in non-farm sector rather than agriculture sector in Odisha. If more share of women will participate in labour market as skilled worker in Odisha, the economy will reach a better position with high women empowerment.
Determinants of Performance of Agricultural in UP: A District Level Analysis

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It is a known fact that agriculture is backbone of the Indian economy. Today, India ranks second worldwide in farm output. Agriculture and allied sectors like forestry and fisheries accounted for 13.7% of the GDP (Gross domestic product) in 2013, about 52% of the total workforce employed in this field and despite a steady decline of its share in the GDP, it is still the largest economic sector and play a significant role in the overall socio-economic development of India. The agricultural sector of India has occupied almost 43% of India’s geographical area. Agricultural sector which continue to provide livelihood for more than half of the population in India. Agriculture has a pivotal role in the protection of (or damage to) these natural resources, and as consequence for ecologically sustainable development. The rapidly decreasing the share of agriculture in India GDP have made it necessary to look for its problem i.e. what are the factors which determine the agricultural growth of our economy and problem with this sector to improve or eradicate it and increase the share of agriculture to GDP of our economy. This study emphasises on those determinants by which agricultural growth determine. Such as electricity, fertiliser, irrigated area cropping intensity, net area sown, agricultural cold storage, etc. These resources determine agricultural growth. But, the low productivity in Indian agriculture sector is (52% workforce and just 14% GDP) because of inefficiencies that are there in the agricultural system. These inefficiencies not only increase wastage but they lead to lower production which coupled together decrease the productivity in farm sector. Lower agricultural contribution in GDP (50% in 1951 to 16% of GDP today) is the indication that India is indeed developing and like any other country in the past, the percentage contribution of agriculture sector decreases over time.

The performance of agriculture depends upon many factors like availability of resources and utilisation of resources. Availability of resources is pre-condition of agricultural performance of any economy. It is not the ultimate condition. Utilisation of resources also very important for agricultural performance. We can say both are together determine the agricultural performance. Utilisation of resources as well as important as availability of resources for agricultural performance. In the case of Uttar Pradesh, the evaluation of all the above factors showed a peculiar characteristic. There is a huge variation in the performance of agriculture in different regions of Uttar Pradesh. In Bundelkhand region, availability of resources is high but agricultural performance is very low it is due to the utilisation of resources i.e. utilisation of resources is very low in Bundelkhand region. On the other hand, in western region availability of supportive factors is but performance of agriculture is good due to proper utilisation of resources. Also, in eastern and central region agricultural performance is average. Production of food grain in irrigated area is more than non-irrigated areas.

The government should bring new agricultural policies. Continue subsidy and free electricity supply, irrigation facilities, fertiliser etc. to the farmers. Primary agricultural loan should be easily accessible at a low interest rate to every farmer. Cold storage facilities in every village. Availability of seeds at a low cost to the farmers. The availability of supportive factors to the agriculture is in much
more backward state and this has caused to the backwardness to the agriculture. The eastern region is much more productive region of the state and can foster the growth of agriculture is government support it through the public investment in agricultural infrastructure.

Women Empowerment Under the MGNREGS in Thiruveramur Block of Tamil Nadu

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The Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) is an important interventionist strategy in the Indian rural economy. The MNREG Act is an Indian job guarantee scheme, enacted by the Parliament, on August 25, 2005. The scheme provides a legal guarantee, for one hundred days of employment, in every financial year, to adult members of any rural household, willing to do public work-related unskilled manual work. The programme aims at fulfilling the needs of the rural masses (at least one member can be employed from the family). The main objective of MGNREGS is the creation of durable assets and strengthening the means of livelihood for the rural poor. The MGNREGS covers the entire country (685 Districts), with the exception of districts that have a 100 % urban population. The Act mandates that a minimum of one third of the beneficiaries should be women. The national average shows that women participation was 40.19 % in 2006-07; it registered a steady increase recording 42.49% in 2007-08, 47.88% in 2008-09 and 56.83% in 2016-17. The women participation thus has surpassed the minimum prescribed levels. The MGNREGS was launched on 02.02.2006. Under this Scheme, the total number blocks covered was 385, number of Grama Panchayats was 12,524 and number of villages was 79,336. The MGNREGS has given more priority to employment opportunity of rural people in Tamil Nadu. MGNREGS provided household employment to 62.39 lakh people in Tamil Nadu, during the period 2006-07 to 2013-14.

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Theme 3: Changing Pattern of Rural Labour Markets

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Transition in Hiring Practices of Labour in the Rural Area:
A Case Study of Anuppur District of Madhya Pradesh

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This paper discusses the migration and changing pattern of hiring practices in Anuppur district of Madhya Pradesh with compositions and impact of migration on living standard of migrated labour force. The composition of migration shows type of work chosen by labour force during migration from rural to urban area. This paper argues that migrating from rural to urban area is successful bridge to overcome poverty, to earn higher wages with leisure working hours, to have a better quality of life by affording own house and other items. Rural labour force is generally considered as casual labour force and to enter in labour market contractor or middle man plays a crucial role to get them hired. The present study indicates that certain steps are needed in the direction of job security, healthy hiring practices and raising their standard of living.

Rural Labour Market Dynamics and Disparities in Tamil Nadu:
A Quantitative Analysis

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The significant change in the rural labour market pattern has been issue that has generated considerable academic and research interest among in the academicians, researchers and policymakers in India. In this paper, the author looks at forty years of dynamic in rural labour market pattern an all India and Tamil Nadu, using by various census data from 1981 to 2011. The main objective of this study is to analyse the changing pattern of rural labour market structure and to examine the scope for absorption of additional labour force by the non-farm sector, particularly, during the post reform periods. It also attempts to throw light on the findings of the disparities in rural labour employment in various categories of industrial occupations and both male and female in the farm and non-farm sectors. This study is divided in to three sections. The second section discusses the structural changes in the national and state economy, growth of general and rural population and share of total workers, composition of rural labour force both male and female, different categories of workers and employment growth rate.
and finally brings out some salient features of disparities in employment in rural labour market. Finally, section three presents the conclusion and policy implications of the study. Structural changes which take place over the last forty years reveal that in Tamil Nadu, the share of primary sector to GSDP has declined to less than 11% in 2016-17 from around 25% in 1981. Between industry and service sector, the latter's share is very high. Both in India and in Tamil Nadu the growth of total female workers is more than male counter parts. Again, the growth rate of marginal workers is high compared to other classes. The class of non-workers recorded a sizeable decline. Between main workers and marginal workers, the former recorded a steep down trend and the latter up trend. The growth rate of cultivators shows down trend, along with agricultural workers and agricultural laborers. Another important finding is that the post–reform period situation of employment is markedly declining in the case of several classes of workers, pronounced changes in the structure and composition of male and female labour force of different categories of workers and sectoral distribution of labour force. The study also reveals that for male, female is engaged in self–employment has increased sizably within the rural sector. The study gives suggestions to meet the past changing of rural labour market both at national and state level that is to explore the potential for augmenting non-farm employment acts as safety net especially in regions of declining agricultural productivity within the rural sector, besides promoting self – employment where ever possible. Suiting to these requirements, education up to school final must, as per the 12th Plan (2012-17) 47% of students’ dropout before they complete secondary education. As a result, when they enter in the labour market they paid at low wage and they are in low skill. Need to be tailored to job specifications to make them more productive. According to the National Skill Development and Entrepreneurship policy 2015 says India need110 million and reskill or upskill 290 million by 2022, Government budgetary allocation has to be sustained and optimal utilisation of the same must be ensured. It these attempts become successful, it would restrain migration of labour to towns and cities besides enhancing productivity in agriculture. This is time the entire gamut of macroeconomic policy in India needs rethinking and the link between macroeconomic policy and rural labour dynamics is the essential for past changing pattern of rural labour market in India.

**Share Croppers: A Face of Unpaid Labour**

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Agriculture includes cultivation of land, rearing and maintenance of livestock including forestry, fishing and hunting. Physical labour is the main source of livelihood for the people working in agriculture sector. They were mostly unskilled and unorganised. Farm laborers employed in fields were of two categories – the regular ploughmen and the ordinary day labourers. The ploughmen sometime cultivated his masters land on batai (i.e. share of the crop) as now. He used to get only half of the crop, though he met the expenses of the cultivation himself. Among the village poor people, the cultivators for a share were known as Adhiars. They were generally landless but cultivates on landlords’ land. In many cases the Riayats employed hired labourers or ploughmen, and more often slaves. The dearth of labour
necessarily led to the use of forced labour. Loss of common rights, unequal subdivision of holdings, disuse of collective enterprises, the multiplication of rent receivers, free mortgaging and transfer of land and the decline of cottage industries were the circumstances which has weakened the economic position of the small holders and has increased the supply of agricultural labour.

Caste based societies believes that a person’s role and purpose are determined by his or her status in society. They have informed attitudes about governmental and social responsibilities regarding labour violations. Within a few generations’ poor, low caste Indians enter and perpetuate a cycle of poverty and illiteracy, children often abandon school and join the work force. “Kamaiyain in Chhattisgarh and Halwaha in Uttar Pradesh and Bihar has slowly transformed into other newer and subtle kinds of bondage. They are bonded due to debt, inherent debt taken by their ancestors, human trafficking and other means. G S I have placed India at top in bonded labour index. This is a matter of shame. Actually, this number can increase if a sensitive and minute survey took place.

The labour market in agricultural sector is unorganised. It has the characteristics of pre capitalist society. The issues connected with the agricultural labour acquire an important social dimension. Traditional and social cultures have a strong grip in the villages /rural areas. Social stratification in a village is linked with land and caste which govern status, economic power and political influence as much as the level of living. Owner cultivators with large holdings are at the apex and agricultural labour occupies the lowest position in the rural setup. In rural areas Caste is the main governing factor, thus recruitment of agricultural labour has a direct relation with the caste group. But we have experienced the low economic condition was also a strong factor. Our farmers generally have small holdings. Small land holders, asset less and landless labourers were the vulnerable section for bondage in agricultural area. They were poor in economic aspects. Clever land owners trap them by fulfilling their needs, which are small but important. This paper is concerned with the second category of the working force in agricultural sector, the agriculture laborers.

Empowerment of Women Through MGNREGS: A Study of Auraiya District of Uttar Pradesh

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Women empowerment is a major issue and employment creation is the major concern of the state of Uttar Pradesh. Several poverty alleviation and employment generation programmes are introduced by the state and central government. But the schemes are not effectively and efficiently working to reduce poverty and increase the living standard of the people in rural India - especially women population. Hence, 2005 onwards government of India had introduced NREGA a different scheme for the betterment of women empowerment and development of rural population. Under this scheme it has been guaranteed to 100 days work providing every family in a financial year in rural India. The scheme
is attractive especially for women because it stipulates that the one third of the total workers should be women. The program has focussed on women participation. Hence, this study aims at analysing the women participation on MGNREGS with reference to Auriya district of Uttar Pradesh. Further, the study evaluates the performance of MGNREGS in rural development, employment creation and elimination of poverty in Auriya district of Uttar Pradesh. The study also evaluates the level of satisfaction of women beneficiaries on MGNREGS. The present study aims to analyse the performance of MGNREGS in Uttar Pradesh in terms of physical assets, women beneficiaries, employment, unemployment allowance worksite facilities and study the empowerment of women through MGNREGS programme in Uttar Pradesh in terms of wages, income, employment, consumption expenditure and women participation. The study mainly hypothesised that the performance of MGNREGS is not satisfactory in Uttar Pradesh.

Women population is mostly equal to male population and their contribution is also impressive. The women participation in job market is very low. Women continue to face many barriers to enter labour market and to access decent work and face a range of multiple challenges relating to access to employment, choice of work, working conditions, employment security, wage parity, discrimination and balancing the competing burdens of work and family responsibilities. Women experience inequality in all spheres of our society. Their active participation is important for the establishment of the best society. By empowering the women, we mean the improvement in totality of human capabilities like part in decision making in economic, social and religious spheres. Since Independence, various employment generation and poverty alleviation programmes were introduced by the Government of India with the consent of Union territories and state governments to decrease the unemployment crisis and to increase the standard of living of women - particularly in the rural areas. But these programmes have not worked effectively and did not yield any desired results to increase the standard of rural living particularly of women inhabitants. The Government of India has initiated MGNREGS enacted in 25th August 2005, but it was fully implemented on 2nd February 2006 in all the rural districts of the country. It is the biggest poverty alleviation programme in the world to empower the rural women workers. The main objective of MGNREGS is to provide wage employment and to protect rural households from poverty and hunger. The programme also aims at generating productive assets, protecting the environment, empowering women, reducing rural-urban migration and fostering social equity in the society. MGNREGS is, therefore, not just an employment scheme it is a tool of economic and social change in rural areas. This programme is focusing on empowerment of women in villages. Some researchers have done studies on MGNREGS. Most of them are confined to economic aspect of the program only. Some research studies have shown that women are participating in MGNREGS on a large scale in most of states in India. And they have received equal wages and earned incomes of their own. Single women households and female-headed households are particularly benefited by the MGNREGS. The present study is an attempt to examine the empowerment of women through the program. Hence, my study aims at analysing the women participation on MGNREGS in the Auraiya district of Uttar Pradesh. The present study is to analyse the performance of MGNREGS in Uttar Pradesh.
Pradesh in terms of physical assets, women beneficiaries, employment, unemployment allowance worksite facilities and to study the empowerment of women through MGNREGS programme in Uttar Pradesh in terms of wages, income, employment, consumption expenditure and women participation. The present study is based on primary data. The primary data has been collected through detailed interview schedule. The district has highest rate participation of women workers in the program. A sample size of 100 women workers of MGNREGS program from Auraiya district of Uttar Pradesh is taken. 25 samples of women workers are selected from each village. The stratified random sampling has been used for sample selection. The study finds that the study find that the programme has no impact on women workers in the villages. The majority of the women workers are not even getting the work under the programme and wage payment is on irregular bases. The programme is not showing any impact on the empowerment of the women in the district of the Auriya due to loopholes in the implementation of the programme in the villages.