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Role of NAAC Assessment in Improving the Institutional Quality: An Experience of Mohanlal Sukhadia University

Sanjay Lodha* and Neha Paliwal†

External Quality Assurance is a mechanism through which the quality of an institution is assessed, monitored, guaranteed and improved by an external body. As an external quality assurance agency, NAAC is entrusted with the task of assessment and accreditation of Higher Education Institutions (HEIs) in India in consonance with the global trends. This research paper seeks to answer whether NAAC, while performing its task of evaluation, also achieves its mission of promotion and sustenance of quality in higher education institutions. This paper draws its inferences from a case study of Mohanlal Sukhadia University, Udaipur (MLSU). The paper analyses the effect of external assessment on the quality of MLSU based on quantitative and qualitative data collected from samples of students, faculty members and administrators of the University. The scope of the paper also includes a comparative study of NAAC assessment and students' assessment about the quality of MLSU.

Introduction

Higher education in India is one of the top three areas of development undergoing a tremendous change. The country is becoming a global hub for educational activities and a feeder for all kinds of

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international manpower requirements. There is a growing demand for and also a concern to provide quality education with a standard curriculum and globally acceptable system of education. The 'massification' of higher education in India has posed challenges of expanding the system with equity, improving quality while expanding the system and managing the sector efficiently and effectively (Varghese, 2015).

During the last decade, universities in India have taken serious note of these emerging needs and demands. The institutions are trying to update the curriculum, design new programmes and offer better educational services while maintaining high quality. There has also been a phenomenal expansion of institutions of higher education in the country. A bulk of new institutions have been established by private entrepreneurs also. As proposed by Brennan and Shah (2000), Trow (1996), Morley (2003) and Dill (2010), the expansion of higher education always draws attention to the issue of quality. The quality of HEIs is a relative concept. It depends on the benchmarks adopted and the person who judges it. It means different things to different stakeholders: governments, employers, students, academics, society and so on (Liu, 2016). In the government's eyes, quality may mean that as many students as possible finish the programme in the scheduled time with a degree of international standard at affordable costs. Employers may focus on knowledge, skills and attitudes which graduates obtain during their period of study. For students, the quality of education may be connected to the contribution to individual development and the preparation for a position in society. The academics will probably define quality as good academic training based on good knowledge transfer, a good learning environment and a good relationship between teaching and research (Vroeijenstijn, 1995). On these bases, the assessment of the quality of a higher education institute involves the judgment of performance against either internally or externally defined criteria (Green, 1994).

External quality assessment in higher education is defined as a means of assessing the quality of what is actually provided by higher education institutions against external criteria by external experts (Pearce, 1995). External Quality Assurance is a mechanism through which the quality of an institution is assessed, monitored, guaranteed and improved by an external body. The need for external quality assurance for HEIs by an independent national body in India was felt by the National Policy on Education (1986) and Programme of Action (1992). Consequently, National Assessment and Accreditation Council (NAAC) was established in 1994 as an external quality assurance agency for HEIs in India. The philosophy of

NAAC is ameliorative and enabling rather than punitive (Hegde and Shankar, 2016). The working and effectiveness of NAAC and other external assurance agencies have been issues of discussion from time to time among the stakeholders and policymakers to make them compatible with the changing scenario of higher education.

Micro-level studies provide the best inputs for macro policy reforms. Through the case study of Mohanlal Sukhadia University (MLSU), the present study tries to find out whether NAAC affects the quality of education at HEIs. This paper draws its inferences from the study of MLSU done by the state team of Rajasthan as part of a bigger project entitled 'Quality of Higher Education in India: A Study of External and Internal Quality Assurance at the Institutional Level'undertaken by CPRHE-NIEPA (Centre for Policy Research in Higher Education-National Institute Education Planning and Administration).MLSU is a state university and has undergone two NAAC accreditation cycles and achieved 'A' grade in the second cycle. The process of evaluation and suggestions for quality improvement given by the Peer Team for MLSU at both cycles are discussed in this research paper. What actions the University had taken on these suggestions and how did they affect the quality of MLSU is analysed thoroughly in this research paper.

Objectives

This research paper seeks to answer whether NAAC, while performing its task of evaluation, also achieves its mission of promotion and sustenance of quality in HEIs. The objectives of the study are: (i) to analyse the effect of external assessment on the institutional quality of MLSU; (ii) to elaborate the experience of NAAC visits to MLSU; (iii) to highlight the suggestions for quality improvement given by NAAC Peer Team and action taken by the University and to (iv) to compare the NAAC assessment with the students' assessment about the institutional quality of the University.

Methodology

This study has followed a descriptive research design with a substantial focus on interviews and content analysis of related documents. The secondary data were collected from Peer Team Reports and minutes of Internal Quality Assurance Cell (IQAC) meetings.Besides the available secondary information, quantitative data is also collected through questionnaires filled by the students and faculty members. Five departments of the university have been identified for data collection i.e, Accountancy and Statistics, Botany, Chemistry, Geography and Hindi. These departments

represent various faculties of the university and have a sizeable number of teachers and students. All the teachers in these departments have more than three years of teaching experience in the same department. The data was collected between the academic sessions of 2015-16 and 2016-17.Out of these five departments, a targeted sample of regular final year students at Under Graduate level, III or IV semester at Post Graduate level and research scholars (in the ratio of 6:3:1 from each department according to the average strength at each level) were selected to collect the data through a structured questionnaire. The information was collected from 272 respondents. In pursuance of the research design, few interviews were conducted with top administrators of the University including the Vice-Chancellor, Registrar, Comptroller, IQAC Coordinator and Head of the selected departments. Most of the analysis is qualitative in nature and inculcated content analysis. The analysis of data collected from NAACPeer Team report, minutes of IQAC meetings, and Focus Group Discussions (FGDs). The study also analysed quantitative data collected through questionnaires which leads to interpretations and conclusions.

To analyse the quantitative outcome of the NAAC assessment, the NAAC grade point average on a four-point scale for seven criteria was compared with the ratings given by the students on the same aspects related to the quality of the University. For this students were asked to rate the University on ten indicators on a five-point scale as if they were members of the NAAC team. Then based on their responses, the average score for each category was derived in the form of median since the distribution of scores was very skewed (Guildford, 1965). That score was converted to a four-point scale and then compared with the scores actually given by the NAAC team.

Forms and Structures of Academic Audit and Quality Assurance at MLSU

Mohanlal Sukhadia University is striving to maintain quality of education by establishing Internal Quality Assurance Cell (IQAC) and inviting various external agencies for accreditation and re-accreditation of the institution and its various courses for showcasing sustained improvement. The institutions which have been approached by the University for External Quality Assurance are the National Assessment and Accreditation Council (NAAC), All India Council for Technical Education (AICTE), Bar Council of India (BCI), Pharmacy Council of India (PCI). As we know the forms of external audits in India have changed with time, before NAAC external quality assurance was done by high-powered Five Year Plan UGC Committees. What was good about these Plan committees was that the recommendations given by these

Committees were the basis of financial allocation to the University and different units within the system. Now with the end of the Plan era, there is nobody in place to substitute UGC Plan Committee. Financial allocation through Rashtriya Uchchatar Shiksha Abhiyan (RUSA) at present appears to be uniform in nature and makes no distinction between institutions based on grades received. NAAC itself is only an assessment and accreditation agency. It does not recommend the nature and quantum of grants.

In the first cycle of NAAC in the year 2003-04, Mohanlal Sukhadia University got a 'B++' grade. During the second cycle in 2014 on the recommendation of the Peer Team, the University was declared as accredited with CGPA 3.11 on a four-point scale at 'A' grade up to May 2019. Besides the assessment and accreditation by NAAC, which is for the University as a whole, Mohanlal Sukhadia University seeks to go for the approval of various courses to concerned institutions. These institutions assess for the requisites of the particular course and provide only temporary affiliation. In MLSU the courses in Law Faculty and Pharmacy faced a hard time when their affiliation was going to be cancelled due to the shortage of faculty. It was only after the recruitment of permanent faculty in both Law and Pharmacy that assessment bodies could be invited for recognition. The B.Pharma. Course and examination of Pharmacy Department is approved by the Pharmacy Council of India (PCI) subject to the condition that it will restrict the admission to sanctioned intake i.e., 40 seats. Similarly, the Five YearIntegrated Programme of B.A. LL.B. and LL.B. Three Year Degree Programmeare approved by the Bar Council of India. The Master of Business Administration (MBA) Course is approved by AICTE with the intake of 60 students. In one of its recent assessments, the AICTE objected inadequacy of books in the library.

Experiences of the Accreditation Processes Done by NACC

The visit of the NAAC Peer Review team was an event of considerable activity and enthusiasm at the MLS University. The campus got a facelift with enormous cleanliness drive, sprucing up and maintenance initiatives. Apart from the infrastructural improvement, the NAAC visit was also preceded by a flurry of documentation by departments. The visit of the NAAC peer review team has had a definite impact on the corporate life of the University. Apart from the facelift which was an essential activity prior to the NAAC audit; the most visible impact was the vibrancy of the faculty to document their academic work. There was a lot of give and take at the intra as well as at inter-departmental level. The University prepared itself as one unit. The administrative staff as well as the subordinate level functionaries pitched in their best to spruce up the system. For the second

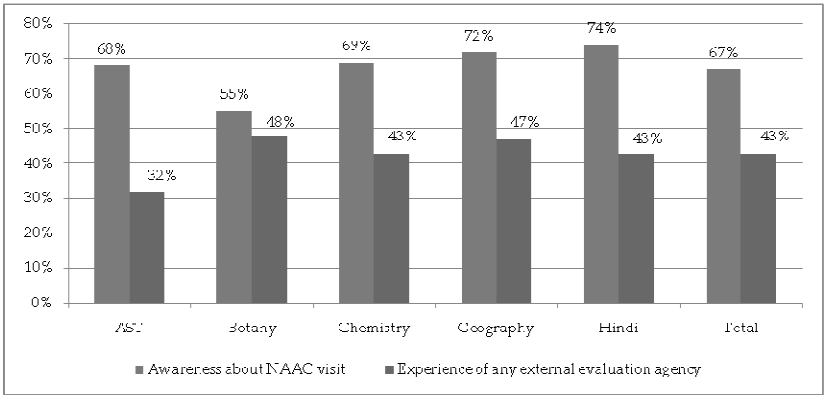
cycle at MLS University, the University sought student feedback on teaching quality and other academic aspects. Some of the best practices adopted were departmental presentations profiling academic activities undertaken in the last five years. To monitor these presentations a committee of senior faculty members was constituted chaired by Vice-Chancellor.

Due to the long gap between the first and second cycle, the ease of going for the NAAC accreditation for the second time was not there. Self Study Report (SSR) helped to introspect and was a crucial soul-searching document enabling SWOT analysis. The IQAC Coordinator of the University observed that the 'second cycle of NAAC was more rigorous than the first one because team members in the first cycle were not keenly observing things as they did in the second visit and the Peer Team was more balanced'. In the interview, it was mentioned that the Peer Team was very balanced, mature and experienced. However, the IQAC coordinator felt that the team should have got more time to have a more judicious assessment of the University.

It was observed that all the faculty members of the University were completely involved in the recent visit. Even younger faculty members were involved in making presentations of the departments for the NAAC team. Three mock visits, where outside mentors came and visited all the departments, were planned before the NAAC visit. The NAAC team had its initial interaction with the Vice-Chancellor, Registrar, Deans and few senior members where the University presentation was made. Then there was interaction with the IQAC Coordinator and other members of IQAC. After that, interaction with all the Heads, faculty members and students of departments was made when they went for departmental visits.

Figure 1

Students' Response about Awareness and Experience of NAAC Visit



Source: Primary Data

When students of five departments were asked about NAAC more than two-third (almost 67 per cent) of students were aware of NAAC assessment but only 43 per cent experienced the visit of NAAC and in this, there was hardly any variation between the sampled departments. The reason was that NAAC team members talked to the students in few departments only. In some departments, they interacted with research scholars whereas in other departments under-graduate and post-graduate were involved in the dialogue. The Peer Team also had interaction with parents, students' alumni, and principals of affiliated colleges, etc.

At the meeting with parents and alumni, the Peer Team wanted to know about the changes in the University since their student days. They sought suggestions for the betterment of the University. The team primarily focused on assessing infrastructure including hostels, sports facilities, library and the infrastructure of constituent colleges. They visited the libraries and oversee IT facilities offered by the University. The team examined the curriculum of the departments. In the Faculty of Management Studies (FMS), they were very much interested in having a look at whether the course curriculum was updated or not. Though the team was not very demanding regarding evidence wherever they demanded, information was substantiated by providing necessary shreds of evidence. On the eve of departure, the Exit Committee meeting took place. The meeting was attended by all the Heads of Departments and Deans. The feedback given by the Peer Team was very helpful and it familiarised the senior faculty of the University with the perceptions of the external team. Commenting on the whole process, the Vice-Chancellor, while being interviewed by the research team, said that 'it is only concrete academic work which matters before the NAAC peer team and any kind of 'window dressing' does not help.'

Impact of NAAC Assessment on Quality of MLSU

As far as the impact of external quality assurance on the quality of an educational institution is concerned, there are some noticeable methodological problems attached to studying the impacts of quality assurance in higher education (Harvey and Newton, 2004; Rosa, Tavars, and Amaral, 2006a; Stensaker, 2003). Research on the impact of quality assurance is complicated because it is almost impossible to control all related factors to find out the causal relationships. Secondly, the complex forms of information-processing and decision-making traditions of universities and colleges made it further difficult to measure impact. Thirdly, a particular problem when analysing effects to the fact that quality assurance has many

purposes, and quality improvement is not the sole concern of the external schemes. Finally, the potential political and economic gains of being a 'good implementer' of quality assessment also blurred the research findings, making them more positive than the reality (Liu, Tan and Mang, 2015). The authors found that the impact of external quality assessment on MLSU is also no exception to the above description. Besides the NAAC recommendations, other factors also play a role in the quality enhancement of the institutions and as explained in Table 1, there are some other constraints also which restrain the application of NAAC recommendation of quality improvement in the institution. Taking note of this, the impact of externally quality assurance on MLSU is analysed based on recommendations given by Peer Team and subsequent action taken. After intensive assessment of the University and based on its deliberations with a host of functionaries, the NAAC Peer Team gave several suggestions for the upliftment of the University based on the observation in both the cycles of accreditation. The pivotal suggestions are explained below:

Curricular Aspect

On the recommendation of the Peer Team (NAAC, 2014), the Faculty of Earth Sciences was created consisting of the departments of Geology, Geography and Environmental Sciences. Separate departments for Tourism and Journalism and Mass Communication were also established in the MLSU. Fifty-three new self-financing courses were introduced to meet the current and changing needs of society and to expand the horizon of job opportunities. On the recommendation of the Peer Team in the first cycle of NAAC accreditation, the Choice Based Credit System (CBCS) was introduced in BCA, MCA and M.Sc. (IT). After the second cycle, all Post Graduate courses are now following the semester system with an internal assessment system. All the departments have been instructed to prepare courses that are interdisciplinary in nature and could be proposed by them to students of all the streams under CBCS.

Any innovation has to be based on the felt needs of the stakeholders and also the preparedness of the existing machinery. In the present case, it may be said that both these conditions did not exist. There was hardly any demand for the semester scheme and the faculty as well as the students appeared pretty satisfied with the annual scheme. Indeed the faculty worked hard to frame fresh syllabi for the new scheme taking help from model UGC syllabi and other sources. But lack of teaching faculty and inadequate library resources has left the semester scheme in a poor condition. It may in brief be

described as a structure without substance. Moreover, the new scheme was introduced only at the University level. Its implementation also has been half-hearted and defective. The academic calendar has not been followed strictly as results are not declared in time in the University. It has been difficult to meet UGC Regulations about mandatory hours and days of actual teaching because of the co-existence of annual and semester schemes at Under Graduate and Post Graduate levels. Internal assessment in most of the faculties lacks quality because faculty is limited and also because students do not put much labour. The gainers are the affiliated colleges that still follow the traditional annual scheme. Many University departments now do not have sufficient strength of students. It is observed that some are even on the verge of closure due to lack of students. Even as the University was struggling with the semester scheme, the CBCS was introduced in all faculties since 2017-18. The syllabi for the new system were framed without much deliberation. Mostly it was jugglery with the semester syllabi. The first semester has only core courses. Most of the teaching is being done by guest faculty. Problems started when skill-based courses were initiated in the second and fourth semesters. What all this implies is that on the surface everything may appear to be smooth but it is the quality learning that suffers. Students will pass out and get their degrees but their learning level is something that bothers them.

Teaching-Learning and Research

In the first cycle the Peer Team recommended a self-assessment system for the University and to follow the same University instituted a system wherein under the Performance Based Appraisal System (PBAS), the faculty have to submit their annual academic performance indicators (API). All departments are required to submit their annual report. An inbuilt mechanism of academic audit took place by a regular SWOT analysis of departments; the last was done in January-February 2017. Each department made a presentation of its achievements and its vision in front of the newly appointed Vice-Chancellor. Regular meeting of Departmental Committees and the Academic Council is also ensured. At MLSU as per the recommendation of the NAAC team in the first cycle, the University introduced a feedback form on its website through which feedback can be submitted online.

On the recommendations of the NAAC Peer Team, students are now being assigned projects which require extensive research enriching their subject knowledge and also imparting comprehension and good writing

skills. Student seminars are held regularly which is instrumental in soft skill development. Some external institutions like (Physical Research Laboratory) PRL, The Inter-University Centre for Astronomy and Astrophysics (IUCAA) are associated with the University for student project work.

After the second cycle, changes are not very dramatic but subtle changes are observed there. The faculty is more sensitised to write a research paper and prepare proposals for research projects. It was felt that with an 'A' grade in the pocket, there will be healthy academic competition among the faculty. In this study, one of the most pressing reasons which 77 per cent of students mentioned to choose Mohanlal Sukhadia University at the time of admission was that it is a NAAC accredited 'A' Grade University. It means the NAAC rating has enhanced the reputation of the institution.

Resource Development and Funding

In the first round of NAAC assessment, a severe shortage of permanent faculty/and non-teaching staff was felt by the Peer Team. This serious lacuna was remedied by large-scale recruitments in 2011-2012 and additional appointments thereafter. In 2011-2012, more than 86 faculty recruitments were done. Two rounds of selections were done for administrative and technical staff after 2013 in which about 60 appointments were made. In the second cycle also NAAC Team again found that full-time regular faculty is inadequate in the University. The University, therefore, is pursuing the matter with the state government. Nearly 120 posts are lying vacant. Some of these have been advertised and the rest are lying vacant from even before 2009. University authorities have requested the government for filling the vacant posts. As a result, in 2018 nearly 100 faculty members were selected at all the three levels. However, even now many positions are lying vacant.

The Peer Team in the first cycle recommended that in order to generate funds, MLS University should promote consultancy services in the University. Though consultancy is limited but the University now generates additional revenue from self-financed courses, paid seats in the regular courses and by renting out the auditorium. The University was appointed by the state government to act as a nodal agency for medical courses and teacher training courses. University generated about Rupees two crore during 2010-14 through PCPMT (Private Colleges Pre-Medial Test of Rajasthan), Basic School Teaching Course (BSTC) admission tests and departmental recruitment for Rajasthan Government.

After the University was accredited with an 'A' grade in the second cycle securing a grade point of 3.11, it was expected that it will lead to a change in the approach of the UGC and the State Government towards the institution. It was felt that now all pending sanctions from the UGC and the state government will be cleared soon. In the initial few months, one can notice a more positive approach from the state government and also its representatives at the University i.e., the Registrar and the Comptroller. However, this optimism was soon replaced by the same old indifference of the state government and no special treatment was accorded by the UGC. The RUSA programme did not differentiate between better-graded universities and the relative non-performers. However, one positive impact was the confidence of the teachers in interacting with colleagues based in other universities. Often, the 'A' grade became an opportunity to display on public platforms. The major benefit of the NAAC assessment in the second cycle and 'A' grading for the University is that University became a part of the GIAN Project of the MHRD. A few departments also got benefited from this. The Department of Physics is expected to become the National Advanced Centre and Departments of Geology, Botany and Zoology are covered under SAP of UGC. The faculty feels that an 'A' grade will enable the University to sign MoUs with other institutions.

Infrastructure and Learning Resources

Peer Team in the first cycle recommended that infrastructural facilities in the Department of Environmental Sciences and Biotechnology should be improved. A new building with full-fledged, well-equipped laboratories for UG/PG students, research laboratories, seminar halls and other infrastructure had been constructed on the main University campus for the Departments of Environmental Sciences and Biotechnology. Several new buildings have been constructed and improvements in the existing infrastructure have been made as per the advice of NAAC.

Since the first accreditation, up-gradation was done in the University library. E-books and research journals are now made available through INFLIBNET. Due to the NAAC Team recommendation, the working hours of the library have been increased. Although the college libraries function between 10 a.m. and 5 p.m., the University Central Library remains open till 8 p.m. during summers and the e-library section is open on holidays also. Ramps have been placed for ease of use for differently able learners and adequate access to computers and other facilities have been included on the ground floors of libraries/offices. On the recommendation of the Peer Team

in the second cycle to fully utilise the National Knowledge Network (NKN) and e-resources available with the library, the Central Library started seven days E-Resources Workshops for faculty members and students.

Student Support and Progression

The Peer Team commented that there was scope for further improvement of student placement. The Placement Cell of Science College announced the tie-up of MLS University with Aspiring Minds Assessment Pvt. Ltd. to address the issues of employability and limited access to opportunities for its students and affiliated colleges. Through the MLSU-AMPEAR (Aspiring Minds Programme for Employability Assessment and Recruitment) Programme, more than 2000 students from a constituent and various affiliated colleges participated in the first round of assessments in September 2011. Since then this exercise is held every year and more than 100 students have found placement in reputed companies. A central placement portal (www.myamcat.com/mlsu) was set up for students in Udaipur, Sirohi, Rajasmand, Pratapgarh, Dungarpur, Chittorgarh and Banswara on which regular updates on the placement programme are announced.

A major problem that students in this part face are their proficiency in the English language and their overall writing skills. Although a soft skill centre was established after the recommendation of NAAC nothing much is achieved in this direction. To meet the needs of working students, self-finance courses have been started and are conducted at times where they can attend college. Thus many courses in the College of Commerce start much before office hours or after office hours to adjust working students. From the academic session 2017-18, a self-finance Bachelor of Arts course was started to give place to those students who do not want to go to private college because of the hefty fee structure. After the second round of NAAC, a Skill Development Cell was established in the University on the recommendation of the NAAC team to promote entrepreneurship. Student Portal has been created on the website of the University where students can get full information regarding classes, attendance, examination and assignments, etc. The Integrated University Management System (IUMS) was introduced more recently which takes care of 33 services in the University and is supposed to be a major game-changer.

Other Initiatives

On the suggestion of the Peer Team in the first cycle to launch welfare schemes for employees, the University started the facility to provide housing loans, conveyance loans and clean loan facilities to all employees at a very nominal interest rate and easy installments. Due to the recommendation of the Peer Team, the Alumni Association of the University and Grievance Committee to look into various student problems was constituted. The association mainly concentrates on developing liaison with alumni, facilitating placement and arranging assistance for research activities. This Alumni Association contributed generously to build the University Guest House. A College Development Council (CDC) was constituted to coordinate the academic and development activities of the affiliated colleges on the recommendation of NAAC. It helps in assuring the quality at affiliated colleges and bridging the gap between University and affiliated colleges. As the NAAC team recommended increasing the meetings of IQAC in the second cycle, the frequency of IQAC meetings has increased. Efforts have been made by the IQAC to streamline the documentation. IQAC is asking the departments and faculty members to submit the annual reports and API forms regularly on the annual basis. Thus working of IQAC has improved due to the suggestions of NAAC. The NAAC team also recommended that in place of college structure, units need to be departmentalised and faculty/school structure should be promoted. Accordingly, the University has approached the Chancellor to permit necessary changes in the nomenclature. Recruitment of nearly 60 non-teaching staff was done in the year 2015. As a result, many employees who were working either through an agency or in a temporary capacity got absorbed as permanent employees. Much emphasis is being given on campus beautification now. The action is taken and barriers to action are given in Table 1.

Table 1
Summary of NAAC Peer Team Recommendation and Progress at the MLS University

S. No.	NAAC Recommendation	Responsible University Unit	Action taken	Barriers to action
1.	Recruitment of faculty	Recruitment section headed by Registrar	Approached state government	The reluctance of State Government*
2.	Creating new teaching positions	Academic Council based on Faculty recommendations	No progress so far	Existing posts are not being filled
3.	Uniform nomenclature about college	State Government	University has written to the Chancellor for statutory change	Yet to hear from the government
4.	Relocation of the central library	Estate Office/PWD	No action	Financial crunch
5.	Facilities for differently able students	Respective units	Progress taking place	-
6.	Shifting of the library to a new building	Central Library	Progress taking place	-
7.	Consultancy with University-Industry interaction	Faculty of management and commerce	Meetings held with Udaipur Chamber of Commerce	Action to be concretised

*In 2017 University got sanction for the recruitment of 30 vacant posts only (out of 123 total vacant positions).

Comparison of NAAC Assessment with Students' Assessment about Quality of MLSU

As discussed earlier, different stakeholders have different meanings of quality and they judge the quality of HEI from their perspective(Liu, 2016). Here we try to compare the NAAC assessment of the quality of MLSU with the student's assessment to look at the quality of MLSU from two different perspectives. NAAC uses seven criteria framework for assessment and accreditation (A&A) of any higher education institution. These seven criteria are: curricular aspects; teaching-learning and evaluation; research consultancy and extension; infrastructure and learning resources; student support and progression; governance, leadership and management; institutional values and best practices. In this analysis, scores at a four-point scale given to the University by the NAAC on each of these seven criteria are used. In the survey of students of MLSU a question "If you were the member of a team evaluating or assessing your University how would you rate your institution on each of the 10 following indicators?" was asked. The 10 indicators were: curriculum and courses; teaching and learning; evaluation and examinations; research; infrastructure; learning resources; co-curricular activities and sports; student support and progression; governance, leadership and management; administrative functioning, communication

and support to students during admission registration or filling examination forms. Students rated the University on a five-point scale as 1: Highly Unsatisfactory, 2: Unsatisfactory, 3: Neutral, 4: Satisfactory, 5: Highly Satisfactory. To compare the grading given by the students to NAAC grading, 10 indicators of the student survey were modified and converted into six (institutional values and best practices were not included in student survey) to make these comparable with NAAC criteria. For this 'teaching and learning' indicator was merged with the 'evaluation and examination and infrastructure' indicator with learning resources. Since the distribution of score points for every indicator was very skewed, the median is used to compute the average cumulative grade for each indicator and then these median ratings were converted to a four-point scale with the help of a simple shifting of scale formula. Table 2 shows how the NAAC assessed the University on quality parameters and what actually the students think about this.

Table 2
Students' Perception and NAAC Assessment of the Quality of MLSU

S. No.	Criterion (1)	Weight (As Per NAAC Criterion) (2)	Students Grading* (Converted to 4 Point Scale)		NAAC Grading# (4 Point Scale)	
			Weighted Grade Point (3) [(4)*(2)]	Grade Point Average (4)	Weighted Grade Point (5)	Grade Point Average (6) [(5)/(2)]
1	Curricular Aspects	150	466	3.11	450	3
2	Teaching-Learning and Evaluation	200	630	3.15	660	3.30
3	Research, Innovations and Extension	250	760	3.04	770	3.08
4	Infrastructure and Learning Resources	100	296	2.96	330	3.30
5	Student Support and Progression	100	304	3.04	300	3
6	Governance, Leadership and Management	100	294	2.94	300	3
7	Institutional Values and Best Practices	100	-	-	300	3
	Overall Grade (on the Basis of Six Criteria)		3.06 (=Col 3 Total for six criteria/ Col 2 Total for six criteria) 'A' Grade		3.12 (=Col 5 Total for six criteria/ Col 2 Total for six criteria) 'A' Grade	
	Overall Grade (on the Basis of Seven Criteria)		-		3.11 (=Col 5 Total for seven criteria/ Col 2 Total for seven criteria) 'A' Grade	

*Computed on the basis of data collected through questionnaire
#www.mlsu.ac.in

Table 2 shows that there is not much difference between the overall grade points given by NAAC and grade points computed based on student's responses for the accessing quality parameters of MLSU. Even though criteria-wise analysis shows there is a significant difference between them regarding some parameters or criteria. Students rated 'infrastructure and learning resources' as 2.96 out of 4 whereas NAAC rated it at 3.30. Similarly, on 'governance, leadership and management' students rated the University at 2.94 and NAAC at 3. At two parameters 'curricular aspects' and 'student support and progression' students rated MLSU by higher scores than NAAC. It proves that though the perspectives and methodologies of NAAC assessment and student's assessment are different yet there is not much variation in their grading of the quality of MLS University. Compared to the NAAC Peer Team, the assessment done by the students was more stringent.

Conclusion and Policy Suggestions

The experience of MLS University establishes that a NAAC visit is looked upon with utmost gravity and seriousness by the administration as well as the teaching faculty. The exercise gears up the machinery and many efforts are made to put the best step forward. The different rounds of NAAC assessment in the University have showcased the strengths and weaknesses of the University. The reports are mirror images and a fair as well as generous assessment of the institution. As a result of the exercise, the institution has made sincere efforts to improve its functioning both in the academic and administrative fields. There is a greater degree of awareness among the faculty about the requirements of the NAAC. In fact, the urge to secure a good assessment grade has now become a regular feature among the teachers and staff of the institution.

External assessment has made many positive changes in the working of MLS University but these are more infrastructural and physical in nature. Through external assurance, the internal quality assurance processes have also been improved in the University, including academic staff development, curricula, student support systems. But there is limited evidence supporting that pedagogical techniques and stand of student learning had improved, which is the ultimate outcome expected from quality assessment schemes. Some changes which NAAC recommended were adopted by the University half-heartedly since these were not suitable according to its environment, like curriculum changes.

It has also been observed that even as the institution made its best effort and also succeeded in securing good grades, there are no concrete

corresponding initiatives by the state government till now to promote the University. The State Government treats all institutions at the same level. This acts as a disincentive for better institutions. It is required that the State Government facilitates those institutions which secure a good assessment. Programmes of incentives will gear up institutions to go for regular assessments by NAAC.

Though the working of NAAC is good, but every State University should send suggestions to make it's working proper. This provision has already been made and NAAC has started inviting suggestions. The task before NAAC is enormous as many institutions have to be assessed. But the NAAC has limited trained manpower to handle the task. There is a need for more senior people who can help NAAC in assessing institutions. NAAC has got a training centre in Bengaluru. There is a need to establish regional training centres for assessors. Otherwise, the process is smooth and new parameters, the 7-7 criteria, are very good and comprehensive. There are minor overlaps that need to be worked out.

Policy Messages for Quality Assurance Agencies

- External quality assurance agencies need to develop a separate criterion to assess central universities and state universities on the one hand and government and private colleges on the other;
- There is a need to directly link grading with financial assistance being given to an institution;
- External assessment may be done at a short notice if not absolutely unannounced;
- The time gap between two rounds of assessment may be reduced from five years to three years;
- NAAC needs to be decentralised on a regional basis to speed up the process of assessment and also broaden the scope of assessors;
- NAAC Peer Team for assessment of any institution needs to be decided in accordance with the SSR so that justice is done to all units within an institution;
- The duration of the NAAC Peer Team needs to be determined based on the SSR so that sufficient time is given to institutions to showcase their achievements;
- NAAC should develop some Ideal Profile of Central Universities, State Universities which could be a strategic profile of good quality universities viz. Some kind of a template of an average state university achieving 'A' grade;

- More interactive portals should be there on the website of NAAC. If some institution applies for assessment, a unique login id and password should be given and regular updates should be mentioned on the website.
- It is also required that the size of the self-study report needs to be shortened. More emphasis can be laid on physical verification and inter-personal interaction part and less on documentation formalities.
- Internal Quality Assurance Cell needs to be empowered and better equipped by giving it a proper office, staff and powers;
- Either NAAC or UGC must provide a separate budget for the functioning of IQAC;
- There should be regular interaction between NAAC and IQAC;
- University departments need to send annual reports to IQAC and that should be the basis of financial assistance to different units and departments of the University;
- The structure of IQAC needs to be broad-based to make it more effective;
- The Coordinator/Director of the IQAC must find ex-officio representation in all decision making bodies of the University;
- The IQAC needs to hold regular meetings with stakeholders such as heads of departments, administrative officers, students, alumni to create awareness about its functioning and also to sensitise them about the importance of regular quality promotion and maintenance.

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Nature and Extent of Climate Change in the Catchment Area of River Chambal: An Empirical Investigation

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The paper attempts to analyse the nature and trend of climate change in the Malwa region of Madhya Pradesh. This study aims to analyse the phenomenon of drought occurrence or gradual desertification concerning the whole of the catchment area of River Chambal i.e., the eight districts of Indore, Dewas, Dhar, Shajapur, Ujjain, Mandsaur, Ratlam and Neemuch by making use of moisture index. The study further attempts to empirically investigate with linear and quadratic regression models and the use of dummy variables that whether these districts have experienced climate change concerning selected eight climatic parameters over a century. The overall scenario of climate change has tried to be linked with the scenario of industrialisation and the study concludes that industrialisation seemed to have an externality effect on the climate profile of the less-industrialised districts as well. The study concludes that a positive impact was seen to be established in combating desertification through water-shed and water-harvesting programmes. The study thus directs policy towards strengthening the measures of water-harvesting in the region as a whole as an effective strategy of combating desertification.

Agriculture in Madhya Pradesh has remained rainfed and will continue to be so for the next few decades. The state is totally dependent on

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rainfall for its water requirements. The total rainfall in the state varies from 60 cm., over the extreme north and western parts, to 120 cm. over the central, eastern and southern parts of the state. Therefore, significant climatic aberrations or changes in climate will have a certain impact on the agricultural output of the state. Global warming in recent years with a shift in precipitation zones would bring more areas under drought, exposing the vulnerability of the countries affected. Monitoring the occurrence of droughts is helpful in various disciplines like administration, planning, agriculture and hydrology to take remedial measures. Drought is a period of drier than normal conditions that result in water-related problems. Agricultural drought occurs when soil moisture and rainfall are inadequate during the growing season to support healthy crop maturity and cause extreme crop stress and wilt. The drylands of the world are increasingly subject to desertification due to climate change and recurrent droughts.

It is thus extremely important to analyse the trend of climate change in the Malwa region of Madhya Pradesh and to know whether it is being significantly encroached by desert from that of the state of Rajasthan. Therefore, this study aims to analyse the phenomenon of drought occurrence or gradual desertification concerning the whole catchment area of River Chambal i.e., the eight districts of Indore, Dewas, Dhar, Shajapur, Ujjain, Mandsaur, Ratlam and Neemuch by making use of moisture index, drought index, and aridity index. The study further attempts to empirically investigate whether these districts have experienced climate change for a century (1901-2002) A.D. Then a time-series-based linkage has been tried to establish between climate change pattern and drought occurrence.

Literature Review

Human activity, economic development, and ecological evolution have been closely linked with changes in climate (temperature and precipitation) and environment (drought and wetness) (Qian and Zhu, 2001). Region-specific climate change analysis thus becomes important in this regard. The question of whether climate has significantly changed on a regional basis is of substantial interest and requires a better understanding of climate behaviour and climate impact on problems associated with ecological, economic and social matters. Having sufficient information about the climatic change in the recent past is also necessary to improve the certainty and accuracy of estimates about the future, and the role of this information is particularly important in the assessment of regional climate change (Brunnetti, Buffoni, and Mangianti, 2004). Analyses of climate change

and its impacts over the past centuries have been performed on global, hemispheric and regional scales (Onate and Pou, 1996). A large number of climate change studies have also appeared investigating the impact of temperature and precipitation anomalies on the life-supporting environment (Gruza, Rankova, Razuvaev, and Bulygina, 1999).

The fluctuations in rainfall are much more complicated than the temperature fluctuations on a global scale or even on a regional scale. In a lead study, it was reported that the monsoon rains from Africa to India decreased by more than 50 per cent from 1957 to 1970 (Winstanley, 1973) He predicted that the future monsoon rainfall, averaged over 5 to 10 years is likely to decrease to a minimum around 2030 A.D. and he arrived at a hypothesis that there is a southward movement of Sahelian and Rajasthan deserts. However; recurrent droughts and wet periods are typical characteristics of a tropical area. Hence; the hypothesis needs revision in light of the current data. In order to identify the water scarcity or drought situations and their severity, it is very important to understand the water balance process over the earth. Large scale droughts were observed in 1391-1920 and 1961-75 (Bhalme and Mooley, 1980). Different aspects of drought in India have been covered extensively in some studies (Mooley and Parthsarathy, 1983), (Chowdhury, Dandekar, and Raut, 1989). According to the water balance approach, drought is described as the condition when the amount of water needed in the form of evaporation and transpiration exceeds the moisture supply that is available as rainfall and soil moisture (Thornthwaite and Mather, 1955). It thus depends on the specific characteristics of an area. It is interesting to note that for one site and one climate, a unique meteorological dataset exists. This uniqueness is important in the way that the resulting cardinality is the product of site and climate cardinality. As for the climate change experimental plan, there is a specific association of climate and site resulting in meteorological data (Lardy, Graux, Gaurut, Bellocchi, and Hill, 2011). Based on this data regional climates can be extremely variable from year to year resulting in recurrent droughts and floods. This, in turn, can severely affect the climate-dependent agrarian economy. This paper thus aims to explore the temporal behaviour of meteorological data from the real climate observations gathered from ground-based meteorological stations in the catchment area of river Chambal in the state of Madhya Pradesh.

Study Area

Madhya Pradesh is popularly known as an agriculturally dominated state which is endowed with rich natural resources and forests. Till date, its

ecological balance is within the limit but in the future when population pressure will mount and consequently agricultural output demand will rise and this ecological balance will be disturbed. As we know that the impact of climate change differs from region to region. Therefore, it is necessary to study the effect at the regional level. This specific study is related to the catchment area of the river Chambal. A catchment area as may be noted is the area of land bounded by watersheds draining into a river basin or reservoir. It is also known as a catchment basin, drainage area or drainage basin. It may be more appropriately defined as the entire geographical area drained by a river and its tributaries; an area characterised by all run-off being conveyed to the same outlet. River Chambal, a principal tributary of river Yamuna, originates in the Vindhyan ranges near Mhow in Indore District of Madhya Pradesh, at an elevation of 354 m, at latitude 22°27' and longitude 73°20'. The river flows through the states of Madhya Pradesh, Rajasthan and Uttar Pradesh. The basin is roughly rectangular, with a maximum length of 560 km in a northeast-southwest direction.

Broadly the catchment area of River Chambal may be termed as Malwa Region. It is located in the south-western part of the Madhya Pradesh and generally slopes towards the north. It is spread across 45,628 square kms. The Malwa region mainly covers the districts of Indore, Dewas, Ujjain, Dhar, Mandsaur, Ratlam, Neemuch, and Shajapur. The study area of Malwa Plateau lies in the south-west part of Madhya Pradesh which has special significance because the climatic conditions here are much different as compared to the other parts of Madhya Pradesh. This region is semi-arid and is normally dry for most of the year except monsoon. The area feeds almost 80 per cent of the water to Gandhi Sagar Dam. The average rainfall is about 33 inches but the surface water utilisation in the region is low mainly because the run-off of the river is used to feed the Gandhi Sagar Dam. It is then exporting water to the downstream area of Uttar Pradesh, Rajasthan, and Gwalior region of Madhya Pradesh. The region is thus forced to exploit groundwater for its irrigation needs (Gupta and Kawadia, 2003). As a result, the groundwater level in the region has reached to a dangerous level. The feature of the area is described as *pag-pag-roti-dag-dag-neer* and nights were pleasant even during the summer season. The area is now facing extreme cold, heat and rains. The moisture content in the soil has reduced and thus, sowing the seeds of desertification of the region (Gupta, Kawadia, and Attari, 2007).

Rainfed farming is the traditional practice with the cultivation of grains, pulses (moong, blackgram and pigeonpea) and groundnut in this

region. In the Rabi season, wheat and gram are cultivated mostly under irrigated conditions. The natural vegetation comprises tropical dry and moist deciduous forests. However, rich farmers grow rice, wheat and gram and, sometimes cotton (though cotton has mostly got shifted to the Nimar area of the state) using irrigation facilities. It faces constraints in the form of susceptibility of the soils to severe erosion hazards. Cracking clayey soils have narrow workable moisture conditions for agriculture.

Objectives and Research Methodology

The salient objectives of the paper are: (i) to measure the extent of desertification using a moisture index/drought index/aridity Index for the districts lying in the catchment area of river Chambal and (ii) to analyse the nature and extent of climate change in the catchment area of River Chambal.

For climate change analysis; eight climate variables namely temperature, precipitation, vapour-pressure, wet day frequency, diurnal temperature range, cloudcover, reference crop evapotranspiration and potential evapotranspiration have been used in the paper to study the pattern of climate change. Linear and quadratic regression models have been used to study the pattern of changes in chosen climate indicators over a period of time. The seven-year moving average method has been used to smooth the trend of time-series fluctuations. The dummy variable has been used to study whether there is a shift in the pattern of various climate indicators at a predetermined point i.e., the year 1940. This study is thus acting as a basis for understanding the climatic profile of the region as a whole. It can further be extended to establish linkages concerning changes in agricultural production trends and practices.

A. Drought Analysis

Computation of Moisture Index abbreviated as MI (Thornthwaite and Mather, 1955) was simplified using annual average data (Krishnan, 1992) as

$$MI = [(P-PE) / PE] * 100$$

Where; P = Precipitation; PE = Potential Evapotranspiration

The values of the index correspond to the humidity or aridity of an area. If the value of the index is positive then the atmospheric condition is humid and the negative index value represents a dry climate condition. Based on MI value, the climate of each district is identified as in table 1.

Table 1
Moisture Index Value per Zone

Value of MI	Climate zone
< -66.7	Arid
-66.7 to -33.3	Semi-arid
-33.3 to 0	Dry sub-humid
0 to +20	Moist sub-humid
+20.1 to 99.9	Humid
100 and More	Per-humid

B. Analysis of Nature and Extent of Climate Change

The climatic condition of the region was analysed using secondary data based on various indicators which constitute weather conditions in the region. The annual average of the following indicators was used between 1901 and 2002 for the districts to study the nature of climate change in the region.

1. *Average Temperature (UNIT: integer/degree Celsius):* The average daily air temperature, for each month and as an annual statistic, calculated over all the years of record.
2. *Precipitation (UNIT: Integer/mm):* The arithmetically averaged total amount of precipitation recorded during a calendar month or year. Both mean and median rainfall are included in these statistics, although from the meteorological point of view the median is usually the preferred measure of 'average' or 'typical' rainfall. This is because of the high variability of daily rainfall - one extreme rainfall event (such as a slowly moving, severe thunderstorm) will have less effect on the median than it will have on the arithmetic mean.
3. *Vapour Pressure (UNIT: Integer / hPa) i.e., hectopascal (1 hPa ≡ 100 Pa):* It is the pressure exerted by the water present in an air parcel. This pressure is one of the partial pressures that make up the total pressure exerted by an air parcel. The vapour pressure increases as the amount of water vapour increases.
4. *Wet Day Frequency (UNIT: Integer/Days):* It is the proportion of wet days (among all days in the data).
5. *Diurnal Temperature Range (UNIT: Integer/degree Celsius):* It is the difference between the daily maximum and minimum temperature. Changes in diurnal temperature range i.e., DTR have multiple possible causes (cloud cover, urban heat, land-use change, aerosols, water vapour and greenhouse gases). Different regions are affected by different factors. Some researchers say the decrease of DTR is

evidence of climate change. Others say the decrease in DTR levelled off in the 1990s.

6. *Cloud Cover (UNIT: Integer/per cent):* A cloud in the atmosphere is a visible collection of minute particle matter, such as water droplets and/or ice crystals, in the air. Condensation nuclei, such as smoke or dust particles, form a surface around which water vapour can condense and create clouds. Cloud cover is the state of the sky when it is covered by clouds.
7. *Reference Crop Evapotranspiration (UNIT: Mm/Day):* The evapotranspiration rate from a reference surface, not short of water, is called the reference crop evapotranspiration or reference evapotranspiration and is denoted as ETo. The reference surface is a hypothetical grass reference crop with specific characteristics. The only factors affecting ETo are climatic parameters. Consequently, ETo is a climatic parameter and can be computed from weather data. ETo expresses the evaporating power of the atmosphere at a specific location and time of the year and does not consider the crop characteristics and soil factors.
8. *Potential Evapotranspiration (UNIT: mm/day):* It is defined as the amount of evaporation that would occur if a sufficient water source were available. If the actual evapotranspiration is considered the net result of atmospheric demand for moisture from a surface and the ability of the surface to supply moisture, then PET is a measure of the demand side. Surface and air temperatures, insolation, and wind all affect this. A dryland is a place where annual potential evaporation exceeds annual precipitation. Potential Evapotranspiration is being denoted as PET.

The main source of data for this study concerning all the eight districts of the region for the chosen climate variables as a monthly mean for all the years ranging from 1901-2002 is the site of India Water Portal Met Data (Indian Meteorology Department, 2016). Then yearly averages of these monthly means have been calculated for different years for the study. Some more information has been extracted from the website of the Indian Meteorological Department.

The regression analysis has been used to study the nature of trends in chosen climate variables. The final equation used in the study is:

$$Y = a + bT + cT^2 + D + U$$

Here Y is the climate variable whose variation with time has been attempted to be analysed.

T is the time period of the study in terms of the number of years.

T^2 is the square of the time period in terms of number of years.

D is the dummy variable used in the study. The value of D is 'Zero' till 1940 and 'One' thereafter. If the coefficient of dummy variable comes significant it will indicate that the year 1940 is the point from where a sharp change in the trends of variation of variables is seen. If not; then it will be concluded that no such trend has been experienced. The year 1940 has been selected from an appropriate literature review regarding climate change. A seven year moving average has been used to smoothen the trend of time-series fluctuations.

Results and Analysis

Moisture is most inadequate in arid zones followed by semi-arid and dry sub-humid regions (As depicted in Table 1). From moist sub-humid zones onwards, the moisture is adequate for normal crop production. The eight districts of the Chambal basin have been categorised into their prevailing climate zone based on the average moisture index obtained from the climate data spanning almost over a century. The nature of the trend has also been tried to be identified with the help of regression equation and trend line.

Table 2
District Categorisation as Per Moisture Index

District	Value of Average Moisture Index	Climate Zone	Nature of Trend
Indore	-67.61	Arid	No Change
Dewas	-61.18	Arid	No Change
Dhar	-68.45	Arid	Increasing Trend*
Mandsaur	-59.97	Semi-Arid	No Change
Neemuch	-63.05	Arid	No Change
Ratlam	-61.29	Arid	No Change
Shajapur	-58.26	Semi-Arid	No Change
Ujjain	-60.73	Arid	No Change

*Coefficient significant at 5%.

It is analysed that six out of eight districts of the study area fall in the arid zone while the remaining two belong to the semi-arid zone; as per the calculated Thornthwaite Moisture Index. There has also been no significant change in the trend of the moisture index for the districts as per the centurial climate data. Only the Dhar district is depicting a significant increasing trend in the moisture index. This means that currently the district is under the 'arid' zone but gradually it will move into the 'semi-arid' zone. With Dhar; there would be three districts in the semi-arid zone namely Dhar, Mandsaur

and Shajapur. Rest all the districts would be in the 'arid' zone. We therefore can conclude that no efforts have been made to shift the area from arid to semi-arid or humid zones.

Comment on Special Characteristics of Dhar District

As per the moisture index, only the Dhar district has shown a significant increasing trend. This means that currently the district is under the 'arid' zone but gradually it will move into the 'semi-arid' zone. This can be well understood in the backdrop of the special focus Dhar has received in the past as a drought-prone district.

Integrated Mission for Sustainable Development (IMSD) study was initiated in the year 1987 (Rao, et al., 1997) with specific reference to find a scientific and lasting solution to mitigate droughts. Droughts have been a recurring feature in Indian agriculture in the time span 1991-2000; and also, earlier. Thus; some special districts were selected for systematic investigation.

A specific study was carried out, in districts of Jhabua and Dhar, in Madhya Pradesh using Composite Land Development Sites (CLDS) approach for forest and wasteland development and soil and water conservation in 1995 (IMSD, 1995). This was followed by specific suggestions and treatments. Further, monitoring was done by Space Application Centre, ISRO, Ahmedabad (Dasgupta, Dhinwa and Rajawat, 2015). This was done through visual interpretation and analysis of temporal images of the region from 1991 to 2013. The study reveals that there is a substantial increase in the area of irrigated agricultural land with the increase in the number of check dams along with the stream channels. This has helped the Dhar district to move away from the arid zone towards the semi-arid zone.

Therefore, it is becoming clear that soil conservation, rain-water harvesting and management of non-arable lands for fodder, fruit and fuel-wood production in the watershed perspective are the core strategies of fighting drought in the arid zones of India. As various water harvesting measures were adopted into the Dhar district; the result came out in the form of increased agricultural productivity. Thus, a positive impact was seen to be established in combating desertification through watershed programmes. It is therefore needed that more such techniques are adopted in the remaining arid zones to prevent them from getting gradually converted into deserts and to ensure food security.

B. Climate Change Analysis

Weather and climate over the earth are not constant with time; they change on different time scales ranging from the geological to the diurnal through annual, seasonal, and intra-seasonal time scales. Climate change occurs on time scales ranging from annual changes associated with El Niño, through decadal changes, to multi-decadal trends linked to global warming (Saunders, 1999). Availability of observed data over more than a century or two helps us to understand the nature of climatic variations and any specific pattern they follow.

The specifically deals with (i) the pattern of climate change in the selected districts of the catchment area of Chambal river over a century, (ii) the trend and direction of change in climate-variables, (iii) the year of shift, if any; in the trends of change of climate-variables, and (iv) a comparative climate change analysis for all the districts under consideration. Two null hypotheses are being tested for climatic variation across the century for all the districts under consideration: (i) selected climate variables do not change significantly with increasing period of time, and (ii) no change in trend variation of climate variables is experienced around a specific point in time say around 1940s.

$$Y = a + bT + cT^2 + dD + U.$$

Here, Y is the climate variable whose variation over time we wish to analyse. T is the time period of the study in terms of the number of years and T^2 is the square of the time period in terms of number of years. D is the dummy variable used in our study. The value of D is 'Zero' till 1940 and 'One' thereafter. The year 1940 appears to be a year of significance mainly based on the literature review of climate related studies. Seven year moving average is used for smoothing the trend of time-series fluctuations.

Conclusion and Policy Implications

The overall scenario of climate change in the catchment area of the Chambal river can be seen in the following paragraph. It also helps in clearly understanding the similarities and dissimilarities in the nature and pattern of climate change among the eight districts of the catchment area.

1. Temperature increases significantly at an increasing rate in all the districts and the shape of the curve emerges like that of the alphabet U. Year 1940 acts as a significant turning point for Dewas district and Shajapur districts. For all other districts, no such trend shift is experienced concerning the year 1940.

2. Precipitation declines significantly with a diminishing rate over the period in all the districts and the shape of the curve acquires a clear-cut Inverted U shape. For precipitation, the year 1940 acts as a significant turning point only for the districts of Indore and Dewas. For all other districts, no such turning point is experienced.
3. Vapour Pressure increases significantly at an increasing rate in all the districts and the shape of the curve emerges like that of alphabet U. The year 1940 acts as a significant year of a turning point for the districts of Indore, Dewas, Dhar, Shajapur, and for Ujjain district. Wet Day Frequency is significantly declining but at a diminishing rate in all the districts. The year 1940 shows a shift in the trend towards a significant decrease for the districts of Indore and Dewas only.
4. The variable of the Diurnal Temperature Range does not depict any significant trend of variation in all the districts.
5. Cloud Cover increases significantly at an increasing rate in all the districts and the shape of the curve emerges like that of alphabet U. The year 1940 does not depict any significant shift in trend variation with respect to this variable in any of the districts under consideration.
6. Reference Crop Evapotranspiration increases significantly at an increasing rate in all the districts and the shape of the curve emerges like that of alphabet U. The year 1940 acts as the turning point for the districts of Dewas, Mandsaur, Neemuch, and Shajapur.
7. Finally, the variable Potential Evapotranspiration significantly declines but at a diminishing rate in all the districts and its variation acquires a clear-cut inverted U shape. The year 1940 does not depict any significant shift in trend variation with respect to this variable in any of the districts under consideration.

From the above discussion, it thus becomes apparent that the catchment area of river Chambal has experienced a uniform pattern in terms of the trend of variation in all the climate variables. A final summary of climate change analysis can be presented as under (i) the variables temperature, vapour pressure, cloud cover and reference crop evapotranspiration increases significantly at an increasing rate in all the districts under consideration; and the shape of their variation curve emerges like that of alphabet U, (ii) the variables precipitation, wet day frequency, and potential evapotranspiration declines significantly but at a diminishing rate in all the districts under consideration and the shape of their variation

curve acquires a clear-cut inverted U shape, (iii) the variable diurnal temperature range does not depict any significant trend of variation in all the districts.

The year 1940 acts as the significant turning point in the curve of variation in the following variables in the districts mentioned as under:

- Temperature: Dewas and Shajapur.
- Precipitation: Indore and Dewas.
- Vapour Pressure: Indore, Dewas, Dhar, Shajapur and Ujjain.
- Wet Day Frequency: Indore and Dewas.
- Reference Crop Evapotranspiration: Dewas, Mandsaur, Neemuch and Shajapur.

The overall scenario of climate change can be effectively linked with the scenario of industrialisation in the Chambal basin. The next step would be to search for an interlinkage between the two. As already established the climate change pattern has been almost the same in the whole of the region. However, the level of industrialisation has not been the same in different districts. The districts of Indore and Dewas are much more industrialised in comparison to Dhar, Mandsaur, Neemuch, Shajapur, and Ujjain. The concentration of carbon-di-oxide, smoke, aerosols, particulate matter, and many other greenhouse gases have also been much more in the former two districts in comparison to the other ones. Therefore, it was expected that the climate change scenario would be more pronounced and significant in Indore and Dewas in comparison to the rest of the districts which are primarily agriculture-based. In light of the comparison between the hypothesised and the actual outcomes about the pattern of climate change, it may be concluded that industrialisation seemed to have an externality effect on the climate profile of the less-industrialised districts as well. So, irrespective of the level of industrialisation and concentration of harmful gases in some particular districts in the region; the climate change experience has been the same due to negative externalities associated with them for the whole of the Chambal region. This is the most significant finding of the whole study and has important implications in the domain of policy-making for the region as a whole.

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Appendix 1.1
Comparative Climate Summary of All the Districts (Temperature)

	Indore	Dewas	Dhar	Mandsaur	Neemuch	Ratlam	Shajapur	Ujjain
Climate Variable Temperature	*It increases signifi-cantly at an Increasing Rate* and the shape of the curve emerges like that of alphabet U	*It increases signifi-cantly at an Increasing Rate* and the shape of the curve emerges like that of alphabet U with the year 1940 signifi-cantly acting as the turning point***	*It increases signifi-cantly at an Increasing Rate* and the shape of the curve emerges like that of alphabet U	*It increases signifi-cantly at an Increasing Rate* and the shape of the curve emerges like that of alphabet U	*It increases signifi-cantly at an Increasing Rate* and the shape of the curve emerges like that of alphabet U	*It increases signi-ficantly at an Increasing Rate*and the shape of the curve emerges like that of alphabet U	*It increases signifi-cantly at an Increasing Rate* and the shape of the curve emerges like that of alphabet U with the year 1940 signifi-cantly acting as the turning point*	*It increases signifi-cantly at an Increasing Rate* and the shape of the curve emerges like that of alphabet U

*Significant at 1 per cent significance level.
**Significant at 5 per cent significance level.
***Significant at 10 per cent significance level.

Appendix 1.2
Comparative Climate Summary of All the Districts (Precipitation)

	Indore	Dewas	Dhar	Mandsaur	Neemuch	Ratlam	Shajapur	Ujjain
Climate Variable Precipitation	*It is signifi-cantly declining with a dimini-shing rate*over time. Precipi-tation variation acquires a clear-cut Inverted U shape with the year 1940 as the turning point.*	*It is signifi-cantly declining with a dimini-shing rate*over time. Precipi-tation variation acquires a clear-cut Inverted U shape with the year 1940 as the turning point.*	*It is signifi-cantly declining with a dimini-shing rate*over time. Precipi-tation variation acquires a clear-cut Inverted U shape.	*It is signifi-cantly declining with a dimini-shing rate*over time. Precipi-tation variation acquires a clear-cut Inverted U shape.	**It is signifi-cantly declining with a dimini-shing rate*over time. Precipi-tation variation acquires a clear-cut Inverted U shape.	*It is signifi-cantly declining with a dimini-shing rate*over time. Precipi-tation variation acquires a clear-cut Inverted U shape.	*It is signifi-cantly declining with a dimini-shing rate*over time. Precipi-tation variation acquires a clear-cut Inverted U shape.	*It is signifi-cantly declining with a dimini-shing rate*over time. Precipi-tation variation acquires a clear-cut Inverted U shape.

*Significant at 1 per cent significance level.
**Significant at 5 per cent significance level.
***Significant at 10 per cent significance level.

Appendix 1.3
Comparative Climate Summary of All the Districts (Precipitation)

	Indore	Dewas	Dhar	Mandsaur	Neemuch	Ratlam	Shajapur	Ujjain
Climate Variable Vapor Pressure	*It increases signifi-cantly at an Increasing Rate* and The shape of the curve emerges like that of the alphabet U With the year 1940 showing a turning point.*	*It increases signifi-cantly at an Increasing Rate* and The shape of the curve emerges like that of alphabet U with the year 1940 showing a turning point*	*It increases signifi-cantly at an Increasing Rate* and The shape of the curve emerges like that of alphabet U with the year 1940 showing a turning point*	*It increases signifi-cantly at an Increasing Rate* and The shape of the curve emerges like that of alphabet U.	*It increases signifi-cantly at an Increasing Rate* and The shape of the curve emerges like that of alphabet U.	*It increases signifi-cantly at an Increasing Rate* and The shape of the curve emerges like that of alphabet U.	*It increases signifi-cantly at an Increasing Rate* and The shape of the curve emerges like that of alphabet U with the year 1940 showing a turning point. *	*It increases signifi-cantly at an Increasing Rate* and The shape of the curve emerges like that of alphabet U with the year 1940 showing a turning point. **

*Significant at 1 per cent significance level.
**Significant at 5 per cent significance level.
***Significant at 10 per cent significance level.

Appendix 1.4
Comparative Climate Summary of All the Districts (Wet Day Frequency)

	Indore	Dewas	Dhar	Mandsaur	Neemuch	Ratlam	Shajapur	Ujjain
Climate Variable Wet Day Frequency	*It is signifi-cantly declining with a diminishing rate*over time. Precipi-tation variation acquires a clear-cut Inverted U shape with the year 1940 showing a change in the trend towards a significant decrease.*	*It is signifi-cantly declining with a diminishing rate*over time. Precipi-tation variation acquires a clear-cut Inverted U shape with the year 1940 showing a change in the trend towards a significant decrease. *	*It is signifi-cantly declining with a dimini-shing rate*over time. Precipi-tation variation acquires a clear-cut Inverted U shape	*It is signifi-cantly declining with a dimini-shing rate*over time. Precipi-tation variation acquires a clear-cut Inverted U shape.	*It is signifi-cantly declining with a dimini-shing rate*over time. Precipi-tation variation acquires a clear-cut Inverted U shape.	*It is signifi-cantly declining with a dimini-shing rate*over time. Precipi-tation variation acquires a clear-cut Inverted U shape.	*It is signifi-cantly declining with a dimini-shing rate*over time. Precipi-tation variation acquires a clear-cut Inverted U shape.	*It is signifi-cantly declining with a dimini-shing rate*over time. Precipi-tation variation acquires a clear-cut Inverted U shape.

*Significant at 1 per cent significance level.
**Significant at 5 per cent significance level.
***Significant at 10 per cent significance level.

Appendix 1.5
Comparative Climate Summary of All the Districts (Diurnal Temperature Range)

District	Indore	Dewas	Dhar	Mandsaur	Neemuch	Ratlam	Shajapur	Ujjain
Climate Variable Diurnal Temperature Range	No Significant Trend	No Significant Trend	No Significant Trend	No Significant Trend	No Significant Trend	No Significant Trend	No Significant Trend	No Significant Trend

*Significant at 1 per cent significance level.
**Significant at 5 per cent significance level.
***Significant at 10 per cent significance level.

Appendix 1.6
Comparative Climate Summary of All the Districts (Cloud Cover)

	Indore	Dewas	Dhar	Mandsaur	Neemuch	Ratlam	Shajapur	Ujjain
Climate Variable Cloud Cover	*It Increases signifi-cantly at an Increasing Rate* and The shape of the curve emerges like that of alphabet U	*It increases signifi-cantly at an Increasing Rate* and The shape of the curve emerges like that of alphabet U	*It increases signifi-cantly at an Increasing Rate* and The shape of the curve emerges like that of alphabet U.	*It increases signifi-cantly at an Increasing Rate* and The shape of the curve emerges like that of alphabet U	*It increases signifi-cantly at an Increasing Rate* and The shape of the curve emerges like that of alphabet U	*It increases signifi-cantly at an Increasing Rate* and The shape of the curve emerges like that of alphabet U	*It increases signifi-cantly at an Increasing Rate* and The shape of the curve emerges like that of alphabet U.	*It increases signifi-cantly at an Increasing Rate* and The shape of the curve emerges like that of alphabet U.

*Significant at 1 per cent significance level.
**Significant at 5 per cent significance level.
***Significant at 10 per cent significance level.

Appendix 1.7
Comparative Climate Summary of All the Districts (Crop Evapotranspiration)

	Indore	Dewas	Dhar	Mandsaur	Neemuch	Ratlam	Shajapur	Ujjain
Climate Variable Reference Crop Evapo-Trans piration	*It increases signifi-cantly at an Increasing Rate* and The shape of the curve emerges like that of alphabet U	*It increases significantly at an Increasing Rate* and The shape of the curve emerges like that of alphabet U with the year 1940 signifi-cantly acting as the turning point**	*It increases signifi-cantly at an Increasing Rate* and The shape of the curve emerges like that of alphabet U.	*It increases significantly at an Increasing Rate* and The shape of the curve emerges like that of alphabet U with the year 1940 significantly acting as the turning point***	*It increases significantly at an Increasing Rate* and The shape of the curve emerges like that of alphabet U with the year 1940 significantly acting as the turning point***	*It increases signifi-cantly at an Increasing Rate* and The shape of the curve emerges like that of alphabet U	*It increases significantly at an Increasing Rate* and The shape of the curve emerges like that of alphabet U with the year 1940 significantly acting as the turning point*	*It increases signifi-cantly at an Increasing Rate* and The shape of the curve emerges like that of alphabet U.

*Significant at 1 per cent significance level.
**Significant at 5 per cent significance level.
***Significant at 10 per cent significance level.

Appendix 1.8

	Indore	Dewas	Dhar	Mandsaur	Neemuch	Ratlam	Shajapur	Ujjain
Climate Variable Potential Evapo-Transpiration	*It is signifi-cantly declining with a dimini-shing rate*** over time. Potential Evapo-transpi-ration variation acquires a clear-cut Inverted U shape	*It is signifi-cantly declining with a dimini-shing rate**over time. Potential Evapo-transpir-ation variation acquires a clear-cut Inverted U shape.	*It is signifi-cantly declining with a dimini-shing rate**over time. Potential Evapo-transpir-ation variation acquires a clear-cut Inverted U shape.	*It is signifi-cantly declining with a dimini-shing rate*over time. Potential Evapo-transpir-ation variation acquires a clear-cut Inverted U shape.	*It is signifi-cantly declining with a dimini-shing rate*over time. Potential Evapo-transpir-ation variation acquires a clear-cut Inverted U shape.	*It is signifi-cantly declining with a dimini-shing rate**over time. Potential Evapo-transpir-ation variation acquires a clear-cut Inverted U shape.	**It is signifi-cantly declining with a dimini-shing rate***over time. Potential Evapo-transpir-ation variation acquires a clear-cut Inverted U shape	**It is signifi-cantly declining with a dimini-shing rate ***over time. Potential Evapo-transpir-ation variation acquires a clear-cut Inverted U shape

*Significant at 1 per cent significance level.
**Significant at 5 per cent significance level.
***Significant at 10 per cent significance level.

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Economic Inequality and the Risk of Child Mortality and Malnutrition in India

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The paper analyses the inter-relationship between economic inequality, child mortality and malnutrition in India in the present developmental regime. The paper argues that the present concept of economic development is against equitable distribution of education and health care facilities. It argues that withdrawal of the state from welfare measures will lead to an alarming disparity across the society and it will constraint the development of women and children in the long run.

Introduction

All over the world, the 30th anniversary was celebrated for adoption of the Convention on the Right of the Child (CRC) in 2019. Article 6 of the Convention on the Rights of the Child (CRC) states that children have the right to live and governments should ensure that children survive and develop healthily. The Convention places a high value on the children's right to survival and states that children have the right to good quality health care, safe drinking water, nutritious food, clean and safe environment, and information to help them stay healthy. (Article 24 of CRC); and this is high time to look at the depravity of economic and wealth inequality from the child-centric approach.

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This paper seeks to establish that the level of malnutrition and child mortality rate is more amongst the economically underprivileged populations as compared to the others. If these rates are to be scaled down for the deprived populations, policy for equitable resource distribution and its responsible and restrained usage must be given priority. How the economic inequality and monopoly over wealth are rising in India, it will become more difficult for bringing about an effective reduction in malnutrition and child mortality rate. The targets for child rights and betterment must be implemented in tandem with those of economic equality. Inequality should not just be treated as an economic issue. The paper draws upon data from Credit Suisse Research Institute's Global Wealth Report 2018 and National Family Health Survey (Round 4, 2015-16).

Skewed Economic Development

The entire discourse on development revolves around economic development. After all, this economic development has given us such a glare to our eyes that we fail to see the rampant inequality. The myth of existing economic development seeks to create an overdrive of positivism. According to the Forbes Report 2018 (it studies and publishes exclusively on rich persons - their nature of work, lifestyle and wealth status across the world), there are 100 billionaires (whose wealth is measured in USD and not in INR) and whose total wealth is Rs. 32964 billion (equivalent to $492 billion).

As per the interim figures, the per capita income of India was INR 112,764/- per annum. With this measure being in place, the total wealth of the 100 persons in the top wealth echelons is equivalent to one year's income of 292.3 million Indians. The 2011 Census informs that India has a total of 245 million households. This means that 100 billionaires control the wealth of the country's entire population.

Forbes' Report informs that the year (2017-18) when the value of INR was falling, unemployment was on the rise. The farmer was committing suicide, the launch of Goods and Service Tax (GST) had jolted the economy; and in that year, the richest 250,000 families of India had earned wealth at the rate of INR 22 billion per day. On the contrary, an estimated 60 million persons were struggling with the predicament of unemployment. There was not a single USD billionaire in 1991 when policies of economic liberalisation had commenced. However, at present there are as many as 121 USD billionaires who have not only taken virtual control of India's economy but also literally exercise control over Indians' behaviour, consumption and even their understanding of what democracy means. In fact, the economic

liberalisation had duly determined that only those who have money will be able to access services and that gradually the government would shed the concept of 'welfare state'.

According to the OXFAM Report, the billionaires in India recorded earnings of INR 20913 billion in the year 2017-18. This amount was equivalent to the entire budget of the Government of India. In India, a highly placed officer gets a salary of INR 8600/- per day; whilst, virtually, no evaluation of the result of his work is carried out. However, an average daily wage of INR 187/- has been established for the worker under the Mahatma Gandhi National Rural Employment Guarantee Act (MNREGA) and that his remuneration is also linked to his work appraisal. One, thus, may see that at this level itself, there is a 46-times disparity. The wealth of India's richest industrialist, Mukesh Ambani rose by INR 3 billion every day. It is, therefore, a bit difficult to gauge its difference with the income of 80 million farmers and labourers. We know that the income of the richest person is 16 million times that of the labourer in India.

The Existing Status of Inequality

The information derived from the Credit Suisse Research Institute's Global Wealth Report - 2018 shows that India's total wealth was Rs. 3881.8 trillion. Out of this, the wealth equivalent to INR 3012.28 billion (78 per cent) was under the control of the country's wealthiest 20 per cent persons. The next 40 per cent of persons possessed wealth equivalent to INR 869.52 trillion (22.4 per cent). This segment is known as the middle class of India, which considers remittances of Equated Monthly Installment (EMI) for a two-wheeler, four-wheeler, HD television and home loan as life's biggest aims. This class of people does not consider the environment, drying up of rivers, increasing violence, communalism and democratic values to be of primary concern of their day-to-day life.

The poorest 20 per cent of the country are not only deprived of wealth (170 million persons), their wealth is rather negative at INR 34936 billion, as the Credit Suisse Research Institute's Global Wealth Report - 2018 reports. Credit Suisse has taken the financial capital earned by the families, their immovable property and the value of the landed property as the gross value in assessing their wealth for their study. Whilst doing so, the debt burden for the families has been subtracted. This report informs that the wealthiest 1 per cent of adults in India has wealth equivalent to INR 997.6 Trillion. It means that 1 per cent of Indians possess control over the total wealth of 80 per cent of Indians. Therefore, it is natural that the question

arises as to what freedom or public welfare can we expect from a dispensation that has vested control of economic development and sutras of economic policies in the hands of 1 per cent persons of countries population? Is it a mark of good economic policy that 1.34 billion people are made the colonials of the 1 per cent capitalists?

Table 1
Control over Wealth in India

Adult Population - in 20% Wealth Quintile	Total Population - in 20% Wealth Quintile	Second Quintile of Population	Wealth with Second Quintile in %	Wealth	Wealth	Wealth Per Person	Wealth Per Adult
In Million	In Million	%	of Total Wealth	In $ Billion	In INR Trillion	In INR	In INR
170.04	269.3	00-20	(-)0.9	-53.748	-34.9362	-129718	-205456
170.04	269.3	21-40	0.9	53.748	34.9362	129718	205456
170.04	269.3	41- 60	11.3	674.836	438.6434	1628688	2579618
170.04	269.3	61-80	11.1	662.892	430.8798	1599861	2533961
170.04	269.3	81-100	77.6	4634.27	3012.2768	11184617	17714899
850.2	1346.6	Total		5972.00	3881.8	2882633	4565696
8.50	13.5	0-1	25.7	1534.80	997.6226	74083673	117338375

Source: Credit Suisse Research Institute's Global Wealth Report 2018 (Global Wealth Report)

Genesis of Inequality

Inequality is not naturally born. Policies embedded with greed lead to its evolution. The country's resources and opportunities are ruined when the state dispensation is inanimate to the rising inequality. Rather, it is the disposition of economic policies that determines the kind of circumstances that will get formed in the society. What is even irksome is that even the laws passed by the Parliament in consistence with the Constitution are disregarded when it comes to implementation. A case in point is The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, No. 2 of 2007. Whilst the preamble to the Act states that '…whereas it has become necessary to address the long-standing insecurity of tenurial and access rights of forest-dwelling Scheduled Tribes and other traditional dwellers including those who were forced to relocate their dwelling due to state development interventions…', the huge rejections of their claims in the implementation of the Act speaks of wide gaps in policy and intent on the part of the state. The recent Supreme Court order (at the instance of certain vested interests in the guise of nature conservationists)

asking for their removal from their dwellings on account of rejection of the claims is a vivid example. Notably, the state did not come forward to 'defend' these vulnerable communities! According to the latest report (as of 30th November 2018) compiled by the Ministry of Tribal Affairs (GoI), out of 4.224 million forest rights claims filed (both individual and community forest rights), 1.894 million have been given title deeds, whereas approximately 1.939 million claims were rejected. The reality is that processes have not been followed as per the motive of this act and Forest-Wild Life Protectionists made all efforts for creating a case against the 'Co-Existence of People-Nature-Wile Life'.

The example of Pradhanmantri Matru Vandana Yojana (Maternity Benefit Program under National Food Security Act 2013) also shows that policy makers are comfortable in sacrificing empathy in the context of maternity entitlements. India's interventions to resolve the problem need to address the exclusionary approach adopted by the present government. The Pradhanmantri Matritva Vandana Yojana (PMVY) is a vivid example of the exclusion being perpetrated. It is notable that every single woman, whether a homemaker or working in the unorganised sector is not covered under any of the maternity entitlement legislation or scheme. In such a situation, 93 per cent of women are deprived of rest, nutrition, care and a supportive environment due to acute poverty or marginalisation. Whilst the Parliament of India enacted the National Food Security Act 2013 with a provision of maternity benefit of Rs. 6000 to all women who are not covered under any other maternity benefit scheme or legislation and that it spoke of universalisation amongst so that the excluded and the uncovered women are taken care of, but the conditionalities introduced by the Ministries in the Central Government have rather created further exclusion amongst the most marginalised.The terms and conditions state that the maternity benefit will only be given up to-the birth of the first child in three installments, if after receiving the first installment woman faces miscarriage or a stillbirth happens, respective installments will be deducted when she conceives next time. In a sense, the policy makers have ensured that even the maternity benefit does not reach the actual first living child of a family.

Further, whilst liberalisation and privatisation have concentrated capital and resources in the hands of a few, the state's dispensation has rather constricted its responsibilities about public rights, basic services, education, health and social security, etc. for facilitating the privatisation, on the other. With these services moving into the private sector, the deprived sections of society are not able to access these services because of their

inability to pay for the same. Thus, now we broadly find that we have two kinds of mechanisms in place. The state-governed education system - which too is afflicted with 10 types of schools, books, teachers and standards. The majority of the government schools are such that there are no teachers, the teachers those are there are untrained, basic infrastructure is missing and that their monitoring and accountability are conspicuous by its absence. In essence, these state-governed schools do not provide life-changing quality education. The state does not have a policy intended to strengthen it.

The other mechanism is that of the private sector's control over education. It is costly. Its approaches are such that the poor and the deprived people cannot relate themselves with them with the result that many of the children are rendered out of the schools. Here, education is a market with products. Here, the private sector does not have this belief that it is the right of every child to have quality education and that to afford it is its constitutional responsibility. It believes that these responsibilities are to be borne by the state.

Widespread disparities leave a deep imprint on the children. Social inequality sharpens economic inequality. Economic inequality extends and widens the range of poverty. The government runs the schools for the poor children but keeps their schools and the education system weak. The children coming out of these schools fail to bring about transformation in their lives and that the menace of inequality keeps on widening. The same logic applies to the health system too. The economic disparities have widened because of our economic policies. The sections of the society that is bearing the brunt do not get safe potable water, basic dwelling and health facilities. When he becomes ill, he is not able to access quality health care services. He gets caught in the vicious cycle of illness and deprivation.

As many as 93 per cent of women in India work in the disorganised sector. Nothing, be it their work, wages or economic security is secured. They do not get even their maternity entitlement. In its absence, they are required to undertake heavy work during pregnancy. They do not get adequate rest and that they do not access their complete entitlement pertaining to health and nutrition. Consequently, first, their delivery is risk-prone and secondly, the newborn does not get mothers breast milk immediately after the birth. This may lead to an outcome of stunted growth of the child, disability, child death and/or maternal death. As many as one-fourth of the children have low birth weight in our country. Further, in India, 58.4 per cent of children do not receive their mother's breastmilk (colostrum) immediately after birth and that 91.3 per cent of children do not

get complementary feed along with the continued breastfeed (NFHS-4, 2015-16)-post the exclusive breastfeedinguntil the first six months after the birth, with continued breastfeeding up to two years.

Out of the total deaths occurring in India, 12.4 per cent of deaths take place in age up to four years and that 45 per cent of these deaths occur due to pre-term birth, low birth weight and pneumonia. If the 93 per cent deprived women are given the maternity entitlement (comprising economic benefit, rest pauses, health care services and nutritious diet), this situation could turn around. However, at present, the situation is such that even the Pradhan Mantri Matru Vandana Yojana entails such conditions that the benefits reach the least number of women. Whether it be the private sector, organised sector or the state dispensation, only 7 per cent of women can access the entitlements.

When the parents and guardians are faced with the crisis of livelihood insecurity, they are not able to look after their children. They are compelled to compromise with health care services and quality of education. After all, poverty inhibits them from buying services from the open and profit-centered market. Not only this, the women are either not able to access health or counseling services during pregnancy or get poor quality services. Poverty inhibits the children, particularly the girls from accessing education. It affects them adversely as they are not able to make informed decisions about their reproductive health. This is not only a matter of principles. It is a fact that malnutrition and child mortality are closely linked with economic inequality.

Impact of Inequalities on Children and their Wellbeing

An Analysis of the findings of National Family Health Survey - Round 4 (NFHS-4) in terms of classification by urban and rural areas, it becomes clear that situation of malnutrition in the rural areas across the dimensions of 'stunting'[1] (low height-for-age), 'wasting'[2] (low weight-for-height) and 'underweight'[3] (low weight-for-age) is skewed towards pronounced disadvantage. In contrast to the urban areas where 31 per cent children suffer from 'stunting', 41.2 per cent of rural children are stunted. Likewise, there is a distinctive difference in respect of 'wasting'. As compared to 19.9 per cent of urban 'wasted' children, there is 21.4 per cent of rural children suffer from 'wasting'. In the case of underweight, the differentiation is even sharper. As many as 38.2 per cent of rural children are 'underweight' as compared to 29.1 per cent of urban children. When the situation is viewed from the perspective of social strata, it is observed that

43.8 per cent of Scheduled Tribe children and 42.8 per cent Scheduled Caste children are malnourished in terms of being 'stunted'. However, it is also noticeable that 19.1 per cent of children belonging to the socially as well as economically much better off Jain community are also 'stunted'. Likewise, 28.8 per cent of children from this community are also underweight. On the other hand, 45.3 per cent of children from the tribal community and 39.1 per cent of children from the Dalit community suffer from underweight.

Table 2
Status of Nutrition Based on Residence and Social Structure in Per Cent

Malnutrition Indicators	Urban	Rural	Total	Scheduled Tribe	Scheduled Caste	Jain
Stunting	31.0	41.2	38.4	43.8	42.8	19.1
Wasting	19.9	21.4	21.0	27.4	21.2	17.8
Underweight	29.1	38.2	35.7	45.3	39.1	28.8

Source: National Family Health Survey (4) 2015-16

Economic Inequality and Children's Status

In this part of the paper, India's population has been divided into five equal parts of 20 per cent each in terms of their economic status. We have seen in the foregoing discussion that 1 per cent of the population exercises control over the wealth of per capita income of the entire population of the country. The poorest 20 per cent people not only are without any wealth but that they are in a negative situation.

We are seeking to examine whether malnutrition and Child Mortality Rate in India bear any relationship with economic inequality or not. Findings of the National Family Health Survey - Round 4 (NFHS-4) indicate that economic poverty and economic diversity do bring to bear an enormous impact on children's lives. The implications are so severe that their lives are being destroyed and that for lifelong their psychological and physical capacities are also being snatched away. When capacities are snatched away, people get into the vicious circle of disparities.

Neo-Natal Mortality Rate and Economic Inequality

As per the National Family Health Survey - Round 4 (NFHS -4), India had Neo-natal Mortality Rate (NMR) at 29.5 per 1000 live births (newborns dying within the first month of their life). When the result was compared vis-à-vis the wealth index, it was found that the highest wealth quintile of 20 per cent section of the society had the Neo-natal Mortality Rate at 14.6 whereas it was 3 times, i.e., at 40.7 for the lowest wealth quintile 20 per cent households. The second wealth quintile (i.e., the next 20 per cent)

had the NMR at 34.2, the third (middle) quartile at 28 and the fourth one at 21.6.

We are aware that child marriages, teen pregnancy, lack of nutrition and poor reproductive-maternity health care services have their roles in causing neonatal mortality. It needs to be stated that the existing economic policies of the state desist it from carving out public welfare policies and that the policy implementation gets devoid of adherence to constitutional values.

Infant Mortality Rate (IMR) and Economic Inequality

The number of infant deaths occurring within one year of birth per 1000 live births is known as Infant Mortality Rate (IMR). As per NFHS-4, IMR stood at 40.7 per 1000 live births in the year 2015-16. Analysing against the wealth index, it is found that the highest wealth quintile of 20 per cent section of the society had IMR at 19.8 whereas that for the lowest wealth quintile had the IMR of 56.3, i.e., about three times.

Under Five Child Mortality Rate (U5CMR) and Economic Inequality

The children who die before celebrating their fifth birthday comprise child mortality. The number of children dying within five years of birth per 1000 live births defines the Under 5 Child Mortality Rate (U5CMR). As per the National Family Health Survey - Round 4 (NFHS -4), India's Under 5 Child Mortality Rate was 49.7. When analysed vis-à-vis the wealth index, a huge difference is noticed. It is found that the highest wealth quintile of 20 per cent section of the society had U5CMR at 22.6 whereas the indicator for the lowest wealth quintile stood at 71.7; a difference of more than three times. The second quartile had the U5CMR at 57.3, the middle one (third) at 46.1 and the fourth wealth quartile at 34.9.

Malnutrition (Stunting) and Economic Inequality

Height-for-age is a measure of linear growth retardation and cumulative growth deficits. It reflects chronic malnutrition. The National Family Health Survey - Round 4 (NFHS -4) informs that as many as 16.3 per cent of children in India are suffering from severe stunting. And that, this challenge is not uniform across all households. The highest wealth quintile of 20 per cent households has 7.8 per cent children who are severely stunted. On the contrary, the lowest wealth quintile of 20 per cent households has 25.7 per cent severely stunted children, i.e., three times.

Likewise, the proportion of chronically undernourished children (whose Z-score of stunting is below minus two standard deviations (-2 SD)

from the median of the reference population) stands at 38.4 per cent of children in India, a measure reflecting deepened food insecurity. More than half (51.4 per cent) of the children belonging to the lowest quintile of 20 per cent are stunted whereas the proportion of those in the second quartile stands at 43.5 per cent. Again, on the wealth index, 22.2 per cent of children in the highest wealth quintile suffer from this chronic undernutrition in the form of stunting.

Malnutrition (Wasting) and Economic Inequality

As per the NFHS-4, India has 21.0 per children who are acutely undernourished (thin for their height: (-2SD). The proportion stands at 24.2 per cent for the poorest quintile in contrast to that of 17.9 for the wealthiest quintile. The proportions for the severely 'wasted' children are at 8.7 per cent and 6.5 per cent for the poorest quintile and the wealthiest quintile respectively.

Malnutrition (Underweight) and Economic Inequality

The NFHS-4 reports that 35.7 per cent of Under 5 Children in India are underweight. The levels for the poorest and wealthiest quintiles stand at 48.8 per cent and 20.1 per cent respectively. As regards severely underweight status, India has 11.0 per cent children who suffer from this malnutrition, with the classifications for the poorest and the wealthiest quintiles being pegged at 17.8 per cent and 5.1 per cent respectively.

Height of Women - Their Low Body Mass and Economic Inequality

It is an established scientific fact that women having a height of 145 cm are more likely to come across reproductive complications. It is also treated as evidence of women's nutritional insecurity. The NFHS-4 informs that 5.6 per cent of women amongst the wealthiest quintile of 20 per cent have a height of less than 145 cm whereas 18.0 per cent of those from the poorest quintile have height shorter than 145 cm.

Further, as many as 22.9 per cent of women of age 15-49 years (who are not pregnant and who have not had a birth in the two months before the NFHS-4 Survey) in India are thin, represented by Body Mass Index (BMI) being lesser than the standard 18.5 Kg/M2. It is noticeable that there is a steady decrease in the proportion of thin women as household wealth increases (from 35.8 per cent in the lowest wealth quintile to 11.6 per cent in the highest wealth quintile. It is also observed that there is a steady increase

in the proportion of overweight or obese women (from 5.8 per cent in the lowest wealth quintile to 36.2 per cent in the highest wealth quintile).

Table 3
Status of Mortality in Children and Their Malnutrition Vs. Wealth Index

Indicators	Wealth Quintile					
	Lowest	Second	Middle	Fourth	Highest	Total
Neo-natal Mortality Rate	40.7	34.2	28.0	21.6	14.6	29.5
Infant Mortality Rate	56.3	47.2	39.1	29.6	19.8	40.7
Under 5 Child Mortality Rate	71.7	57.3	46.1	34.9	22.6	49.7
Stunted (-) 3SD	25.7	18.3	13.5	10.6	7.8	16.3
Stunted (-) 2SD	51.4	43.5	36.4	29.2	22.2	38.4
Wasting (-) 3SD	8.7	7.5	7.0	6.8	6.5	7.4
Wasting (-) 2SD	24.2	21.7	20.2	19.3	17.9	21.0
Underweight (-) 3SD	17.8	12.5	8.9	6.8	5.1	11.0
Underweight (-) 2SD	48.6	40.4	33.2	27.4	20.1	35.7
% women Height less than 145 cm	18.0	13.7	11.0	8.5	5.6	11.1
Thinness amongst women						
(BMI < 18.5 Kg/M2	35.8	29.5	23.1	17.1	11.6	22.9
Thinness amongst men						
(BMI < 18.5 Kg/M2)	31.9	26.6	20.5	16.3	10.6	20.2
Obesity (BMI ≥ 25.0 Kg/M2) amongst women	5.8	11.4	18.7	28.2	36.2	20.7
% With Diabetes	0.8	0.9	1.3	2.3	2.9	1.7
% With Goitre or any other Thyroid Disorder	0.7	1.1	1.8	2.7	4.3	2.2
% With Cancer	0.2	0.2	0.2	0.2	0.2	0.2
% Receiving ANC from a skilled Provider	57.1	76.2	85.6	90.4	94.1	79.3
Institutional Delivery	59.6	75.1	85.0	90.5	95.3	78.9

Source: National Family Health Survey (NFHS-4) 2015-16.

Linkages between Education with Malnutrition, Child Mortality and Domestic Violence

Economic inequality and poverty deprive a very large section of society of its right to education. It has also been observed that even after the implementation of the Right to Education Act, quality education has still not been universalised. In effect, efforts have been afoot to completely privatise school and higher education institutions. Findings of the NFHS-4 bring out that malnutrition; child mortality rate and violence meted out to women have a deep connection with education. The NFHS-4 points out that India had a Neo-natal Mortality Rate (NMR) of 29.5. It is notable that those families which had women completing 12 or more years of schooling had the NMR at 17.9 and that in those families where there was no schooling of the mothers, the Neo-natal Mortality Rate stood at 37.2. In respect of Infant

Mortality Rate (IMR), the average IMR was 40.5. However, the proportion was much lower at 23.5 for the mothers who had 12 or more years of schooling. On the contrary, the mothers who had had no schooling at all, their newborns perished, with the NMR at 53.2. The figure was slightly better at 51.2 for the mothers who had schooling for less than five years.The findings are further corroborated in the case of Under 5 Child Mortality Rate (U5MR) too. Those women had had schooling for 12 or more years, their children under five mortality rate was 26.5 and that the phenomenon rose to 67.5 for those women who had had no schooling at all.

Malnutrition and education of women also appear to be closely linked. The results of NFHS -4 indicate that children of the women who had 12 years or more of schooling had severe stunting at 8.7 in contrast to that of 24.8 in respect of children of women who had no education at all, a weakness of around three times. Similar findings are there for chronically undernourished children (whose Z-score of stunting is below minus two standard deviations (-2SD) from the median of the reference population) where the corresponding figures of stunting are 23.8 for women having had 12 or more years of schooling and 50.7 for those women who had no education. The difference is alarming and a cause of concern for us. The corroboration of deep linkage between underweight and education of mothers is also evidenced from the findings of NFHS-4. The proportion of underweight stood at 21.8 for children of mothers having had schooling of 12 or more years. On the contrary, the proportion rose to 46.8 for the children whose mothers had no education at all. The corresponding difference in the case of severely underweight stands at 5.5 and 16.5 respectively.

The results of the NFHS-4 also informed that as many as 24.4 per cent women were subjected physical, sexual, or emotional violence by husband in 12 months preceding the survey. Women's experience of violence declines sharply with women's schooling and wealth. By schooling, the percentage of women who report physical violence declines from 43.5 per cent among women with no schooling to 17.7 per cent among women with 12 or more years of schooling. Similarly, the experience of physical violence ranges from 45.8 per cent among women in the lowest wealth quintile to 19.2 per cent among women in the highest wealth quintile.

Table 4
Malnutrition, Child Death Rate, Violence and Women's School Education

Indicator	No School Education	<5 Years Education	5-7 Years Education	8-9 Years Education	10-11 Years Education	12 Years or more Education	Total Rate/%
Neonatal Mortality Rate	37.2	37.6	33.0	28.9	19.8	17.9	29.5
Infant Mortality Rate	53.2	51.2	43.3	39.8	27.9	23.5	40.5
Under 5 Child Mortality Rate	67.5	61.7	51.8	45.6	31.8	26.5	49.7
Stunted (-) 3SD	24.8%	18.5%	16.0%	13.3%	10.5%	8.7%	16.3%
Stunted (-) 2SD	50.7%	45.3%	39.8%	35.5%	29.7%	23.8%	38.4%
Wasting (-) 3SD	8.1%	7.6%	7.5%	7.1%	6.9%	6.9%	7.4%
Wasting (-) 2SD	22.7%	22.2%	21.6%	21.0%	19.8%	18.5%	21.0%
Underweight (-) 3SD	16.5%	12.6%	11.0%	9.3%	7.4%	5.5%	11.0%
Underweight (-) 2SD	46.8%	41.9%	37.6%	33.1%	28.5%	21.8%	35.7%
Anaemia (6-59 months Children)	64.8%	60.0%	58.7%	56.7%	55.0%	51.6%	58.4%
Women suffered violence by husband in last 12 months (Physical, Sexual or Emotional)	43.5%	41.5%	35.1%	30.6%	25.1%	17.7%	33.3%

Source: National Family Health Survey (4) 2015-16

Conclusion

It is necessary to look into and acknowledge children's education and within them that of girls' education from the perspective of addressing the goal of combating malnutrition, child mortality and domestic violence. The results of NFHS-4 points towards the need for the state to place special emphasis on quality and universal education. It must be recognised that the commercialisation of education has not only snatched away the right to education from the large chunk of the country's population but also the character and outlook of education has become anti-society.

It appears that the nature and disposition of economic policies for India's development which have been adopted are in effect serving the cause of concentrating wealth in the hands of a few. The intent does not appear to be addressing the creation of a mechanism that renders equitable distribution of resources and opportunities. The kind of definition of 'development' which we seem to be adopted has its natural consequences manifesting in unemployment, food insecurity, the crisis of health,

deterioration of quality in education, commercialisation and extreme economic poverty.

The sections of the society which have been impacted by these policies are the first ones forced to face the challenges of malnutrition, illnesses and deaths. Studies are seeking to prove that the crisis of malnutrition owes the phenomenon to poverty, illness and climate change. However, the underlying causes comprise the economic policies and distorted development which is further deepening the roots of poverty. Inequality is compelling people to stay ill without getting any treatment. Recent endeavours sought to bring in public advocacy for people-centric distribution of resources. The observation with the implementation of the Forest Rights Act was one of them. However, a section of capitalists in the country rose against this move. The manner in which the farmers' plight is being perceived goes to show that the community's access to wealth will keep on shrinking via the axis of state disposition and the capitalists.

End Notes

1. An indication of poor Foetal Growth Restriction (FGR) as well as chronic undernutrition or prolonged food deprivation and/or disease or illness for the child.
2. An indicator of acute undernutrition, the result of more recent food deprivation or illness. Wasting represents a recent failure to receive adequate nutrition and may be affected by recent episodes of diarrhoea and other acute illnesses.
3. A condition reflecting low level of body mass relative to the corresponding age. Weight-for-age is determined by both the height of the child (height-for-age) and weight (weight-for-height). Underweight is used as a composite indicator to reflect both acute and chronic undernutrition, although it cannot distinguish between them.

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Problems of E-waste Recycling Units in Organised Sector in Developing Countries: The Case of Indian E-waste Recyclers

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India is among the top three generators of e-waste in Asia and is the fifth biggest producer of e-waste in the world after the US, China, Japan and Germany. Management practices and policy-level initiatives in developing countries like India and China are at an embryonic stage. In developed countries, producers are responsible for managing e-waste through the concept of extended producer responsibility (EPR) however due to the wide cultural differences and due to the producer's lobby, it is not practically possible to implement the EPR in developing countries like India. The major responsibility of e-waste recycling in India lies with e-waste recyclers operating in organised sector. The present article is an attempt to understand the issues and challenges from the perspective of e-waste recyclers working in the organised sector in India.

Introduction

India is among the top three generators of e-waste in Asia as per 2014 estimates. Though the country is among the major Asian producers there is no formal management of e-waste (Wath et.al., 2011) exists in India. Moreover, there is a lack of accurate data on e-waste generation, disposal or

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imports (Jain and Sharma, 2013). There are only estimations of e-waste generation either by NGOs or government agencies. India with 1.7 million tonnes of e-waste per annum, is the fifth largest generator after the US, China, Japan and Germany. Among all the continents, Asia is the largest generator of e-waste, generating around 16 million tonnes with 3.7 kg per inhabitant per year (Balde et.al., 2015).

Scientific recycling of e-waste is crucial to minimise its adverse impact on health and the environment and maximise the welfare of workers engaged. Efficient recycling of e-waste can create a positive impact on the economy, society and the environment. But in India, more than 90 per cent of e-waste processing is done by unorganised sector that has taken the business from their ancestors and passing on to new generations.

However, after the initiatives are taken by the Government of India e-waste recycling units in the organised sector are gradually coming into existence. This makes it necessary to investigate the status of these organised e-waste recycling units. Furthermore, e-waste is relatively a new waste stream when compared with municipal solid waste, bio-medical waste for which a proper system of management is yet to evolve in India. Failure of prior rules to effectively manage hazardous wastes, for instance, Batteries Management and Handling Rule 2001 warrant a more meticulous investigation in managing e-waste. There is a strong need for conducting studies on e-waste recyclers in the organised sector in the Indian context because hardly any study has been done or documented which focuses on problems faced by them. Understanding the perception and identifying the problems of e-waste recyclers working in the organised sector would throw light on the areas that need to be worked upon to lay down the foundation for developing an effective e-waste management system in India.

Literature Review

Life and the environment are endangered across the world because of the negative impact of e-waste. It has been reported by Jackson, 2010 that US Environmental Protection Agency has declared e-waste concerns among the top six newly announced global priorities. Studies by Saoji, 2012; Jang, 2010; Amfo-Out et.al., 2013; Ateimo et.al., 2012; Yang et.al., 2009; Zheng et.al., 2008 have reported that the presence of toxic substances such as mercury, cadmium, lead, arsenic, chromium, brominated flame retardants (BFRs), polybrominated biphenyls (PBBs) and polybrominated diphenyl ethers (PBDEs) has made e-waste as an environmental threat. Despite of health and environmental concerns, the unorganised sector holds a quite big

pie because the sector is advantageous from the monetary incentive per se (Perry et.al., 2007) but quite disadvantageous in the long-term (Siqueira et.al., 2016). Studies conducted by Greenpeace in India and China revealed the presence of toxic chemicals and heavy metals in soil and local rivers around e-waste recycling scrap yards (Brigden et.al., 2005). According to Brigden et.al. (2005) the matter of concern was that the amount of some of these chemicals found were thousands of times higher than typical levels both in inside and outside the environments. Lack of awareness about threats associated with e-waste is a major problem in developing countries (Liu et.al., 2009).

Disposing of e-waste through landfills or incineration is also hasardous. In the opinion of Inanc, improper management of landfills leads to leakage of chemicals, metals, vaporisation of metallic mercury and dimethylene mercury (Innac, 2004). Despite of many threats associated with improper handling of e-waste there is lack of knowledge about management of e-waste management as the adverse impacts of such issues cannot be seen or realised immediately (Ciocoiu et.al., 2011).

The concern is more for developing countries as these countries are not adept from the technology per se and then dumping of e-waste from developed nations adds to their plight. For instance, it has been reported that the US exports its e-waste to India as sending e-waste to India is a cost-effective alternative to processing e-waste in the US itself. Illegal imports along with domestic generation are one of the reasons that contribute to an exponential growth of e-waste in developing countries (Zoeteman et.al., 2010). Although the transboundary movement of e-waste has become a common phenomenon across the globe yet it is vague whether such an act would be classified as waste crimes. Enforcement of waste regulations is ineffective in developing countries whereas in developed ones waste regulations have been tightened that results in the dumping of waste from developed to developing (Baird et.al., 2014).

Material and Methods

Qualitative research methods are gaining popularity over the past few decades. Since the present investigation involved comprehending live experiences of e-waste recyclers operating in India, issues and challenges faced by them, a qualitative method was used. In the opinion of Bryman and Bell (2011) and Miles and Huberman (1994), qualitative methods are useful when the purpose of research is to develop an in-depth understanding of the perception of respondents which is difficult to assess using purely

quantitative methods. Keeping these things in mind the approach used was qualitative so that e-waste recyclers could better share their problems in detail. Further, the case method was used as a tool for data collection from e-waste recyclers. The reason behind using the case method as a tool for data collection is that Flyvbjerg (2006) stated that the case method is an effective means to conduct research as it takes the researcher close to real-life situations. According to Yin (2003) and Benbasat (1987) this method is particularly useful when a phenomenon is complex and broad, available knowledge is not sufficient, a holistic/in-depth investigation is required and when a phenomenon cannot be studied outside the context in which it occurs. It is regarded as particularly useful where research and theory are at their early and formative stages. Considering the nascent stage of e-waste recycling units in India the use of qualitative approach and case method is completely justified.

E-waste recyclers operating in India constitute the population for the study. E-waste recycling units are spread across 12 states. The sampling frame indicated the presence of 97 recyclers located in these 12 states. A representative sample of 20 recyclers from six states was drawn using the purposive sampling technique and case studies were developed on each of them. The participants were selected purposefully because Cresswell (2003) asserted that in such studies the participants need to be selected purposefully so that it would help the researcher to identify the problem. Field visits to all 20 recycling units were made as per the prior appointment during the period of 2014-2017 and 20 case studies were developed. The sample size of 20 case studies was adequate as Eisenhardt (1989) suggested to develop four to 10 cases in such studies. In order to derive the findings of the study all these 20 case studies were subjected to SWOT analysis.

Results and Discussion

Findings were derived after analysing 20 case studies that were developed on various e-waste recyclers located in different parts of the country. The installed capacity of the visited 20 recycling units varied from 300 MTA to 12,000 MTA. These units were located in the states of Maharashtra, Karnataka, Madhya Pradesh, Rajasthan, Uttarakhand and Chhattisgarh. Out of these 20 recycling units around 50 per cent have been in operation for the last two to five years. 18 units had on average not more than 10 employees. There were two units with around 100 employees and only one unit with more than 500 employees. A thorough analysis of the case

studies developed and in-depth interaction with recyclers lead to the identification of following issues and challenges in e-waste management.

Inadequate Collection

Inadequate collection of e-waste is one of the major problems reported by e-waste recyclers in India. E-waste recycling units are facing an acute shortage of e-waste availability for recycling. The majority of the units operating in India were not receiving even 50 per cent of their installed capacity. This was despite the fact that the country generated around 18.5 Lac MTA of e-waste annually estimated to reach 30 Lac MTA by 2018 as per a study by Assocham and Frost & Sullivan (http://www.assocham.org/ retrieved on December 30, 2016). In the Indian context, the situation is quite alarming as this was around six times the total installed capacity of all recycling facilities of the country, which was around 2.96 Lac MTA, as per 2014 statistics (http://www.cpcb.nic). The unavailability of waste as a raw material for food waste and waste paper recycling units has been reported by Livingston et.al. (2016) and Iosip et.al. (2012).

Underutilisation of Resources

Due to inadequate collection, the resources of the e-waste recycling units remained underutilised. Because of the unavailability of sufficient raw material to recycle, the recyclers had idle capacities at their setups which had adverse financial implications. The sum of installed capacities of these 20 recycling units was 57,560 MTA. Out of which the capacity utilisation was merely 20,230 MTA. In other words, capacity utilisation was only 35.15 per cent. 80 per cent of capacity remained underutilised in more than 50 per cent of units. In order to run the businesses, there should be proper capacity utilisation as unused installed machinery and infrastructure undermined the productivity of the workforce. Measures need to be taken to improve the scenario of e-waste recycling units in India as according to Baldwin et.al (2013) underutilisation of production capacity caused a decline in workforce productivity that in turn resulted in around 50 per cent of the slowdown in overall productivity growth.

Technical Constraint

Indian e-waste recyclers are facing technical constraint and it is their another drawback. Employing scientific methods for precious metal recovery demanded technical know-how and expertise. Findings of the study revealed that 70 per cent of visited recyclers did not have any engineering or

chemical background. The remaining 30 per cent of the recyclers with a technical or chemical backgroundwere at an advantage over others who lack such knowledge. Nonetheless, e-waste processing in India in the organised sector did not demand any such credentials. Baring a few e-waste recyclers, most of the unit owners were lagging in technical competencies and know-how. As per Asian Productivity Organisation (2007), while dealing with solid waste management, lack of technical competence was a reported concern. This calls for the training and development programmes to enrich the technical knowledge of recyclers and to equip e-waste recycling units technically to improve the returns obtained at different stages while processing e-waste.

This reflected the need to take action to make e-waste recyclers known not only about the materials but also the properties of materials found inside the electric and electronic equipment. Knowledge of the internal composition of the material was a prerequisite for e-waste processing (Chancerel et.al., 2009). This is because computer server boards, a kind of e-waste for instance contained niobium capacitors. These capacitors could explode if the workers at units dismantled them casually. Moreover, the batteries removed had to be stored in drums filled with sand else a collision might lead to a fire. Thus, to avert any untoward accident workers engaged in handling e-waste need to be trained. Askari et.al. (2014) too stated that there is lack of knowledge regarding e-waste storage and disposal at 75 per cent of e-waste processing units. This lack of knowledge results in inefficient processing of e-waste. As per Reintjes (2016) inefficient processing of waste materials resulted in a loss of precious resources thereby affecting financial benefits as well.

Financial Constraint

Indian e-waste recyclers are having the problem of financial constraints. Establishing a state-of-art recycling unit for optimum recovery with minimum loss of resources and adverse impact on the environment is a capital-intensive project. Advanced handheld analysers for metal analysis are capable of offering results within seconds. These could help recyclers in improving returns by analysing and testing scrap for composition and grade (Schluep et.al., 2009). However, the installation of such equipmentis quite expensive (Buenrostro, 2001).

Challenges associated with funds and then the prevalent scenario of under-utilisation discouraged Indian e-waste recyclers to modernise operations and adopt the latest technologies for efficient recycling. Findings

revealed that there is a need for financial assistance for e-waste recycling units in the country. Lack of financial resources for managing municipal solid waste had also resulted in its inadequate management (Siqueira et.al, 2016). This is one of the major reasons that despite their willingness, Indian e-waste recyclers were not able to organise technical enhancement training programmes for workers. Not only quantity recovered, but the quality of the material recovered is also one of the important parameters in waste recycling from financial and resource conservation per se. Nonetheless, in the absence of financial support, it would be difficult for e-waste recyclers to improve e-waste processing methods.

Unorganised Sector

The widespread prevalence ofthe unorganised sector in India is posing a threat to recyclers working in the organised sector.Thousands of workers engaged in the unorganised sector need not invest in infrastructure or on logistics. Apart from the ineffective processing of e-waste, the unorganised sector also raises other socio-economic issues, such as child labour and environmental pollution. To evade pollution control board authorities, these workers keep on changing their sites of operations periodically. Unorganised units are important competitors for organised units (Wilson et.al., 2006). Being economically weaker and marginalised social groups, these workers are casual towards health and safety aspects too. However, in the opinion of Lundgren (2012) and Suk et.al. (2003) family obligations and meager job opportunities in the organised sector made them prefer the unorganised sector.

The involvement of child labour in the unorganised sector is quite high (WHO, 2011). Large numbers of children are processing e-waste without any fear of its hazardous content as they are quite ignorant. The same was affirmed while interacting with a child at one of the unorganised recycling sites in the state of Karnataka who believed that a banana or carbonated cola drink clears the stomach and wipes off the illeffects, if any, in e-waste processing. This showed the gross ignorance on the part of the child labour. During the processing, many chemicals get accumulated in their bodies because of the immature systems in children that prevent the effective excretion of toxic materials (Tinmaz and Demir, 2006). Even low levels of lead, mercury, cadmium and other heavy metals could result in severe irreversible neurological problems. The challenge due to unorganised sector is not confined to India only but has been there in many developing nations like China, Turkey and Vietnam (Chi et.al., 2011; Welsch and Kuhling, 2009).

In the Indian context as well, the unorganised sector holds quite a big pie. And hence, corrective measures need to be taken with great care. It is vital to keep a check on their activities and at the same time workers from the unorganised sectors need to be assured of job security. As per reports of the Labour Bureau, India created 9 lakh jobs in the year 2011, which dropped to 4.19 lakh in 2013 and subsequently to 1.35 lakh in 2015. In such a scenario, where the generation of jobs is getting tougher, if the unorganised sector is banned from processing e-waste, then it would be adding to the existing plight of unemployment.

The Mindset of Consumers and Lack of Awareness

The mindset of consumers in India is another challenge for recyclers. Understanding the attitude and behaviour of consumers towards waste disposal is one of the major prerequisites for setting up any system of waste management. In the opinion of Welsch and Kuhling (2009), one of the major contributors to environmental problems is the behaviour of humans. However, merely change in attitude alone would not lead to the desired behaviour from the environment per se but it would be certainly the first step on the ladder. Lack of awareness on the part of consumers has been reported in many studies. For instance, Jain and Dhar (2017) conducted a study and found that that none of the consumers was aware of existence of any e-waste recycling unit at the state or national level and hence never disposed of e-waste with a recycler. This was even though e-waste regulations made it mandatory for consumers to dispose of e-waste with recyclers. The situation is alarming as 85 per cent of respondents were not aware that the government has enforced any such regulations way back in May 2012. One of the reasons that could be attributed to the casual approach of consumers while dealing with e-waste is that they could not see the immediate detrimental impact due to improper management of e-waste. Afroz et.al. (2013) also found low awareness of consumers regarding the negative impacts of e-waste. There is a need for international cooperation to raise awareness that e-waste has become one of the major threats to the environment and health (Alabaster et.al., 2013).

Consumers in India expect lucrative incentives while disposing of e-waste. It is then quite prudent to plan rewards accordingly. Nonetheless, Bolderdijk (2015) asserted that until and unless consumers were not personally convinced about the importance of waste recycling, the incentives might not bring in the desired results. Studies suggest that measures like repetitive communication through advertising, emphasising personal

benefits, organising awareness campaigns on a mass scale can initiate behavioural changes (Jesson, 2009; Ma et.al., 2014; Vasileva., 2014). Behavioural change was the most sought of as it would make citizens of the country voluntarily contribute to issues pertaining to the environment. Consumers of developed nations with high per capita income, high status of living would not bother in paying extra fees for recycling or taxes but in India any additional monetary burden matters to a common man. Consumers are trying to evade responsibilities because of financial reasons. The unorganised sector offers more incentives than the organised sector and hence people are interested in disposing of e-waste to the unorganised sector. The need is to identify ways that could help in bridging the gap of financial incentives received from e-waste recyclers and that from other possible sources (unorganised sector/outlets).

Tedious Approval Procedures

E-waste recyclers in India found the approval procedures for obtaining e-waste recycling licenses quite tedious. Recyclers found it tough to get through the statutory norms due to highly bureaucratic and lengthy procedures. Approvals to setup and operate were not granted within the stipulated time frame of 90 days for authorisation and 90 days for registration. The application processing in the majority of e-waste recycling units visited took a very long time ranging from one to four years. Repeated visits to different departments for approvals were mandatory and, in the process, it dampened the spirits of the applicants. Recyclers were at a loss to understand the expectations of concerned officials and ran from pillar to post. It was expensive to purchase a property in an industrial area and hence more than 50 per cent of e-waste recyclers had to operate in rental premises. In case recyclers wanted to change the place of operation they had to take a fresh approval which was a cumbersome process. It has been reported (Lecuna, 2016) that due to low understanding of regulatory requirements made small and medium-size units more susceptible to bureaucratic rigidity. Gifts were considered a way to avoid bureaucratic procedures or to put mistakes out of sight (Lecuna, 2016).

It is imperative to take initiative for reducing the bureaucracy in the Indian context. The de-bureaucratisation programme has resulted in positive results in Chile, New Zealand, Australia, Canada, and Singapore. In World Bank's ranking, India is at 150th rank for starting a business and at 130th rank in the ease of doing business in contrast to New Zealand which is in the top position. Reducing the length of procedures up to 20 to 40 per cent and

payment reductions up to 50 per cent had a significant impact on the number of registrations of entrepreneurial units (Klapper and Love, 2010).

Sustainability

Sustainability is another challenge for e-waste recycling units in India. With time advanced technologies made it possible to manufacture electronic devices with less content of precious metals. It was reported by Raval and Oza (2014) that due to technological developments in electronic industry, the content of precious metal in older devices were more than their existing counterparts. Consequently, profit margins of e-waste recyclers have been affected. Moreover, most of the equipment in e-waste did not have the potential to even return the cost of processing. According to Widmer et.al. (2005), only those electronic equipment that contained gold and copper could help in reclaiming the cost incurred for e-waste processing. Slack periods were a common phenomenon in waste recycling units (Joseph, 2007). Those recyclers who have alternate sources of income are not affected. But 71 per cent of e-waste recyclers under study did not have any other business and were dependent completely on the operations of recycling units. While working in the organised sector recyclers had to bear many costs for their survival. During their establishing years, few e-waste recyclers recruited full-time employees, but irregular operations forced them to switch to contractual labours as they could not afford to pay regular salaries to their employees in the wake of meager revenues.

Recycling units in Japan and the US too faced similar kinds of problems. Japanese recycling units had to switch over to temporary workers (Bo and Yamamoto, 2010) whereas in California low scrap prices made 30 per cent of recycling units out of business. Waste Management, known as one of the top waste processors in the US had to shut about 20 per cent of its processing facilities nationwide in the last two years (Nash, 2016). The generation of revenue is a prerequisite for the sustainability of any business.

Legislative and Administrative Constraint

Legislations play a crucial role in regulating prevailing systems in a democratic society. Regulations might benefit society on a broader scale but at the same time, they could result in creating a negative impact on individual units (Bozeman, 2000). Moreover, framing effective policies would be a tough task for countries that did not have a well-proven record of regulating the environment (Kuehr and Magalini, 2013). These findings suggest that the situation is a bit challenging for India as Dey (2009) reported

that the Eco-Mark initiatives was taken by the Government way back in the year 1991 and Battery Management and Handling Rulesin 2001 have failed.

India enforced e-waste management and handling rules in 2012 to initiate a system for e-waste management in India. Nonetheless, unaddressed legislative gaps have laid back its effective enforcement. As a result, the problems of e-waste recyclers remain unaddressed in India. For instance, the rules did not define any mechanism through which an unorganised sector could be checked. Recyclers from the unorganised sector entered the organised sector in India after availing licenses. Thereafter, licenses were misused to procure e-waste and such trades go unnoticed. Even in the organised sector, some recyclers have reverted to the traditional system of e-waste processing after getting approvals as there was no periodic review from the monitoring authorities to check their day-to-day operations. Any system devised to rehabilitate unorganised sector is missing in the Indian context. Moreover, traditional processing of e-waste is not termed as illegal. This demands careful balancing of interest of both organised as well as unorganised sector.

The e-waste management rules in India lay emphasis on producers for collection and channelisation as a part of Extended Producer Responsibility (EPR) like in developed countries. But recyclers find it difficult to remain completely dependent on collection centres or producers for operating their units. Implementing EPR is difficult in developing countries because it would be difficult to track down and assign financial accountability to small producers who are producing goods after importing or assembling (Kojima et.al., 2009).

In India, ambiguity in penal actions on violation of e-waste management rules has resulted in a casual attitude amongst the consumers. One of the reasons that violators often go unpunished was because of the lack of powers vested in pollution control boards (Agarwal, 2005). Officials of the pollution control board could only initiate prosecution against violators in courts and do not have the power to punish them. Lack of resources and underdeveloped legal systems are responsible for the ineffective implementation of environmental regulations (Jain, 2006). Systems in developing countries should provide more autonomy to the State Boards. According to Jain and Dhar (2017) to have evidence-based decision making it was imperative to infuse the scientific mindset among officials by promoting research activities. In India, as per e-waste management and handling rules, consumers were instructed to dispose of e-waste with

recyclers but bulk consumers, such as IT companies do not have defined policies for e-waste disposal.

Ethical Constraint

Recycling e-waste poses an ethical challenge to recyclers in India. However, ethical business decisions are quite complex and have mixed outcomes in the form of social benefits and social costs as are financial revenues and expenses. Due to the complexity of decisions, at times e-waste recyclers had to overlook some considerations and some may be sidestepped because of the high costs involved. According to Kuratko and Rao (2014), the decisions of entrepreneurs involve economic-tradeoff wherein at times units earn profit but others in society may suffer. This makes ethics to be a judgment call and continues to remain a major issue for entrepreneurs during the new century because the unethical view of one entrepreneur may be ethical for others. Business should not be considered as a means for wealth creation only these should also create more value for stakeholders. E-waste recyclers are not only the beneficiaries of their business rather their units have to create a positive impact on society and the environment as a whole.

Conclusion

E-waste recycling in organised sector is at its nascent age in many developing countries especially in India. As a result, many of the e-waste recyclers are novices in the organised sector and are unacquainted with the professional expertise expected of them. Lack of awareness regarding disposal of e-waste and expectations of monetary incentives is creating collection issue before recyclers. One of the ways to facilitate them is granting subsidies. Government should grant subsidies to assist e-waste recyclers at the initial stage and later when the units pick up the pace the subsidies can be withdrawn. The government couldinitiate training and skill development programmes. Even, device loans could be granted to assist recyclers in procuring machinery in the initial years so that they can sustain themselves in the competitive organised sector. It is equally important to assist them on the financial and legal front in these initial years as the sector helps to keep the social fabric intact. Educating people regarding the need for proper disposal of e-waste is a must. A series of parallel actions need to be taken to address the issues associated with e-waste management. Developments in organised sector should be made to bring in welfare and to result in betterment for the society rather than giving rise to social and environmental issues or serious repercussions.

Appendix
Substances Found in E-waste and Health Hazards

Chemical	Found in	Health Hazards
Antimony	CRTs, Printed Circuit Boards, etc.	Hazardous when inhaled or when it comes in contact with skin and eye. Causes damage to the blood, kidneys, lungs, liver and nervous system.
Arsenic	Transistors	Soluble inorganic arsenic is acutely toxic. It can cause chronic arsenic poisoning, skin injuries, gastrointestinal problems, cardiovascular disease and cancer.
Barium65	CRTs	Damages heart, liver and spleen. Short-term exposure can lead to the weakening of muscles and swelling in the brain.
Beryllium	Motherboards of computers	Can cause lung cancer.
Cadmium	Chip resistors and Semiconductors	Harmful for kidney and liver.
Chlorofluorocarbons (CFCs)	Refrigerators and Coolers	Damages the ozone layer and is a potent greenhouse gas. It leads to coughing, sore throat, difficulty in breathing, and eye redness, unconsciousness, irregular heartbeat.
Cobalt	Rechargeable batteries and coatings for hard disk drives	Toxic to lungs and skin irritant.
Copper	Used as a conductor	Toxic to lungs and mucous membrane. Highly hazardous when inhaled and in case of ingestion.
Dioxins	Released during open-air burning of electronics	Highly toxic and can cause cancer. It interferes with hormones, damages the immune system and creates problems for reproductive systems.
Gallium	Integrated circuits	Toxic to lungs and mucous membranes. Severe over-exposure can result in a death in case of overexposure.
Hexavalent Chromium	Corrosion protection of untreated and galvanised steel plates	Causes asthma, cancer, damages kidneys, liver and DNA.
Indium	LCD screens	Less investigated substance regarding the environment. Causes eye irritation, creates problems in the respiratory tract. It may have long-term effects on the kidneys.
Lead	Solder of printed circuit boards, glass panels and gaskets in computer monitors	Damages nervous systems, cardiovascular, renal and blood systems. Damages kidneys. It affects the brain development of children.
Lithium	Rechargeable Batteries	Highly toxic as it can be excreted in maternal milk. Hazardous in case of ingestion and inhalation.

Chemical	Found in	Health Hazards
Mercury	Relays, switches and printed circuit boards	Hazardous for nervous, digestive and immune systems. Damages lungs and kidneys. Inhalation of mercury vapour may be fatal.
Nickel	Rechargeable batteries	Have carcinogenic effects. Harmful for kidneys, lungs, liver, respiratory tract.
Phthalates	Used to soften plastics	Harmful for endocrine, reproduction, nervous and immune system. It leads to liver cancer.
Polybrominated diphenyl ethers (PBDEs) used in brominated flame retardants (BFRs)	The plastic housing of electronic equipment and circuit boards to reduce flammability	BFRs disrupt endocrine system functions. It leads to high cancer risk. It may affect the levels of thyroid-stimulating hormone and cause genotoxic damage.
Polychlorinated. biphenyls (PCBs)	Insulating material in electronic products	Harmful for the reproductive and immune system
Polyvinyl Chloride (PVC)	Cabling and computer housing plastics contain PVC for their fire-retardant properties	On burning it releases dioxins. It leads to reproductive and developmental problems. Damages the immune system and interferes with regulatory hormones.
Silver	Wiring circuit boards, etc.	Accumulated in human organs on repeated exposures which damage health. Harmful in case of eye contact, ingestion and inhalation. Severe over-exposure can result in death.
Thallium	Batteries, semiconductors, etc.	Harmful to kidneys, nervous system, liver heart, and may cause birth defects. Highly toxic in case of ingestion and inhalation. Fatal in case of overexposure.
Tin	Lead-free solder	It disturbs the gastrointestinal tract. It produces irritation in the case of skin and eye contact, ingestion and inhalation.

(Source: Lundgren, 2012)

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Education and Empowerment: A Case Study of Mid-Day Meal in West Champaran and Madhepura District of Bihar

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Mid-Day Meal Scheme (MDM) is an important effort to address the twin problem of nutrition and education among children, particularly among the poor and vulnerable segments of Indian society. MDM attempts to address the problem of marginalisation by benefiting disadvantageous groups through increased enrolment and attendance coupled with increased nutritional intake but fails to bridge the educational inequalities prevailing in the society. The paper analyses dynamics of the implementation of the Mid-Day Meal Scheme policy in two districts i.e., Madhepura and West Champaran of Bihar.

Introduction

India after independence, embarked on the massive task of state-engineered socio-economic transformation through development planning to abolish poverty and provide a dignified life to its people; to realise the cherished ideal of 'growth with social justice'. Recognising the fact that education plays a catalytic role in the socio-economic development of a nation and enables the upliftment and transformation of society, by empowering weaker sections, and change their life for the better, education has acquired a place of importance in the development agenda of India. The

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fundamental relationship between nutritional status and the learning ability of children has been widely recognised by nutritionists and social scientists. Consequently, the provision of free or subsidised school meals has emerged as one of the significant policy initiatives undertaken by governments in several developing and developed countries to improve learning outcomes among children.

The Mid-Day Meal Scheme is fundamental to the governmental effort to address the twin problem of nutrition and education among children, particularly among the poor and vulnerable segments of Indian society. India's mid-day meal scheme has reported as the largest school feeding programme of its kind in the world, feeding 120 million students per day and its ambition goes beyond nutrition. As a result, India has been able to increase its literacy rate from approximately 18 per cent in 1951 to 74 per cent in 2011. In this context, the MDMS, whose one of the mandates is to check high drop-out rates, has also made a noticeable contribution in the last two decades. However, at the same time, many educationists have highlighted several flaws within the Indian education system that has come in the way of realising the goal of universalisation of elementary education. One underlying reason in this regard has been the still prevalent marginalisation and exclusionary practices at the societal level that heavily impinge upon the educational situation in the country.

Empowerment and Education

In different socio-cultural and political contexts, the term empowerment has different meanings. In addition, it is relevant both at the individual and collective level, and can be economic, social, or political. Further, there are important gender differences in the causes, forms, and consequences of empowerment or disempowerment. Hence, there are many possible definitions of empowerment, including rights-based definitions (Narayan, 2002). Tracing the genesis of 'empowerment', Singh (2016) opines that by way of the intensification of the democratic process and heightening the public atmosphere of a rights-based approach to development. The term 'empowerment' has gained currency in academic and political discourse in recent years. The idea of empowerment generally implies the process of handing over power to the powerless or the disempowered which further implies distribution of powers and privileges. Sometimes, it also refers to the theory of change - from hierarchical to egalitarian, from autocratic to democratic and from a centralised to a decentralised system of social life and governance. According to Sen and Batliwala (2000), 'Empowerment is the

process by which the powerless gain greater control over the circumstances of their lives. It includes both controls over resources and ideology … [Includes, in addition to extrinsic control] a growing intrinsic capability-greater self-confidence, and an inner transformation of one's consciousness that enables one to overcome external barriers…' Examining the term 'empowerment' in the context of the notion of powerlessness and oppression, West (1990) challenges the assumption that we live in a 'free world' and promotes a new theory of liberation. West's arguments that 'empowerment' must not be defined as the giving away or the gaining of power. It is not a revolutionary act; rather empowerment eradicates oppressive power and acts to enable the whole population in a free and fair world. According to World Bank (2001), empowerment, in its broadest sense, is the expansion of freedom of choice and action. It means increasing one's authority and control over the resources and decisions that affect one's life. Bennet (2002) has developed a framework in which 'empowerment' and 'social inclusion' are closely related but are separate concepts. While empowerment is described as 'the enhancement of assets and capabilities of diverse individuals and groups to engage, influence and hold accountable the institutions which affect them', social inclusion is defined as 'the removal of institutional barriers and the enhancement of incentives to increase the access of diverse individuals and groups to assets and development opportunities'.

Analysing the relation between empowerment and education, Lincoln et al. (2002) argue that empowerment is inseparably linked to education. Education is not only a crucial part of all empowerment programmes but it also acts to empower in itself. For those who are illiterate, education is crucial to develop a sense of self-worth and empowerment. Deka (2015) argues that though education is important for everyone, it is especially significant for girls and women. This holds significance not only because education is an entry point to other opportunities, but also because the educational achievements of women can have ripple effects within the family and across generations. According to Singh (2016), the relationship between education and empowerment can be viewed from different perspectives. One leading perspective that foregrounds the idea of empowerment being used for achieving equality through class struggle attributes a catalytic role to education in generating consciousness and propelling for action to achieve control over resources and the decision-making process.

Referring to all the above, it is evident that empowerment and education are complex and interdependent processes. Also, the marginalised communities are much vulnerable and have lesser or limited access to basic entitlements including education that is very crucial for realising true human development. Nevertheless, increased access to quality education has the potential to make long-term positive impacts in the lives of the deprived people implying their empowerment in all possible manners. The study by Singh (2016) that was aimed at gauging 'the perception of elementary school government teachers towards Mid-Day Meal Scheme in Bihar' found that 81.34 per cent of the elementary school teachers have a moderate level of attitude towards MDMS. It means that the scheme is important in terms of its potential of improving the health of the younger generation and increase in enrolment and retention rate. Central factors that determine the success of educational programmes are related to the quality of teachers, the quality of teaching-learning materials, and the quality of the teaching strategies. Building a nation's human resources takes time because, unlike infrastructure which can come up quickly, human development calls for a lifetime of investments in health, nutrition and education. An extensive study titled 'Assessment of Mid-Day Meal Scheme in PLAN intervention Districts of Bihar' covering several districts of Bihar by ACVIDA (2014) found that although the scheme was initiated to enhance enrolment and retention, in most of the cases, classes do not run post-MDMS. Also, the timing (one hour) for serving MDMS is a matter of concern where a majority of the schools face challenges to complete the entire service of MDMS to every child in one hour. Moreover, some of the schools lack proper planning at the school level which adversely affects the purpose of the scheme and affects the quality of teaching badly. In the majority of the schools, the school management committee (SMC) or community involvement ensuring quality and effectiveness of the scheme is very bleak and instead of helping schools to run the programme effectively, they often pose constraints challenges for school staffs which creates a kind of disconnect between school and community. It is also reported that children parliaments (Bal Sansad) and girls forum (Mina Manch) are not given any chance to give their opinion on the quality and taste of cooked meals supplied to their peers and classmates. On the infrastructure side, more than 50 per cent of schools do not have proper kitchen and storeroom facilities. Teachers are involved with the headmaster (HM) in the distribution of MDMS. In most of the schools, food is tasted by HM or teacher with the cook (rasoiya) and register is also maintained for this purpose. However, the majority of the HMs are not

satisfied with the quality of ration supplied for MDMS. With regard to community participation, it was discovered that parents and community members are often not involved in the process and there seems a complete disconnectedness between school and parents. It is also inferred that they are not very satisfied with the quality of food. The quality of food being served is of average standard in a majority of the schools because of the average quality of materials and grains supplied to schools under this programme.

Objectives and Research Methodology

The paper explores the dynamics of the implementation of MDMS policy in two districts i.e., Madhepura and West Champaran of Bihar. The idea is grounded in the fact that despite having the lowest figure of performance in the implementation of the MDMS, Bihar has, to a certain extent, made progress in terms of growth in enrolment. The pivotal question raised through this paper is that though the policy has been uniform for all despite the differences in needs and requirements of the region, caste, religion, and gender and the political scenario at large, SC/ST/OBC, why female students face several kinds of discriminations in their respective institutional framework. The paper also intends to look into whether the scheme is implemented in line with the policies laid down for its implementation focusing on aspects of quality, stakeholder's involvement, monitoring structure, infrastructural gap and perspective of children on quality of food served.

The information for this study is collected from four schools (two each from West Champaran and Madhepura districts). In both the districts, one school has been chosen from the rural area and the other school was chosen from the urban area. For this study, 120 students and 40 parents were interviewed to unfold the implementation process of MDMS in the two districts of Bihar.

Discussion and Findings

Perceptions of Students

In this study, various facets of implementation MDMS were analysed in the four schools of two districts in Bihar. While analysing the seating arrangement in the classroom, it is inferred that 9.16 per cent of respondents prefer to sit with the same gender students while 69.16 per cent of children sit with anyone. It is also informed that 21.66 per cent of children sit with fellow caste students who are most likely their friends. In the same way, during lunch time, 8.33 and 6.66 per cent of children prefer to sit with

their classmates and the same gender students respectively. On the other hand, 17.50 per cent sit with fellow caste students who are also their friends. The remaining 67.50 per cent of children generally have their lunch with anyone.

Table 1
Seating Arrangement of Students

S. No.	Particulars		No. of Students (Percentage)
1.	With whom do you sit in the class?	Fellow caste student	26 (21.66)
		Same-gender student	11 (9.16)
		Anyone	83 (69.16)
		No Response	-
2.	With whom do you sit to have the meal?	Classmates	10 (8.33)
		Fellow caste student	21 (17.50)
		Same-gender student	8 (6.66)
		Anyone	81 (67.50)

All the children reported that they are regularly provided meals on all school days. They also informed that food is prepared as per the approved weekly menu. Following the directive of the Right to Education Act, 2009, the weekly menu is displayed at a prominent place in all the schools.

During this study, while accessing the quality of MDMS, it was found that either normal (8.33 per cent) or good (91.66 per cent) quality of food was given in all sample schools. It is also reported that the served amount is sufficient enough to satiate their appetite, however, extra food is provided if someone asks for it. Further, 87.50 per cent of students were satisfied with the food and 12.50 per cent were not satisfied with the food. On being asked whether the food served in the school is tastier than what they eat at home, 86.66 per cent of students responded affirmatively while 8.33 per cent said the home food is equally good. Only, 5.00 per cent of children said that the MDMS is not tastier than the home food. Furthermore, 88.33 per cent of children reported that hygiene is maintained in cooking and serving the meal but 11.66 per cent of children opined that poor hygiene is an issue that needs to be corrected while cooking and serving the food.

Table 2
Quality and Quantity of Meal

S. No.	Particulars		No. of Students
1.	Quality of Meal	Good	110 (91.66)
		Normal	10 (8.33)
		Bad	-
2.	Quantity of Meal	Adequate	120 (100.00)
		Normal	-
		Less	-
3.	Children's satisfaction with the served meal	Yes	105 (87.50)
		No	15 (12.50)
4.	MDMS is tastier than the home food	Yes	104 (86.66)
		No	6 (5.00)
		Both are good	10 (8.33)
5.	Hygiene maintenance while preparing and serving the meal	Yes	106 (88.33)
		No	14 (11.66)

No restriction at all was reported in having food in all the schools. Most significantly, no child has come across any discrimination on caste or gender or community grounds in seating arrangement and serving of meals. Similarly, all children are treated equally and no discrimination in terms of quantity and quality has been observed. Accordingly, they have no grievances related to MDMS and therefore, they have not been required to approach either the school authorities or Vidyalaya Shiksha Samiti (VSS) to complain and seek redressal of grievances.

Table 3
Inspection and Monitoring of MDMS by Government Authorities

S. No.	Particulars	Yes	No	No Idea
1.	Does any government official visit the school to monitor MDMS?	82 (68.33)	24 (20.00)	14 (11.66)
2.	Is there a regular inspection of MDMS?	46 (38.33)	45 (37.50)	29 (24.16)

As indicated by table 3, the inspection and supervision of MDMS by educational authorities is not very promising. During this study, 68.33 per cent of children said that some government officials come for inspection of MDMS while 20 per cent responded negatively. On the other hand, 11.66 per cent of students have no idea of such visits. Interestingly, most of the children who responded in the affirmative have no idea about the designation of the officials who came for the monitoring visit. During this study, it is inquired about the *modus operandi* of such inspections, students responded that the officials visit the classrooms and mostly ask about their studies and on few occasions get the feedback about regularity and quality

of MDMS. Some students said that they visit the kitchen shed and take photographs. It is reported that authorities mostly keep themselves aloof from the students and spend maximum of their visiting time with the school authorities. Further, regarding the frequency of such inspections, only 38.33 per cent of students said that regular inspection is being done. According to 37.50 per cent of children, such visits are quite irregular while 24.16 per cent of respondents have no idea about such monitoring visits.

Parents' Views Relating to MDMS

During this study, 40 parents are also interviewed to gauge the efficacy of the implementation of MDMs. During the study, all 40 parents (100 per cent) said that their wards regularly go to school. As regards the regular serving of MDMS, 90 per cent of parents said that the food is served on all working days whereas 10 per cent of parents have said that they had no idea regarding the MDMS. As regards the variety of menu, 75 per cent of parents said that different food items are served every day and 25 per cent have either no idea or responded negatively. Further, only 15 per cent of the parents are aware of the provision of an approved weekly menu. Rest 75 per cent have no idea of such proviso while 10 per cent gave no response. Most importantly, 75 per cent of the respondents are satisfied with the quality of food whereas 15 per cent are not. The other 4 per cent did not respond. However, only 65 per cent of parents are satisfied with the hygiene-related issues. 25 per cent are not satisfied and the rest 10 per cent have no opinion about this.

Table 4
Awareness of the Variety and Quality of MDMS

S. No.	Particulars	Yes	No/ No Idea	No Response
1.	Are different food items provided every day?	30 (75.00)	10 (25.00)	-
2.	Are you aware of the provision of the Weekly Menu under MDMS?	6 (15.00)	30 (75.00)	4 (10.00)
3.	Are you satisfied with the quality of food?	30 (75.00)	6 (15.00)	4 (10.00)
4.	Is hygiene properly maintained?	26 (65.00)	10 (25.00)	4 (10.00)

During this study, all the parents said that they have not come across any sort of discrimination related to MDMS. Further, they reported that their wards have never been ill-treated nor any incidents of discrimination of other students or cooks owing to their caste/gender/ community have come to their notice.

Experiences of MDMS Cook-cum-Helpers (CCH)

In this study, in all the four schools, every cooking staff (cook-cum-helpers) has personally been interviewed. All of them have been recruited either by the HM or Vidyalaya Shiksha Samiti (VSS). However, many of them were not able to spell how they were recruited. Further, they are provided with all the cooking materials such as utensils, grocery items, etc. Nobody interferes in their work; only the HM or MDMS incharge monitors their work daily and helps them in procuring all required items. Although they are provided with quality raw material (rice is supplied by the Fair Price Shops and other items such as pulses, mustard oil, spices, vegetables, etc. from private shops) if they found something to be of the inferior quality they complain to the HM regarding this. They opined that the VSS members also come for inspection but they rarely make a visit.

In this study, it is inferred that their caste has never been a problem in performing their duties. They have not been discriminated against by either the school authorities or the students or their parents. However, their biggest grievance is related to the very low salary paid to them and irregularity of the same. At present, they are getting Rs. 1250 a month that is directly transferred to their bank account. Since April 2016, their salary has been hiked from Rs. 1000 to Rs. 1250. They get a meager salary for only 10 months as MDMS is not served during the summer and winter breaks of one month each. They complain of more workload, especially in proportion to the very less salary for their work. The common demand of all the cooks and helpers was the immediate salary hike for their work. In addition, they argued that they must be made permanent and the government should provide them joining letters (Chayan Patra, Pakka Kagaz, etc.) with immediate effect. They also demand that they must be entitled to casual leaves and other facilities enjoyed by a permanent employee. If they fall sick, they have to send someone as their replacement for the cooking workshop in the school.

Perception of Vidyalaya Shiksha Samiti

The Vidyalaya Shiksha Samiti (VSS) has been empowered to monitor the functioning of MDMS and is found functional in all the surveyed schools. During the visit to schools, some VSS members of few schools were available and interviewed relating to functioning of MDMs in their respective schools were interviewed. It was found that the members are not aware of their mandate regarding MDMS. It is also found that all the VSSs are not very serious about their responsibility towards monitoring of MDMS. Although

the HMs and MDMS incharge of surveyed schools said that the VSS members are active but it was found that their participation is not up to the mark. Some of the VSS and Jeevika members affiliated with few schools complained of the non-cooperative attitude of the school administration. Some female members argued that as they do not get any incentive (in monetary terms) what is the use of wasting their time in visiting the schools. During the study, it was felt that as most of the VSS members are poor and work as daily wage labourers, hawkers or landless farmers, they don't have time, and they are not much concerned about their role in regular monitoring of MDMS.

Conclusion

MDMS is a policy intervention that has benefited disadvantaged groups through increasing enrolments, attendance and improved nutrition. Indeed, this is a very significant development, given the fact that most policy interventions for social development benefit the better-off sections of the society. Notwithstanding such operation of MDMS, there is no bridging of the prevailing educational inequalities rather that is on the rise. In this study, we did not find any such discriminatory practices in all the sampled schools across the two districts. Not only the students but the cook-cum-helpers, parents and the members of VSS have categorically denied any discrimination based on caste or otherwise. In view of this significant finding, our assumptions of discrimination of SC/ST/OBC and female students stands nullified. The instance of a Brahmin girl sharing her meal with the SC girl in one of the schools in Bihar stands out as a glowing example of MDM's constructive role in diminishing the caste consciousness and promoting social harmony. However, it also needs to be underlined here that this positive development is attributed to the visited schools only and does not signify the general trend. There are still several pockets where discrimination guided by 'the politics of marginalisation' is being practiced in one form or the other.

Though MDMS benefits the disadvantaged groups and works towards the universalisation of primary education in rural India, low-cost private schooling brings in another form of educational inequality. One significant development in the domain of education since the 1990s has been the deterioration of the government schools that paved the way for the burgeoning of private schools, which became the favourite choice of better-off parents. As a result, the free government schools have been disowned by the privileged groups. In contrast, the poor belonging to lower castes, not being able to afford private school, are destined to send their children to

inferior quality government schools. Studies indicate that most of the children enrolled in private schools are from the general caste group, whereas most of the SC and ST children attend government schools. It is also found that 'return on investment is better for boys' education, sons are sent to private schools and daughters are enrolled in government schools. These observations very much hold for this study as well. The stigma associated with the derogatory term 'Khichdi School' as coined by the recipients of private schooling points towards this dichotomy very clearly. MDMS needs to be substantiated with regular and effective teaching to improve educational attainment among the poor and marginalised which will enable them to transform their lives.

It is indeed worrisome that despite a substantial increase in enrolments thanks to the policy reforms in education since the 1990s, the goal of universal elementary education remains elusive. A large number of enrolled children drop out without completing their schooling. It is also found that the low retention capacity of schools is linked to inadequacy in terms of availability and quality of teachers. More importantly, the appointments of underqualified and untrained teachers, who are further burdened with managerial load at the cost of their teaching responsibility, are some of the symptoms of recent educational reforms. Therefore, it is not surprising that all the respondents (in particular, the HMs and MDM In-charges) for this study have voiced their concern about MDMS taking a heavy toll on the teaching responsibilities. It vitiates the primary objective of universal elementary education and robs the development and empowerment of children from socio-economic backward strata of the society. The need is to impart quality education through the appointment of qualified and trained teachers infused with the requisite skill and aptitude to realise the novel objective of Right to Food and Right to Education for the vulnerable, deprived and marginalised sections of the society.

Another significant issue that emerges out of this study is related to the poor treatment meted out to the cook-cum-helpers. Not only are they offered pitiable remuneration, but they are also not entitled to any other benefits including leaves that are readily available to the school employees. The conditions of the CCHs are more deplorable owing to very limited resources and work overload as compared to their counterparts. Considering the fact that MDMS is aimed at addressing the educational and nutritional deprivation of disadvantaged sections, the administrative apathy towards the CCHs is worrisome. This is a serious issue not only from the point of view of the CCHs' right to fair treatment and wellbeing but most

importantly for the success of this grand scheme as well. As the CCHs are the backbones of this scheme, consistent negligence of their genuine rights can adversely affect the desired goal of the ambitious programmes. Therefore, the government must address their legitimate concerns on a priority basis to save this noble initiative from being dericed as the one that while addressing one sort of discrimination is actually promoting another.

In a nutshell, the study finds that MDMS is functioning satisfactorily in all the sampled schools with little aberration here and there. Most importantly, the students, especially from the disadvantaged groups are very appreciative of the scheme and the school meal programme has considerably addressed their nutritional requirements besides resulting in increased enrolment. Moreover, all the stakeholders have exuded confidence in this noble initiative and are in favour of the continuation of the scheme with a more diversified menu for the benefit of the children. However, the grey areas like poor quality of education, lack of facilities, inadequate interest and awareness of the parents and lesser enthusiasm on the part of the VSS remain very much there and warrant speedy redressal to realise the true potential of the scheme.

MDMS attempts to address the problem of marginalisation by benefiting disadvantageous groups through increased enrolment and attendance coupled with increased nutritional intake but fails to bridge the educational inequalities prevailing in the society. An analysis reveals that the success of MDMS is a by-product of the social power structure. The dominant and powerful section maintains social inequality through better and quality education provided by private schools which are beyond the reach of the poor and deprived. The success of any social development policy depends on the societal power structure, and unless the *status quo* is changed, MDMS achievement in addressing the problem of marginalisation can at best be marginal. Any social development policy like MDMS will not serve the purpose until and unless the multi-dimensional and multi-sectoral processes and structure that marginalises the poor, weak and disadvantageous are tackled. The major areas where a great deal remains to be done are broadly poverty alleviation, ensuring year-round availability of drinking water, expansion of public health services and primary education aimed at a resolute elimination of illiteracy, creation of badly needed access road to rural areas and massive generation of employment for creation of purchasing power among the poor and deprived sections of society. What is needed is a structural and cultural transformation of society to create an egalitarian social structure.

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High Anticipation with Low Healing: The Issue of MSMEs in India during COVID-19

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The economic package 'Atmanirbhar Bharat Abhiyan' declared by the Prime Minister of India to bring the economy back on track is mostly based on monetary measures. In the absence or with limited fiscal policy interventions, the revival of the economy may be sluggish. Economic slowdown resulted out of Covid-19 not only affected the supply chain but also the effective demand simultaneously. A restricted 'Fiscal Policy Intervention' in the 'Aatmanirbhar Bharat Abhiyan', has the limited potentiality of creating market demand. The limited 'fiscal policy' intended to raise the liquidity in the hand of the poor people will create a market demand for food articles. In such a circumstance, the article posits that creating a demand for the MSME product may require a wider fiscal policy intervention as followed by developed countries like the United State of America.

Introduction

Micro, Small, and Medium Enterprises (MSMEs) are one of the methods of classifications for enterprises followed in India. MSMEs have always been at the policy forefront for its significant contribution to Gross Domestic Product (GDP) and employment generation potential.[1] However, in this time of COVID-19 MSME sector is at the media forefront for two

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specific reasons: (i) definitional change, and (ii) a huge stimulus package for the MSME sector to bring back the vibrancy of the sector during and after the economic lockdown. MSMEs, like any other sector, faces loss due to the long lockdown.[2] As a part of the Prime Minister's '*Atmanirbhar Bharat Abhiyan*', the Finance Minister of India Ms. Nirmala Sitaraman made two important declarations relating to MSMEs on 13th May 2020, (i) definitional change in the MSMEs, and (ii) a stimulus package to revive the sector. When there are mix reactions on the stimulus packages, the move on definitional change was appreciated by policymakers and social scientists across the ideological line as a long overdue and as a part of routine threshold revision task. With this background, the paper envisages to understand (i) how far the definitional change will favour the MSMEs for quick revival after lockdown, and (ii) how far the stimulus package will be helpful in the revival of MSMEs in India.

The Context

MSMEs were defined in India by the 'MSME Development Act of 2006'. The recent definitional change of MSMEs is something beyond the routine threshold revision task. MSME Development (Amendment) Bill, 2018 was introduced in Lok Sabha on 23rd July, 2018. The Bill amends the Micro, Small and Medium Enterprises Development Act, 2006 where classification was made based on investment[3] and created legal space to reclassify the MSMEs based on annual turnover. The re-classification will not only provide benefit to the newer entrants to the MSME sector, but it also makes the re-classification transparent with the Goods and Services Tax (GST) Act. However, resistance mounted on the ground that (i) re-classification by turnover criteria alone will create space to accommodate much larger units in the micro and small segment that will be escalation competition (Sinha, 2018), and (ii) turnover-based classification will allow traders to encroach the MSME space to avail the benefits of compulsory government procurement and priority lending.

MSME[4] may be categorised under the sub-heads of unorganised or organised enterprises in India. When the 'unincorporated non-agricultural enterprises (excluding construction) survey' conducted periodically by NSSO[5] give the volume and characteristics of unorganised enterprises; the 'Annual Survey of Industry'[6] (ASI) offer a detailed account of organised enterprises. In addition to enterprises surveyed under ASI, there are enterprises involve in construction activities falling under Section F of National Industrial Classification (2008) (NIC) also comes under the

organised enterprises. As per the latest 73rd Round NSSO Survey (2015-16), there are around 6,33,91,974 un-incorporated non-agricultural MSMEs in India. The number of organised enterprises comes around 2,33,116 based on the 2015-16 ASI figure. Out of total Micro, Small and Medium Enterprises (6,36,25,090), 99.63% are unorganised enterprises. When enterprises under organised sector are registered under the factories act, Companies Act or other[7], enterprises under the unorganised sector are a combination of both registered enterprises under some specific act or authorities[8] other than the Factories Act (which are being captured under the ASI) and a whole range of unregistered enterprises. The MSMEs cover manufacturing,[9] trade and other service[10] enterprises.

The Definitional Issue

Different economies use different criteria to categorise the MSMEs. The most commonly used criteria are based on the number of employees, followed by turnover, the value of assets, and other variables. Labour based criteria are simply rejected in India because of the nature of operation of the MSMEs and the types of labour employed by these enterprises.

Table 1
Classification of MSMEs

Classification	Existing Classification (Only investment)		Revised Classification (Manufacturing and Services combined)	
	Manufacturing	Services	Investment	Turnover
Micro	<Rs.25 lakh	<Rs.10 lakh	<Rs.1 crore	<Rs.5 crore
Small	<Rs.5 crore	<Rs.2 crore	<Rs.10 crore	<Rs.50 crore
Medium	<Rs.10 crore	<Rs.5 crore	<Rs.50 crore	<Rs.250 crore

Sources: Ministry of MSME, Government of India.
* The Rs. 50 crore investment and Rs. 250 cores turnover criteria for a Medium Enterprise has been approved by the Union Cabinet on 1st June 2020.

As per the new definition, it will be classified based on investment and turnover.[11] As per the new definition: (i) micro units; with investment less than Rs 1 crore and turnover less than Rs 5 crore), (ii) small units; with investment less than Rs 10 crore and turnover less than Rs 50 crore, and (iii) medium units; with investment less than Rs 20 crore and turnover less than Rs 100 crore. The new classification may result in many medium enterprises being reclassified as small enterprises (or small getting reclassified as micro) based on the new estimation process. The Ministry is planning to further revise the medium unit by enhancing the investment and turnover limits up to Rs 50 crore and Rs 200 crore, respectively.

Definitional Change and the Benefit and Loss

MSMEs receive few benefits from Government, out of those two most important benefits are (i) compulsory government procurement, and (ii) priority lending from banks. According to the government's procurement policy, 25 per cent of procurement by the central government, which includes ministries, departments, and public sector undertakings, with some exceptions for the defense sector[12], must be from micro and small units. As a result of this MSMEs always wishes to be characterised as either micro or small unit by either undervaluing or not reporting the actual investment or by both. With the introduction of the new definition, when annual turnover will be the criterion for classification of MSMEs, 'goods and services tax network' and 'other sources' may be used for the categorisation of the enterprises. This will be helpful in the reduction of hiding facts to avail the benefit. With the introduction of investment and turnover-based classification, there is every possibility that traders will encroach upon the space for MSME to avail the benefit of compulsory government procurement and priority lending. This may act against the idea of 'vocal for our local' and self-reliant movement. In the line of missing the medium, the whole manufacturing unit will collapse and the investor will be interested in imports.

The Bail-out Package for MSMEs

A 20 lakh crores stimulus package was declared by the Prime Ministers (PM) of India after 47 days (excluding the day of citizen curfew) of the lockdown on 12th May 2020.[13] The responsibility of detailing the package was assigned to the Finance Minister (FM) of India[14]. On the 2nd day of detailing, the FM came out with a necessary declaration, i.e., a change in the definition of the MSMEs along with the stimulus package for MSMEs.

The economy is in a lockdown mode since the declaration of full lockdown by PM Narendra Modi. Except for agriculture and allied sector, all other sectors are in crisis. In addition to supply deficiency, revival of demand is a major issue before the government. In addition to the decline in employment, pay cuts due to economic lockdown both in private and government sector, help and donation to different institution and CM and PM care fund, and even freezing of DA in retrospect till January 2021, break of trust forced people to spend less even those who have some liquidity. This is a very unusual situation; the civilization is confronting. Even the 1930's great depression was demand deficient in nature. Experts believe that along with restarting the supply chain through monetary measures, demand generation is equally important to restore the confidence of producers.

What were the expectations of MSMEs, what is needed, and what is offered in the stimulus package is an issue to be discussed? The stimulus package for MSMEs is a part of Mr. Modi's *Atmanirbhar Bharat Abhiyan* (ABA). Ms. Nirmala Sitaraman in the 1st tranche of the ABA announced almost 15 measures. Out of that when seven are directly related to MSMEs, a few more have a sizeable bearing on the viability and operation of MSMEs. In the 1st tranche Finance Minister announced a Rs. 5,94,550 crore package for MSME, NBFC and Power. The stimulus package for MSMEs has been analysed by experts in two ways (i) some analysed it as the suitable measure to make the MSME operational, and (ii) few criticise it as a credit link package with no fiscal relief. Making MSMEs operational is important but restoring the confidence of consumersis equally important. Trust deficit in a demand-deficient economy may further worsen the situation.

Table 2
Stimulus Package for MSME Declared in the 1st Trench of Atmanirvar Bharat Abhiyan

Sl. No.	Stimulus Package offered	Objective
1	Collateral free loan of Rs 3 lakh crores automatic loans for businesses including MSMEs.	(i) The collateral-free loans benefit 45 lakh enterprises, resume operation, and save jobs. (ii) Enterprises up to 20 per cent of the entire outstanding credit as of 29th Feb 2020 are eligible. (iii) Borrowers with up to Rs 25 crore outstanding and Rs 100 crore turnover would be eligible. (iv) Four Year Tenure with a moratorium of 12 months on Principal repayment. (v) 100% credit guarantee cover to Banks and NBFCs on Principal and Interest. (vi) Available till 31st October 2020.
2	Subordinate debt provision of Rs 20 thousand crores. It will benefit those, which are NPAs or stressed MSMEs.	(i) Stressed MSMEs with equity support (Functioning MSMEs which are NPA). (ii) At least 2 lakh MSMEs are expected to be benefited. (iii) The Government will provide support of Rs 4000 crore to CGTMSE. It will provide partial credit guarantee support to Banks.
3	Rs 50 thousand crore equity infusion through the fund to funds for MSMEs that are viable but need handholding.	(i) A fund of funds with a corpus of Rs 10 thousand crores will be set up to help these units expand capacity and help them list on Stock Markets if they choose, (ii) It will provide equity funding for MSMEs with growth potentialsand viability (iii) FoF will be operated through a Mother Fund and Few daughter funds (iv) Fund structure will help leverage Rs 50000 of funds at daughter fund level

Sl. No.	Stimulus Package offered	Objective
4	The definition of MSMEs has been revised.	To allow MSMEs to aim for expansion and not lose benefits. Also, there will be no distinction between the manufacturing & services sector MSMEs
5	Global tender to be disallowed upto Rs 200 crores	This is expected to decrease unfair competition from foreign companies.
6	Other interventions for MSMEs such as promoting e-market linkages, Government has been continuously monitoring settlement of dues to MSME vendors.	e-market linkages to be promoted that would-be a replacement for trade fairs and exhibitions.

Sources: MSME Ministry Web Portal and Authors Analysis.

The stimulus package for MSMEs contains six major interventions as mentioned in table 2. The stimulus package is criticised as 'less fiscal transfer and more credit guarantees' initiatives. Even though debated in various experts' circles, the government is not in favour of the idea that the deficit will have to be monetised, because of experience of fiscal profligacy (Kar and Naidu, 2020). The stimulus package declared by the Government of India to revive the MSMEs was mostly through instruments of monetary policy along with a set of routine and few protective and promotional measures. A gap observed between the immediate need of the MSMEs and the components of the stimulus package is: (i) need of cash in hand to pay the salary of employees who does not get a space in the stimulus package, (ii) clearing of all dues of MSMEs immediately, and (iii) re-establish trust of the fair market in near future. Further, even though a declaration is made on 13th May 2020 to clear all dues of MSMEs within 45 days no substantial progress is made in this direction till date. Further, mostly the stimulus package targeted the small and medium enterprises and a significant proportion of micro-enterprises may be out of the realms of the benefits. Attempts are being made to analysis a few interventions made by the Government to revive the MSMEs are discussed here.

The definition change not only shifts the medium to small and small to micro but also allow the trader to avail the benefit of the manufacturing sector. By disallowing global tender up to Rs 200 crores, the Government of India tried to send a message in favour of the protection of MSMEs, but the micro-enterprises may face competition due to change in the definition. Enterprises only with an outstanding loan are eligible for the collateral-free loans at concessional rates. There are two caps in this support system, (i) the

loan is limited to 45 lakh enterprises, (ii) a timeline limit of 31st October 2020 is attached to it. This restrict the enterprises in time as well as availability perspective.

The stimulus package has a provision to facilitate stressed MSMEs with Rs 20,000 crores as subordinate debt.[15] It will assist those MSMEs facing an equity problem. It will help MSMEs with non-performing assets (NPA) or have financially stress will be the beneficiary. In case of borrower default, creditors who own subordinated debt will not be paid out until after senior bondholders are paid in full. This usually puts financial institutions at risk. To overcome the risk of lending during the lockdown period, an arrangement is made that the subordinate debt to be provided by financial institutions would be considered as quasi-equity and fully guaranteed through the Credit Guarantee Trust for the Medium and Small Entrepreneurs[16] (CGTMSE). Under the ABA, support of Rs 4000 Crores has been provided to CGTMSE to extend necessary support to financial institutions that offer subordinated debt to MSMEs.

The Government has proposed to set up Funds of Funds[17] (FoF) with a corpus of Rs 10,000 crores that will help to leverage Rs 50000 of funds at the daughter fund level. The FoFs scheme will be managed by a 'Mother Fund' in addition to a few 'Daughter Funds.' MSMEs who have a good track record of meeting their financial obligations and also have the lowest risk of default will be benefited out of the FoF. This step would help to expand MSME size as well as capacity and will also encourage the listing of MSMEs on the main board of stock exchanges.

Conclusion

More than 90 per cent of enterprises in India are unincorporated MSMEs engaged in the non-agricultural sector. Out of the total unincorporated MSMEs, 99 per cent are micro-enterprises. These small units were facing: (i) problem of liquidity, (ii) delay in payments from Government of India and private buyers, (iii) stock of unsold goods, (iv) access to credit, (v) competitions from outside competitors, and (vi) adequate demand in the market even before the lockdown. The state of small enterprises is not very much different from micro-enterprises. These units together are vulnerable to a minor exogenous shock. The unprecedented lockdown due to COVID-19 disrupted the supply chain[18] and created uncertainty of market demand in the economy. The entrepreneurs are not in a position to speculate the state of market demand in near future due to uncertain market conditions. In such a situation, a majority of MSMEs are not in a position to release salaries of

workers for March 2020 despite assurance from the Government to bear a 24 per cent contribution of the employee's provident fund. The Government of India has timely announced a stimulus package for the revival of the MSME sector. But this package is restricted to monetary policy intervention only, leaving the fiscal policy area untouched. This may not yield much significant results in a macro-economic situation. A judicious mixture of monetary policy and fiscal policy may be appropriate to revive the economy as well as MSMEs units in the present situation.

End Notes

1. The MSME sector contributes around 28.90% to the GDP and creates employment opportunities for about 111 million people (Annual Report, MSME 2018-19).
2. The Prime Minister of India on March 19, 2020, addressed the nation and appeal the citizen to observe one-day 'citizen curfew' on March 22, 2020. However, before the declaration of citizen curfew, few states have already declared lockdown till March 31, 2020. Further, the prime Minister unprecedentedly declares for the 1st phase lockdown from March 24, 2020, midnight to April 14, 2020, with only four-hour notice. The second phase starts from April 15, 2020, to May, 3,2020 3and the 3rd phase from May 4, 2020, to May 17, 2020.
3. Investment in Plant and equipment for manufacturing enterprises and investment in equipment in service enterprises.
4. In accordance with the provision of Micro, Small & Medium Enterprises Development (MSMED) Act, 2006 the Micro, Small and Medium Enterprises (MSME) are classified in two Classes (i) Manufacturing Enterprises-The enterprises engaged in the manufacture or production of goods pertaining to any industry specified in the first schedule to the industries (Development and regulation) Act, 1951) or employing plant and machinery in the process of value addition to the final product having a distinct name or character or use. The Manufacturing Enterprise are defined in terms of investment in Plant & Machinery, and (ii) Service Enterprises: -The enterprises engaged in providing or rendering of services and are defined in terms of investment in equipment.
5. NSSO Survey of Unorganised Manufacturing Enterprises covers those enterprises that are not covered by the ASI. NSS unorganised surveys are follow-ups to the different Economic Censuses. NSS uses the Economic Census as its sampling frame. The unorganised sector is not entirely overlapping with what is called the unregistered sector. In the NSS unorganised survey rounds, there are enterprises that can be small registered enterprises under the Shops and Establishment Act, or the Municipal corporation/Panchayat/local body, VAT/sales tax, Employee Provident Fund Act, the Employees State Insurance Corp. Act, and/or registered with SEBI/stock exchanges and any other specific act or authorities. So, the unorganised sector consists of mostly unregistered enterprises and some registered enterprises under some specific act or authorities other than Factories Act (which are being captured under the ASI).
6. The Annual Survey of Industries conducted by the Central Statistical Organisation, Ministry of Statistics and Programme Implementation (ASI) gathers information on "registered", or formal sector firms that are covered by (Sections 2m(i) and 2m(ii) of) the 1948 Factories Act and firms registered in the 1966 Bidi and Cigar Workers Act—particularly (i) those firms that use electricity and hire more than ten workers; and (ii) those that do not use electricity but nevertheless employ 20 or more workers. It also

covers certain utility industries such as power, water supply, cold storage, and the like. Units with 100 or more workers are all counted, and a census of such enterprises is captured in the ASI, as they are completely enumerated, while the rest (<100 workers) are sampled and their survey is based on a predetermined sampling design.

7. Firms captured under the ASI, on the other hand, are all registered/formal firms under Sections 2m(i) and 2m(ii) of the 1948 Factories Act and firms registered in the 1966 Bidi and Cigar Workers Act—particularly (i) those firms that use electricity and hire more than ten workers; and (ii) those that do not use electricity but nevertheless employ 20 or more workers.

8. NSS unorganised survey rounds there are enterprises which can be small registered enterprises under Shops and Establishment Act, or the Municipal corporation/Panchayat/local body, VAT/sales tax, Employee Provident Fund Act, the Employees State Insurance Corp. Act, and/or registered with SEBI/stock exchanges and any other specific act or authorities.

9. The enterprises engaged in the manufacture or production of goods pertaining to any industry specified in the first schedule to the Industries (Development and Regulation Act, 1951) or employing plant and machinery in the process of value addition to the final product having a distinct name or character or use. The size of Manufacturing Enterprises is defined in terms of investment in Plant & Machinery.

10. The enterprises engaged in providing or rendering of services and are defined in terms of investment in equipment.

11. Day after changing the definition of MSMEs; the government has decided to further revise the criteria for medium units by enhancing the investment and turnover limits to up to Rs 50 crore and Rs 200 crore respectively. Further, the MSME ministry is thinking to change the criteria from 'investment and turnover' to 'investment or turnover'.

12. Public Procurement Policy for MSEs amendment Order, 09 November, 2018 has been notified under section 11 of MSMED Act, 2006. Public Sector Undertakings shall procure minimum of 25 per cent of their annual value of goods or services from Micro and Small Enterprises.

13. The Prime Minister of India Mr. Narendra DamodarDas Modi addresses the nation on May 12, 2020, at 3.00 pm with a huge bail-out package that may be helpful to bring the economy back.

14. The FM, Ms. Nirmala Sitharaman has given the detailing of Prime Minister's Aatmanirbhar Bharat Abhiyan in five consecutive talk starting with May 12, 2020, which ended with May 17, 2020. Some of this announcement includes additional liquidity injected into the economy by the RBI during February, March, and April and 1.7 lakh crore fiscal package announced on March 27, 2020.

15. Subordinated debt is any debt that falls under, or behind, senior debt any debt that has a lesser priority over other forms of debt is considered subordinated debt.

16. The MSME Ministry and Small Industries Development Bank of India (SIDBI) established the CGTMSE in 2000 to implement the Credit Guarantee Fund Scheme. The corpus of CGTMSE is contributed by the GoI and SIDBI in the ratio of 4:1 respectively. Its focus is to provide credit guarantee to financial institutions that provide loans to MSMEs.

17. A FoF is a mutual fund scheme that invests in other mutual fund schemes. In this, the fund manager holds a portfolio of other mutual funds instead of directly investing in equities or bonds. The main objective is to create wealth over the long run.

18. Workplace closures disrupt supply chains and lower productivity (IMF, 2020).

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COVID-19 and Migrant Workers in Odisha

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Coronavirus pandemic has inevitably created disorder in various economic sectors across the world. This pandemic is an exceptional shock for the migrant workers being the most vulnerable group as they depend on daily wages to meet their ends, but today their affordability to three meals per day seems burdensome. Odisha is one of the major contributors to the migrant labour force. Migrant workers are usually employed in informal, low-skilled, risky jobs in agriculture, construction, and domestic work. These workers' lives are not rosy even during normal times and usually live a low quality of life and face challenges to acquire basic amenities for survival. Thus, this unprecedented situation has worsened their conditions. The paper aims to assess the impact of COVID-19 on migrant workers in Odisha and suggests some measures to create alternative livelihoods by rebuilding the rural economy after COVID-19.

Introduction

COVID-19 is an existential threat to the health and livelihood of millions of people around the world. India had been experiencing slower economic growth and rising unemployment before the COVID-19 crisis. As a consequence of the COVID-19 pandemic and the ensuing shutdown and the suspension of economic development, thousands of migrant workers from major cities in India have decided to return to their homeland. Odisha, one of the major contributors to the migrant labour force, also faced a massive

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inflow of workers who entered the state due to a lockdown on 24th March 2020. Migrant workers are usually employed in informal, low-skilled, risky jobs in agriculture, construction, and domestic work. According to the International Labour Organisation (ILO) estimation, close to 81 per cent of working people of India are engaged in the informal sector. Informal sector workers are characterised by unskilled, low paid, working in hazardous environments, and deprivation of any form of social security and safety nets (NSSO, 2012). These workers are prone to several forms of discrimination and engagement. Migrant workers seldom benefit from fair treatment at the workplace and often need to struggle to access their social rights (International Training Centre, 2020). These workers' lives are not rosy even during normal times and usually live a low quality of life and face challenges to acquire basic amenities for survival. Thus, this unprecedented situation has worsened their livelihood conditions. The differentiation between 'white-collar' and 'blue-collar' workers is evident as the former can work from home or even benefit from paid leaves. In contrast, the latter does not have this privilege and remains aloof even from their basic social securities. The blue-collar migrant workers are vulnerable to difficulties in job security and a lack of accurate information (Khan and Sahoo, 2020). Migration has always been a strategy that a majority of workers in India depend on for their livelihood. Migrant laborers suffer from the double burden of being poor and migrants. Migrants are the most disadvantaged category as they rely on regular earnings to meet their needs, but now their survival of three meals a day seems to be a herculean task. Lacking employment and resources, food shortages, and closing down public transit, thousands of migrant workers were forced to walk hundreds of miles back to their hometowns. Many migrants died due to the lockdown, with reasons ranging from starvation, suicide, exhaustion, road and rail accidents, police brutality, and denial of timely medical care. The paper aims to assess the impact of COVID-19 on migrant workers in Odisha and suggests some measures to create alternative livelihoods by rebuilding the rural economy after COVID-19.

The paper is divided into six sections. Section I deals with the introduction to the problem; section II summarises the origin of COVID-19 and Odisha's COVID profile. Section III gives a brief overview of migration and trends in Odisha, followed by the impact of COVID-19 on migrant workers in section IV. The Odisha Government's response to COVID-19 on migrant workers is discussed in Section V, while the possible road ahead after COVID 19 for migrant workers is discussed in Section VI.

COVID-19 Origin and Odisha State

The present global threat, worldwide havoc, pandemic COVID-19, is an infectious disease caused by a new Coronavirus, unknown before its outburst in Wuhan city of China in December 2019 (Nishiura, 2020). 'Corona' is a Latin word that means crown. The halo-like structure with protein thorns of the virus has a similar appearance like a crown, which impelled its identifiers June Almeida (Scottish virologist) and David Tyrrell (British virologist) to assert the name 'Corona' to a new virus in the year 1964 (Combs, 2020). In the late 1960s, a large family of similar viruses that may cause illness in animals and humans was identified and named Coronaviruses. Several Coronaviruses are instigating respiratory infections varying from the common cold to more severe respiratory diseases like Acute Respiratory Syndrome (SARS) outburst in 2003 and Middle East Respiratory Syndrome (MERS) upsurge in 2012 (WHO, 2020). Both these SARS and MERS outbursts caused respiratory tract infections with a high rate of mortality. The newly discovered Coronavirus (SARC-CoV2) or novel Coronavirus (2019- Novel Coronavirus), which causes Coronavirus disease, is named COVID-19 on February 11, 2020, by the World Health Organisation (WHO). The origin of COVID-19 arises from animal hosts, but now this outbreak is incessantly spreading by the human-to-human contact. The spread of a virus from animal to human for the first time is known as a spillover event (WHO, 2020). The people are suffering from COVID-19 experience mild to severe respiratory illness. This disease's symptoms include fever or chills, cough, difficulty in breathing, fatigue, body aches, headache, loss of taste or smell, sore throat, congestion or runny nose, nausea or vomiting, and diarrhea. The above-listed symptoms are not complete; the disease shows changing symptoms with time and place, under observation by the scientist. The COVID-19 virus spreads mainly through droplets of saliva or discharge from the nose when an infected person coughs or sneezes. To date, no specific treatments or vaccines are developed in the world (WHO, 2020).

This outbreak was declared a case of a global pandemic by the WHO in March 2020 (British Broadcasting Corporation, 2020). As of 20th June 2020, the coronavirus cases reported worldwide were 8,766,035, and the number of fatalities recorded was 4,62,691. About 4,627,883 patients were recovered from this life-threatening disease (Worldometer, 2020). Crises of such magnitude profoundly impact certain population groups and worsen the inequality graphs. In his paper Fenichel (2013) explained the outbreak of contagious epidemic diseases to be scary and behavioural adaptations of

humans to such contagious diseases have prevailed for centuries. India's first Coronavirus case was reported by the Ministry of Health and Family Welfare in Kerala on 30th January 2020 (Reid, 2020). Since then, the outbreak has spread to other states and union territories, with Maharashtra consistently reporting the highest case numbers since mid-March 2020. India reported over 75,50,280 confirmed cases of the coronavirus (COVID-19) as of October 19, 2020. Out of these, around 66,63,041 patients have recovered, while 1,14,653 cases were fatal. As of October 20, 2020, Odisha had 2,68,364 confirmed COVID -19 cases with 20,339 active, 2,46,837 recovered and 1188 deaths. To curb the spread of the outbreak, the government imposed a 21-days nation-wide curfew from March 25, which was extended until May 3, 2020 (British Broadcasting Corporation, 2020) and further extended for another two weeks starting from May 4, 2020, with some ease across different states and economic activities. The fourth phase of this lockdown is stretched up to 31st May 2020, with a downtrend in the domestic industries' operations, which is causing chaotic repercussions in the lives of informal sector workers in India. More than 90 per cent of India's total workforce is involved in the informal economy (Govt. of India, 2013-2014). According to the World Bank, India's first lockdown phase has impacted about 40 million internal migrant workers (Press Trust of India, 2020). In addition to this, a report released by the World Bank - 'COVID-19 through a Migration Lens' reveals that the magnitude of internal migration is approximately two and a half times more than that of international migration.

Migration Trends in Odisha

Odisha is one of the poorest states in India. Migration is an integral part of Odisha's rural livelihood, and people move to other states in search of work and better wages. In the last decade, Odisha has witnessed several natural disasters, including floods, cyclones, tornadoes, and droughts. COVID-19 brought another crippling blow to the state economy this year. Each year, millions of people in Odisha depart from their native places to cities with ambitions to dreams for greater work prospects and better quality of life. Poverty, massive unemployment, lack of opportunities, depletion of natural resources, natural disasters, overcrowding of agriculture in rural areas on the one hand and expectation of employment with higher wages facilities in a better working condition in cities or urban areas on the other hand are significant reasons for which rural-urban migration of workers take place in India. The literature on migration economics gave due emphasis to the 'push' factors as operated at the place of origin and 'pull' factors of the

destination for the processes and outcomes of migration (Bhagat, 2018). Landless agricultural labourers in rural areas belonging to a particular class and caste would experience mobility to meet the household's expenditure (Choudhary, 1991) in comparison to those who are economically well-off. The main reasons for migration are seasonality and low employment, small landholdings, low incomes, and indebtedness in villages (Saha et. al., 2018). Migrant workers constitute the Indian economy's backbone, as migration is a livelihood strategy of millions of people in India. Out of 482 million workers in India, about 194 million are permanent and semi-permanent migrant workers, as per the 2011 Census. Besides, there are about 15 million short-term migrant workers of temporary and circulatory nature. At the state level, in-migration rates are higher in high-income states such as Delhi, Goa, Haryana, Punjab, Maharashtra, Gujarat, and Karnataka. The low-income and under developing states like Bihar, Uttar Pradesh, Jharkhand, Rajasthan, and Odisha portray a relatively high rate of out-migration. National Sample Survey Organisation, 2010 estimates that about 30 per cent of migrants served as casual workers, and about 35 per cent of migrant workers worked as regular/salaried workers. In India, the urbanisation rate has increased from 27.81 per cent in 2001 to 31.16 per cent in 2011. A massive movement of migrant workers from rural to urban areas leads to overcrowding and high pressure on cities' resources. This causes the random growth of slums lacking basic facilities like safe drinking water, sanitation facilities, electricity connection, a healthy and safe environment. Health issues of migrant workers are of great concern as they live in an unhealthy and unsafe environment (Damani, Mishra and Venkateswar, 2020). The state suffers from distress migration, mostly from south-western areas, like the KBK (Kalahandi, Bolangir, Koraput) districts. According to the 2011 Indian Census, Odisha has a working population of 17,541,589, of which 61 per cent are main workers, and the others are marginal workers. According to the Indian Periodic Labour Force Survey, the state labour force participation rate was 51.7 per cent instead of the national average of 53.0 per cent. The 2011 census showed that there were 13 lakh migrant workers in Odisha who, for various causes, had migrated to different parts of the country. The largest was to Andhra Pradesh (14.6 per cent), followed by Gujarat (13.6 per cent), West Bengal (11 per cent), and Maharashtra (9 per cent). Gujarat is the second-largest destination for Odia migrants, with the majority (45 per cent) of the total Odia migrants staying in Gujarat for work or business purposes. Of the overall Odia migrants to Gujarat, about 30 per cent are short-lived migrants, i.e., they have been staying in the Western state for less than four

years. Most of these migrants (especially in the town of Surat) belong to the district of Ganjam. Some 7-8 lakh workers are commuting to Gujarat, most of them employed in Surat (Acharya and Acharya, 2020). Indeed, migration from the districts of Bolangir and Nuapada (Koraput-Bolangir-Kalahandi or KBK) is more prevalent due to difficult living conditions and underdeveloped economies. Most of this migration occurs in Odisha, either for jobs or education purposes or for small businesses. The peculiar characteristic of this rural-urban migration is that the bulk of these migrants is female, whether at the national or Odisha level. The proportion of female migrants to total migrants was 53 per cent in Odisha. Table 1 shows that men migrate looking for employment or work, whereas female migration is for marriage. In Odisha, 54.6 per cent of male migrants move from rural to urban for employment or work.

Table 1
Reasons for Migration out of Odisha, 2011 (in %)

Reason for Migration	Male	Female
Work/ Employment	43.16	0.72
Business	11.17	4.46
Education	7.29	4.08
Marriage	1.61	51.73
Moved after birth	3.77	1.92
Moved with households	23.39	29.66
Others	9.31	7.42

Source: Census, 2011

Impact of COVID-19 on Migrant Workers

Loss of Livelihood and Employment

Before the spread of the Coronavirus in 2020, hardly find any mass migration of labour to their native place by losing their livelihood in urban areas due to the spread of an epidemic. The spread of the worldwide Coronavirus leads to mass migration and mobility of workers. The government and the medical professionals have great confidence in social isolation and the country's lockdown to break the chain of this virus or control its spread. The first case of COVID-19 appeared in India on 30th January 2020, observing its worldwide fatal impact, the lockdown in the entire country was announced on 24th March 2020 for 21 days. All economic activities were closed, i.e., factories, shops, restaurants, cinema halls, transportation, etc. except the essential services. A large number of migrant workers worked in the unorganised sector or informal sector. As per the Periodic Labour Force Survey (PLFS) that India's labour force numbered 471.5

million out of an estimated total population of 1358 million in 2018. Out of the total workforce, 114.2 million employers receive monthly wages or benefits, 115.0 million casual workers, and the remaining 242.3 million self-employed (PLFS, 2017-18). Due to nationwide lockdown, the unorganised employers refuse to pay salaries or wages to the employees or the migrant workers. According to a recent survey conducted between 8 and 13 April 2020, 90 per cent of the migrant workers in various states did not get paid by their employers, 96 per cent did not receive ration from the government, and 70 per cent of migrant workers did not get cooked food. Most of the migrant workers lose their job. According to the Centre for Monitoring Indian Economy, more than 122 million people in India lost their job in April 2020, the overwhelming majority of which were small traders and wage-earners. According to a telephone survey of 4,000 workers conducted by the Center for Sustainable Employment of AzimPremji University, 80 per cent of urban workers in the sample lost their jobs during the period. In contrast, farmers and self-employed workers in non-agricultural sectors experienced a drastic decline in their earnings. Another calculation made by Prof. Jayan Jose Thomas viewed that the shutdown in India, which began on March 25 to suppress the Coronavirus pandemic, destroyed the country's economy and left millions of its workers without any source of income. The revenue wasted by marginalised sections of India's labour force during the two months of the lockout will be as high as Rs 4 lakh crores, or approximately 2 per cent of the country's annual gross domestic product (Thomas, 2020). Millions of migrant workers, who worked in informal sectors became jobless overnight. This instantly impacts these informal sector migrant workers by losing wages, hunger, starvation, homelessness, hopelessness, helplessness, anxiety, and fear of getting COVID-19. The recent COVID-19 pandemic has pushed these migrant workers to the margins without adequate social protection and safety measures. All these plights forced them to run away from different parts of the country to their native places, even during the government's countrywide lockdown. Many vulnerable migrant workers lost their lives due to the hardship of traveling a thousand kilometers by foot in hunger and starvation or due to accident on the way; some also committed suicide due to depression or co-morbidity, which develop threat of social, psychological, and emotional sufferings. It is also observed that the feeling of physical, emotional, and financial insecurity by migrant workers worsens with time, which compels them to arrive at their native place at any cost, which accelerates their pain and suffering.

Psycho-Social and Health Impact

During this economic closure, with a decline in income and employment opportunities of the migrant workers their limited skills restrict them from exploring other possibilities. This is a factor for the increase in poverty, inequality, exclusion, discrimination, and unemployment among migrant workers. Thus, the workers resort to negative coping strategies by compromising on health care, food consumption, selling their assets, or withdrawing children from school. Several incidents of migrant workers unrest are being reported across the country who are desperate to go back to their homes. There have been several cases wherein government shelter homes, are showing aggressive behaviour due to the non-availability of liquor or even abstaining from eating meals and getting into reclusion. It is a matter of serious concern that such behaviour will disturb not only the individual him/herself but also the persons around him/her and the police force on duty. The incidents seem to be a vicious circle wherein false information, instigation, sale of liquor, friction between Corona warriors and migrants, and bitter feelings against them. This is not a good sign as the groups of people working for people's welfare are looked down upon with mistrust and fear. COVID-19 and its transmission will have an irreparable effect on migrant workers worldwide (Gerdin and Kolev, 2020). Even before this pandemic, access to free health care facilities was out of the reach of migrant workers. They worked in poor working conditions, which exposed them to occupational health hazards, poor quality of water and sanitation had deteriorated their quality of life. Regular checkups in hospitals or Out-Patient (OP) treatments are currently suspended in government hospitals, which is causing difficulty for these workers to get their health issues redressed in this period of economic closure. Especially workers who reside in hilly and remote areas are in a vulnerable situation as they find it difficult to visit hospitals in case of any emergency or regular check-ups as there is no conveyance facility available now. These migrant workers cannot afford the treatments provided in private hospitals and are not aware of the digital ways to connect the doctors online. This major setback is making them suffer in silence. Coronavirus pandemic has been proved as the roots of major mental health crises and forcing isolation, uncertainty, anger, and hopelessness among migrant workers.

Central Government Policy Initiatives

To fight against COVID-19, the Finance Minister of India declared a relief package of Rs 1.70 lakh crore, which comes under the domain of

Pradhan Mantri Garib Kalyan Yojana (PMGKY) to support the poorer section of the society. The sub-heads on which this package has to be distributed are: (i) Rs 50 lakh of insurance for each health worker who is the warrior against COVID-19, (ii) 5 Kg wheat or rice and 1 Kg preferred pulses every month will be distributed free to 80 crore poor people, (iii) Rs 500 per month for continuous three months will be deposited in Jan Dhan accounts of women, (iv) the MGNREGA wage rate has been increased by Rs 30 means the wage rate rises from Rs 182 to Rs 202 per day to assist 13.62 crore families, (v) provide support of Rs 1000 for coming three months to poor senior citizens, widows, and disabled. Including all these facilities government assists 8.7 farmers by offering Rs 2,000 each under PMGKY in the first week of April. For eight crore low-income families, three months of free LPG cylinders will be provided and Ujawala Scheme (Press Information Bureau, 2020). The Central Government instructs the State Government to use the Building and Construction Worker's Welfare Fund to relieve the woes of construction workers. Other measures under the first phase include reduction of the repo rate and advice to hold on EMI for three months by the Reserve Bank of India (RBI). World Bank sanctioned US $ 1 Billion as emergency financing to India for meeting the emergency needs in this time of COVID-19. Central Government gives 17,287 crore assistance to states to make arrangements to tackle the issues engendered by COVID 19. The permission is given to states for Rs 320,481 crore net-market borrowings. In this crucial period, on 14.05.2020, the second economic package was declared by the government for migrant labour, farmers, and street vendors. This package includes free food to the migrant workers, 5 Kg of food grain, and 1 Kg pulses per family per month for two months. In this period, provision of a loan of Rs 10,000 as working capital for street vendors, provision of cheaper loan up to Rs 50,000 at 2 per cent interest under Mudra Shishu loans for small business, instruction for national acceptance of ration card is made from the side of the government. Among other measures, the government has sanctioned Rs 50,000 crore through RBI, like special finance to NABARD, SIDBI, NHB, change in FDI policies for combating the pandemic the Asian Development Bank (ADB) has approved of Rs 10, 500 crore loan to India.

Odisha Government's Response to COVID-19 on Migrant Workers

The Government of Odisha has increased the coverage of poor beneficiaries to 5 lakh under the State Food Security Scheme (SFSS). Each beneficiary receives 5 Kg rice per month at Rs 1 price per Kg for three months from April to June 2020. This distribution process has started on 24th

March. The old-age pension to 48 lakh recipients and ration to the 95 lakh families under Public Distribution System (PDS) is given to the beneficiaries at their doorstep to maintain social distancing. Odisha government has set up 36 temporary camps with free food and shelter for 5,547 migrant workers confined in Odisha due to 21 days countrywide lockdown for COVID-19. Odisha Government also provides relief to the migrant workers who were facing problems getting food during returning to their native places by opening temporary camps on the roadside. To help the migrant labourers of Odisha who are stranded in different parts of the country due to lockdown, the Odisha Government has set up 30 helpline centres. Senior IAS officers of the state are appointed as Nodal Officers to coordinate with other state governments to provide relief and food to migrants of Odisha who are camped in their respective states. Around 6 lakh migrants of Odisha have registered with the state government portal to stay in official quarantine after their return. These migrant workers are basically from Bihar, Chhattisgarh, West Bengal, Uttar Pradesh, Madhya Pradesh, Delhi, Haryana Telangana, Andhra Pradesh, and Kerala. The Government of Odisha has provisioned a minimum expense of Rs 120 on for food of each adult per day and Rs 100 for each child under 14 years per day during their quarantine time of 14 days. The Government of Odisha has provided a personal hygiene kit of Rs 300 that would include a toothbrush, paste, tongue cleaner, soaps, oil, razor, masks, sanitary pad, mug, bottle and bucket. The cleaning, sanitation, and security cost per quarantine centre should not exceed Rs 2,000 per day, said Special Relief Commissioner. The Chief Minister of Odisha Mr. Naveen Patnaik declared a package of Rs 100 crore as livelihood support for 4.5 lakh urban poor families suffering from the loss of job during COVID-19 lockdown. The programme was implemented in coalition with the Mission Shakti Department and it has been planned to carry on up to September 2020 to provide earning opportunities for workers, labourers, and daily wage earners.

In the event of the first anniversary of the Biju Janata Dal (BJD) Government in its fifth term, the Odisha Government declares Rs 17,000 crores package to generate jobs for poor farmers and the migrants' workers who returned home due to loss of jobs in different parts of the country during COVID-19 lockdown. This package is known as Special Livelihood Intervention Plan, is scheduled to be launched in June 2020 and executed up to March 2021. The package is planned for the poor people who have been severely affected during the coronavirus outbreak in rural areas of Odisha. It is highly essential to provide immediate job opportunities to many people,

specifically to farmers and wage earners. This plan will develop job opportunities in different areas like agriculture, fisheries, and animal husbandry, MGNREGA, forest, handloom, and handicrafts. This plan strives to cover industrial, tourism, and other employment generating sectors. This plan comprises Rs 6,440 for MGNREGA to generate 20 crore man-days inculcating 46 lakh people. The Government of Odisha has allocated Rs 140 crores for the skill development of migrant workers. The Panchayati Raj Department has to train 40,000 migrant workers who returned from different parts of the country during this economic closure. The integrated plan also involves spending Rs 373 crore on agriculture and allied activities with the involvement of 24.57 lakh farmers. Focusing on the revival of various sectors, the government has approved 22 proposals of different ministries. The plan has also approved an amendment to the Odisha Tourism Policy 2016 to facilitate the hotel project's land allocation. Efforts are given to reviving the MSME industries in the state of Odisha. The Odisha Government planned to invest Rs 6,000 crore in a textile park at Dhamara and Rs 7,000 crore in a medical park at Dhenkanal. Both of these parks are planned to set up in 1,000 acres of land each. It is expected that 20,000 employment opportunities will be generated by Dhamarapark and 16,000 by Dhenkanal park in the state.

The Road ahead for Migrant Workers after COVID-19

The important matter of concern here is how to deal with post-COVID 19 crises? The economy is facing increased unemployment and reverse migration. Migrants are facing different difficulties related to life and livelihood. Thus, it should be the concern of authorities to provide basic amenities, food, and health care facilities to the migrant workers. The safe return of those migrants to their home place ina proper manner should also be emphasised. An integrated policy should be formulated in such a manner that these returned migrants to the home place and urban employment should be absorbed in the local job market. The way forward to deal with this post-COVID-19 situation are discussed below:

Strengthening of Agriculture

Intensification and diversification of agriculture through irrigation improvements could hold migrants in rural areas with productive employment. India’s agriculture sector was able to withstand the critical phase, and surplus grains in the economy helped to reassure the citizen's dependence on agriculture at least for some time. Therefore, this can be an

opportunity for India to focus on this sector to cater to the needs of the world food market and emerge as a leader. To make this happen, rigorous efforts need to be made to upgrade our agricultural and rural infrastructure. Since the workers have migrated to their homes and will remain for at least a year or more, thus they can be engaged in agriculture and allied activities like poultry, animal husbandry, dairy, medicinal plants, sericulture (cultivation of silkworms to produce silk), apiculture (maintain honey bees for the production of honey and the wax), floriculture (uses: aromatic soaps, incense sticks, cosmetics, perfume, and pharmaceutical industry), fisheries, etc. Increased focus on these activities will increase the local supply and help meet the demand in neighbouring cities.

Strengthening of Micro, Small and Medium Enterprises (MSMEs)

Another key step can be to revive the rural economy through the medium, small and micro (MSME) enterprises. This sector is labour intensive and could be an appropriate alternative for rural employment generation. MSMEs in rural areas require a revamp in terms of capital, machinery, and production processes. By this revamping process the unemployment problem could be minimised, and production will be increased in the economy. Small and medium enterprises to be encouraged by the use of local products and local workers. By this process, productive utilisation of local resources will occur at the same time production and employment will be increased to ease out the demand for employment in the local job market.

Strengthening of Skill Training

The revival of the rural economy is also needed by imparting skill training to the workers. It is a known fact that labour in our country is not skilled. Unskilled workers are facing tough times to find work in the available job markets. The factories also opt for workers who are skilled and good in instrument/machine handling. Under the Skill India Mission, these workers should be imparted with training (in plumbing, electrical works, IT-related activities, etc.) to develop new skills to upscale their employability. Therefore, a comprehensive employment policy, combined with the industrial policy is necessary to address agrarian transformation, boost real wages in rural areas and to ensuring industrial development.

Creation of a Database for the Migrant Workers

The problem with the government is that it does not have reliable data on this migrant workforce. The figures available are entirely outdated.

The absence of authentic data is bound to constrain the government in making preparations for this workforce's return and rehabilitation during a disaster-like situation. Therefore, there is an urgent need to create a comprehensive database for migrant workers. At the panchayat level, a system should be created for the registration of every outgoing migrant worker. This would, inter alia, help the government to extend benefits to the workers during any crisis like the COVID-19.

Creation of Job through MGNREGS Work

The Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) was designed as a social protection scheme to benefit the workers in rural areas by providing them with employment and improving their livelihood opportunities. Several projects can be undertaken under the umbrella of MGNREGS, which will see multiple benefits like employing the workers, developing assets in rural areas, and the involvement of local experts (plumbers, electricians, carpenter, welders, etc.) for finding alternatives to their problems. Construction of roads, bridges, toilets, rainwater harvesting projects can be flagged off by absorbing workers in these projects in this period of economic closure. Rainwater harvesting through MGNREGS could solve the drinking water problems (in terms of quality and quantity) of the rural people. It is a cost-effective method that requires minimum expertise and provides numerous benefits with employing the local youths who returned to their natives during the lockdown period.

Prioritisation of Households with Migrants with Institutional Lending

Migrant workers who return to their native villages and planning to find an alternative livelihood should be encouraged to invest in medium and long-term livelihood options. Apart from this, institutional credit should be made available to the migrant workers through the primary agricultural cooperative societies, commercial banks, a special provision of credit, and Kisan credit cards with ease in processing with zero rates of interest for improving entrepreneurship among them.

Strengthening Social Protection for Migrant Workers

To ensure the best wage rates and relatively less exploitative working arrangements for the inter-state labourers, the Government of Odisha may forge partnerships with destination states such as Kerala, which offers the best wage rates in India and relatively better social security

measures for migrant labourers from Odisha. Apart from this, providing counseling to migrant workers will help the stranded migrant workers to make logical decisions rather than emotionally charged ones during these difficult times.

Strengthening Local-level SHGs and Farmer Producer

Finally, in this time of COVID-19 spread, locally available raw materials, supply chain disruption can be addressed and demand creation can be planned for rural areas by Self-Help Groups platform. The government should facilitate the credit linkage to these SHGs and agencies, including farmer producers. Vertical integration is an arrangement in the supply chain where different parts required to produce the final product are shared among different industries. This arrangement helps cost reduction, lessens workload, and time involved in the process of production.

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Decentralised Planning and Role of Panchayats in India: A Study of Andhra Pradesh and Odisha

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Panchayat Raj Institutions (PRIs) have been playing a prominent role in formulating local development plans in rural areas. Keeping this fact in the background, this paper tries to explore the role of Panchayats in formulating local development plans in the states of Andhra Pradesh and Odisha after 25 years of enactment of the 73rd Amendment Act. The paper also tries to provide a comparative picture between the two states on the issues related to powers devolved to the Gram Panchayats (GPs) for preparing local development plans in the states and their achievement towards accomplishing this work. It is observed that both the states have taken up many progressive steps through devolving powers to these institutions. However, weak implementation of power devolution policies, meager allocation of funds and non-adherence of core principles of decentralised planning have made the planning process directionless and unattractive.

Introduction

Decentralised planning in recent years has received much attention in many parts of the globe. It is observed that in recent years increasing focus has been provided to shape local democratic institutions and devolve

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powers to them for formulating decentralised development plans. In the contemporary era of economic development, formulating local development plans has become a major task of local democratic institutions. These institutions have become the epicenter of formulating local development plans and implementing development programmes. The decentralised development plans are tantamount to promoting equitable socio-economic development. It is on this basis, the local democratic institutions in many countries have come forward for preparing decentralised local development plans and budgets in rural areas.

The Panchayats unit of decentralised self-governing institutions in India has been received considerable attention in formulating plans and implementing development programmes. The 73rd Amendment Act of the Indian Constitution has vested many powers to these institutions on this subject under Article 243G of the Indian Constitution. As per the provision of this Act, powers and functions have been vested to the Gram Sabhas for formulating plans and identification of beneficiaries for different schemes and programmes. Powers have been devolved to the Gram Sabhas for the formulation of plans and endorsement of such plans before sending these plans to the Gram Panchayats (GPs) for resource allocation and execution. The District Planning Committees (DPCs) have institutionalised for preparing the integrated district development plans and budget in the districts.

In the case of Andhra Pradesh and Odisha, it is observed that many steps have been taken up to formulate development plans for rural areas. The enactment of the 73rd Amendment Act has also helped in strengthening the era of decentralised planning in these states. The government of these two states, during different periods, has taken efforts to strengthen the process of planning through involving PRIs. The initiative of strengthening the planning process at the grassroots level has also contributed some positive results. In recent years, the state governments under the Fourteenth Finance Commission (FFC) grants have been initiated for formulating Gram Panchayat Development Plan (GPDP) in various GPs of the two states. The GPs have become a key unit of formulating GPDP and their involvement in the process of formulation of GPDP has further strengthened the saga of decentralised planning in the states.

The state of Andhra Pradesh, since the period of its formation on 1st October 1953, has been witnessing the process of democratic decentralisation in the rural areas. The state is one of the pioneering states to successfully experiment with the institutionalisation of the local self-government in the state. In 1959, the State Panchayati Raj Act was enacted which paved the way

for the institutionalisation of the three-tier Panchayati Raj System in the whole state and vesting powers to the PRIs for the formulation of development plans and implementation of development programmes. The post-73rd Amendment period started a new phase towards the institutionalisation of the PRIs in the state. Keeping in view the objectives of the 73rd Amendment Act, the state government enacted the Andhra Pradesh Panchayati Raj Act in 1994. The state has adopted three-tier PRIs in the state. The Zilla Praja Parishads (ZPP) at the district level, the Mandal Praja Parishads (MPP) at the intermediary level and the Gram Panchayats (GPs) at the village level have institutionalised as three-tier PRIs in the state. Various functions (27 functions) relating to 29 subjects enumerated in the Eleventh Schedule of the Constitution have been devolved to the PRIs in the state.

In the case of Odisha, the state for the last few decades has taken up extensive efforts to institutionalising the Panchayats and devolving powers to them for formulating decentralised planning in the rural areas. Odisha is one among the few states in India which have institutionalised the Panchayats in 1948 through the Orissa Panchayati Raj Act of 1948. The Panchayati Raj System has existed in the state through different legal provisions even before the enactment of this Act in 1948. In 1961, the three-tier PRIs were established in the state. Concerning institutional arrangements, the three-tier PRIs such as the Gram Panchayats (at the village level), the Panchayat Samities (at the intermediary level) and the Zilla Parishads (at the district level) are institutionalised in the state as per the provision of the 73rd Amendment Act and as per various State Amendment Acts. The institutionalisation process has also made necessary arrangements for the creation of various other institutions such as the Palli Sabhas and the Gram Sabhas, the standing committees, the District Planning Committees (at District level), the State Planning Commission/Board, the State Finance Commission, and the State Election Commission in the state.

A critical area of examining the role of Panchayats in promoting economic development in India is to shed light on their involvement in formulating decentralised development plans. Several scholars have highlighted (for example Sambrani, 1978, Rao, 1989, Vadiraju and Sangita, 2011) the importance of local development plans or decentralised plans for promoting development and role of the decentralised institutions or Panchayats in making the planning process effective. Starting from the First Five Year Plan to the present period, the essence of the decentralised planning and the role of Panchayats in formulating those plans have been highlighted by these scholars through exploring various policies and

conducting several empirical studies in various parts of India. However, comparing the case of decentralised planning between two states or more than two states has not been highlighted much. In this connection, the present study has tried to fill this gap.

It is on this basis, this paper unravels the status of formulation of decentralised development plans in the two states after the 25 years of enactment of the 73rd Amendment Act. It unravels few broad aspects of the formulation of development plans in the study areas such as (i) the process of formulation of decentralised development plans and its institutionalisation in the states and (ii) present status of this process in the two states in the context of the emergence of GPDP. The findings of the paper highlight the institutional arrangements and formulation of decentralised plans in the states and the overall implications of the process on strengthening the planning process in the two states. In the end, the paper tries to draw some lessons based on issues that emerged from the discussion.

Objectives and Method

The main objective of this paper is to examine the process of formulation of decentralised development plans for socio-economic development and the role of the Panchayats in formulating these plans in the states of Andhra Pradesh and Odisha. It focuses on the three key features of panchayats and planning for socio-economic development such as (i) institutional arrangement and functioning of PRIs, (ii) planning for socio-economic development, and (iii) key issues that emerged regarding decentralised planning under the PRIs in the state.

The paper reviews the case of these states based on secondary data collected from two states and some qualitative data collected through the process of Focus Group Discussions (FGDs) and in-depth discussions. Quantitative data were collected through visiting GP offices in the states and State Panchayat Raj and Planning Departments of Andhra Pradesh and Odisha.

Profile of the States and their Socio-Economic Development Scenario

Andhra Pradesh lies between 12°41'N and 22°N latitude and 77°E and 84°40'E longitude and is bordered by Maharashtra, Chhattisgarh, Telangana and Odisha in the north, the Bay of Bengal in the East, Tamil Nadu to the south and Karnataka to the west. Andhra Pradesh was formed on October 1st, 1953. Andhra Pradesh for a long period was part of the erstwhile Madras Presidency.

Odisha is located on the East Coast of India, spanning a geographical area of 155,707 sq.km., which constitutes 4.74 per cent of the country's total geographical area. It lies in the tropical zone between the latitudes 17°47'N and 22°34'N and longitudes 81°22'E and 87°29'E. Geographically, the state can be broadly divided into four regions, such as the northern plateau, eastern ghats, central tablel, and coastal plains. As per the 2011 census, the total population of the state is 4,19,74,218 of which rural population constitutes 67 per cent and Scheduled Tribes (STs) constitute 22.19 per cent.

Table 1
Administrative Profile of Andhra Pradesh and Odisha

States	Area (Sq.Km.)	Population			Administrative Set up			
		M	F	T	District	Block/ Mandal	Gram Panchayat	Villages
Andhra Pradesh	1,60,205	24,803,000	24,704,000	49,507,000	13	664	12,940	19,075
Odisha	1,55,707	21,201,678	20,745,680	41,947,358	30	314	6236	51,349

Source: (i) Ministry of Panchayati Raj, Government of India, 2011, (ii) AP State Portal, Govt. of Andhra Pradesh, 2015, (iii) Economic Survey, Odisha, 2019-2020

Panchayats in Andhra Pradesh and Odisha

Both the states in the recent period have taken many initiatives of strengthening the Panchayati Raj Institutions (PRIs) in the states. It is observed that the functioning of PRIs in both the states in the post-73rd Amendment era has provided various dimensions which need to be examined through using the historical method. Further, in the case of formulation of development plans, the PRIs of both states have played a key role. In this section, we have tried to explore the evolution of PRIs and their current position in formulating development plans in the rural areas of the states.

Panchayats in Andhra Pradesh

Andhra Pradesh is one of the pioneering states to successfully experiment with the institutionalisation of the PRIs in the state. However, some scholars have observed that the emergence of parallel institutions such as the user committees and village secretariat has diluted the functioning of the Panchayats in the state (Manor, 2002; Reddy, 2003). The state, which was formed in 1953, has a strong history of democratic decentralisation, which was also prevailed during British rule. In the post-independence periods, the Panchayats in Andhra Pradesh have received fresh impetus in the context of

the implementation of the Community Development Programme and National Extension Service during 1952. In 1959, the State Panchayati Raj Act was enacted which paved the way for the institutionalisation of the three-tier Panchayati Raj System in the whole state. In 1964, the village panchayats entrusted new powers and responsibilities including the powers to conduct Gram Sabhas for the management and review of the accounts of the village panchayats. However, it is observed that despite the devolution of such powers, the village panchayats were not able to implement a number of the development projects because of a funds crunch (Manor, 2002). Furthermore, the periods of the 70s and 80s have been observed by some scholars as the era of stagnation and the era of decline, as in many cases, the Panchayats were subdued under bureaucratic control. The journey of the Panchayats during 1980 witnessed a new phase, as Rao and Sundar Ram (1990) summarised that 'rural and urban local bodies in Andhra Pradesh underwent important structural transformations in 1981 and 1987, inter alia, the direct participation of the parties in the electoral process at the district and Mandal level had given a new direction to local politics'. Further, in 1987, when the Telugu Desam Government came to power, the state panchayat legislations were witnessed further change. On January 15 1987, Telugu Desam Government passed the necessary legislation to establish the Mandal Praja Parishads (MPPs) and Zilla Praja Parishads (ZPPs) respectively. However, some decisions were taken to undermine the process of democratic decentralisation. In each district, the government had formed a committee to oversee the work of panchayat at that level under the headship of a Minister appointed by the state government (Manor, 2002), which was a part of promoting bureaucratic control on the decentralised governing institutions.

The post-73rd Amendment period started a new phase towards the institutionalisation of the Panchayats in the state. Keeping in view the objectives of the 73rd Amendment Act, the state government enacted the Andhra Pradesh Panchayati Raj Act in 1994. The Act created ample scope for the Panchayats in the matters of planning for socio-economic development in the rural areas through the Gram Sabhas. The Gram Sabhas have the power of planning for the selection of schemes, beneficiaries and new projects. In recent years the State Government has taken various steps for strengthening decentralised planning in the state. For example, in the case of formulation of a State Vision Document (Vision 2020 Document), it is observed that enough space created for the decentralised institutions in programme planning and implementation can be viewed as the state's

determination towards the deepening decentralised planning at the local levels. However, the emergence of several schemes and programmes under the state government's Janmabhoomi Programme is believed to be created parallel institutions in the rural areas, which created a roadblock towards the path of working of Panchayats, particularly of the preparation of plans for holistic development.

Panchayats in Odisha

Odisha, for the last three decades, has been witnessing the process of evolution and institutionalisation of the PRIs in rural areas corresponding to the evolution of this process at the national level. The evolution of the PRIs is strongly linked with the political history of the state. However, unlike Andhra Pradesh, no systematic initiatives were taken during the pre-73rd Amendment period towards strengthening and reforming the process of democratic decentralisation in the state. During the British rule, various provisions were added through the Government of India Acts of 1919 (Montagu-Chelmsford Reforms), 1929 and 1935 for strengthening the local self-governments in the country and Odisha was also part of those provisions. The Government of India Act, 1935 had made a provision for the creation of Odisha as a separate province on 1st April 1936. During the pre-independence period, the institutions such as the District Boards, Local Boards and Union Boards were created as part of decentralised self-governance system.

During the post-independence period, the era of the decentralised governance gradually developed, notwithstanding witnessing severe policy paralysis and political interference. The Orissa Gram Panchayat Act of 1948 was the first comprehensive legal framework in the post-independence era which had pronounced the institutionalisation of the panchayats in the state. The provisions of this act were further amended in 1950 with the enactment of the Orissa Local-Self Government Act, 1950, which was enacted to govern the district boards in the state. In 1955, the constitution of Anchal Sasan (Local Government) was made and Anchal Fund (Local Development Fund) was created in the state. In 1961, the three-tier system of Panchayats was established in the state. In 1964, the Orissa Gram Panchayat Act was amended with devolving more powers to the Gram Panchayats and Gram Sabhas for the formulation of development plans and implementation of various schemes, projects and programmes by the Panchayats in the state. However, the era of the decline of the panchayats started in 1967 and continued till 1991, which pushed the functioning of these institutions into a state of stagnation.

During the post-73rd Amendment period, the state government in 1992 took proactive policy measures to rejuvenate the panchayats in the state. The Orissa Gram Panchayat (Amendment) Act, 1991, the Orissa Panchayat Samiti (Amendment) Act, 1991 and the Orissa Zilla Parishad (Amendment) Act, 1991 were passed which rejuvenated the three-tier Panchayats in the state. The provisions of the 73rd Amendment Act incorporated through the amendments of the States' Panchayat Acts and as per those provisions, elections were held for the Panchayats in 1997. The State Government also amended the state acts, which provisioned for the greater devolution of powers to the panchayats in the state. Table 2 presents the status of three-tier PRIs in the states.

Table 2
Profile of the Three-Tier Panchayats in Andhra Pradesh and Odisha

Sl. No	State	Profile of the Panchayats			Area per village panchayat (in sq.km)	Population per village panchayat (in number)
		Gram Panchayat	Intermediary Panchayat	District Panchayat		
1.	Andhra Pradesh	12,940	664	13	13	2582
2.	Odisha	6236	314	30	25	5605

Source: Ministry of Panchayati Raj Government of India and State Government of Andhra Pradesh and Odisha, 2011.

The Panchayats in both the states are well institutionalised and functional now, though there are some mismatches in the functioning of these institutions in the two states. In the case of Andhra Pradesh, elections for these bodies have become a matter of concern, because of irregularity and delay in holding elections, which has not happened in the case of Odisha since 1992. However, about devolution of funds and functions, both the states have not achieved the desire results, though the case of Andhra Pradesh placed better than Odisha (Ministry of Panchayati Raj, 2011-12). In the case of formulating decentralised development plans through involving Panchayats and Gram Sabhas, both the states have taken various progressive decisions like (i) formulating annual and five-year perspective plans for each Gram Panchayat through Gram Sabhas and (ii) strengthening District Planning Committees (DPCs) through necessary legal provisions and operational frameworks are some of the key policy decisions.

Decentralised Planning under Panchayats in the States: Issues and Challenges

The evolution of decentralised planning in India and various states of the country has been progressed during different periods with the

institutionalisation of PRIs and enactment of the new legal provisions. According to V.M. Rao (1989) in a country like India, the case for decentralised planning rests on four objectives. First, it is difficult for macro-level planning to effectively cover the resources of local significance and spatially dispersed economic activities pursued on a small scale at the household and village levels. Second, bringing the peripheral groups of the poor and disadvantaged within the mainstream economic process requires programmes, personnel and organisational structures at the grassroot levels for identification, delivery, initial support and guidance towards viability. Third, given the likely slow and halting pace of the rehabilitation of these groups and the frequent periods of stress and distress through which they pass, stable and dependable arrangements are required for providing relief and supplying for their minimum requirements on an adequate scale. Fourth, it is important to have participatory mechanisms in the planning for resources and requirements, to promote among the people motivation, habits of self-help, local level leadership and active role in strategic and planning decisions. These objectives are also important for formulating decentralised planning in the states of Andhra Pradesh and Odisha.

In the case of Andhra Pradesh and Odisha, the process of formulation of decentralised development plans through Panchayats and Gram Sabhas has been progressed in many ways. Considering these signs of progress, in this section, an attempt has been made to highlight the status of decentralised planning in the states based on data collected from various sources.

Decentralised Planning in Andhra Pradesh

In the case of Andhra Pradesh, there have been repeated efforts to institutionalise planning at the grassroots level. This was attempted previously under Backward Region Grant Fund (BRGF) and currently under SGSY and Fourteenth Finance Commission (FFC). The planning process at the Gram Panchayat level got a fillip with the FFC mandating to transfer funds directly to Gram Panchayats. The FFC recommended that Panchayats and Municipalities will get FFC grants only after proper plans are prepared. The Ministry of Panchayati Raj (MoPR), Government of India (GoI) has issued guidelines to ensure the preparation of Gram Panchayat Development Plans. Reinforcing this, the Government has initiated the process of decentralised planning as an instrument for preparing the need-based and local specific plans.

The State Government has also taken various initiatives with regard to devolution of funds, functions and functionaries to PRIs in the state. In this connection, 29 Subjects have broken into Activities. The Andhra Pradesh District Planning Committee Act has been enacted in 2004. Guidelines are issued as per the Act for (i) functions and meeting procedures of DPC; (ii) preparation of District Plan by DPC; and (iii) collection and maintenance of a database on socio-economic and general statistics and development of indicators.

The Government of Andhra Pradesh enacted an Act on the constitution of the A.P. District Planning Committee through a notification in November 2005 which is called A.P. DPC Act, 2004. The Act extends to the whole of the State of Andhra Pradesh. The Act states that there shall be constituted for every district a DPC to consolidate the plans prepared by the Panchayats and the Municipalities in the district and to prepare a draft development plan for the district as a whole. The State Government has also issued guidelines[1] in October 2007 with regard to (i) functions and meeting procedures; (ii) preparation of District Plan by DPC; and (iii) collection and maintenance of a database on socio-economic and general statistics and development of indicators.

Decentralised Planning under Panchayats in Odisha

Decentralised planning in Odisha is observed to be linked with the national-level planning process. During different periods, the state has witnessed massive planning exercises under the aegis of the State Administrative Departments. The process of formulation of decentralised planning evolved gradually as per the directives of the Central Government and the Planning Commission. This process also helped to constitute the State Planning Board and subsequently devolved powers to the local governments in matters of planning.

The early trend of the planning process in the state shows that it was carried out on a sectoral approach and there was no effort to involve people in the planning process. The State Planning and Coordination Department was created to look into the plan formulation process. Further, no concrete efforts were made to involve the PRIs in the planning process because of the weak visibility of these institutions in the state. During the period of the Fifth Five-Year Plan and subsequent plans, the State Government on the basis of the guidelines of the Planning Commission established the State Planning Board, and keeping the mandate of the Tribal Sub-Plan, the sectoral planning process was carried out in the tribal areas. However, no concrete policy

mechanisms were devised to involve the PRIs in the process of decentralised planning.

The enactment of the 73rd Constitution Amendment Act in 1992 explicitly specified the essence of decentralised planning. The role of the Panchayats in decentralised planning got paramount importance after the enactment of the Act. The Ministry of Panchayati Raj was formed at the Centre in 2004 to fulfill the mandate of the 73rd CAA. During this period. the V. Ramchandran Committee (2006) constituted which submitted its report while encompassing the formulation of meaningful plans within a detailed schedule. Keeping the mandate of the 73rd Amendment Act, the State Government amended the state's Panchayati Raj Act and emphasised the need for decentralised planning. The Odisha District Planning Committee Act came into existence in 1998[2] and the Rules in 2000[3] ensured the formation of the DPCs. The DPCs were constituted in all the districts after the 2002 Panchayat elections.

The decentralised planning process in Odisha moved further in the context of the Eleventh Five-Year Plan (2007-12). In this context, the Eleventh Plan of the state in its objective statement highlighted that 'the sustained efforts of the State Government towards effective devolution of powers and responsibilities to the PRIs and Urban Local Bodies (ULBs) and decentralisation of planning process will be further strengthened' (Government of Odisha, 2011). The District Planning and Monitoring Units (DPMUs) were constituted[4] in all the districts during this period. Formulating a plan through the Panchayats was adopted as a policy of the State Government. Decentralised planning process was initiated in all the districts.

In recent years, decentralised planning has become a part of the policy process of the State Government and decentralised district plans are formulated in all districts including the districts. The gradual progress of institutionalisation of the decentralised planning process and participation of people in such process through the Palli Sabhas and the Gram Sabhas has become a new trend in the case of formulation of decentralised development plans in the State.

Issues Emerged from the Discussion

The discussion reveals that the Panchayats are playing a key role in the process of formulating local development plans in the districts. The planning process has been institutionalised at the village level as a part of the major functions of the Gram Sabhas. Such a process has also contributed towards fostering the participation of people in the planning process. There

are many changes observed in the planning process in the context of the institutionalisation of Panchayats and the enactment of the 73rd Amendment Act in the states.

The results of this discussion also reveals that (i) adequate fiscal devolution and devolution of funds should be done by the State Governments to effectively implement the planned activities; (ii) implementation of development programmes by different line departments should be done by PRIs and the planning process should be done by Gram Sabhas; (iii) resource mapping should be done by the respective Gram Panchayats for better utilisation of such resources for economic purpose; (iv) departmental plans like plans for SSA, NHM etc. should not be done separately and these plans should be done on the basis of recommendations of the Gram Sabhas; (v) issue of convergence should be taken up seriously and convergence plan should be followed in letter and spirit; (vi) functioning of district planning committees (DPCs) should be further examined in considering the emerging development needs; (vii) Gram Panchayats should take whole responsibility in developing planning for the respective Gram Panchayats in close coordination with Gram Sabhas; (viii) capacity building of PRIs staffs along with adequate infrastructure facility should be taken into consideration in keeping the importance of planning process; and (ix) implementation of plans should be based on priority fixed by Gram Sabhas and no sort of dilution should be allowed.

Conclusions

It can be concluded that the decentralised planning under the framework of Panchayats has a significant effect on promoting better socio-economic development and fostering inclusive growth. So, it is indeed essential to make this process more effective in the two states under the framework of Panchayats. There should be further progress in redesigning institutional arrangements of Panchayats and promoting planning through these institutions. Fostering participation of the weaker sections of people is tantamount to making the decentralised planning process effective and this should be reflected in a true sense while formulating plans. The paper further concludes that the decentralised development plans should be formulated by focusing on the optimal utilisation of natural resources. The overall development issues should receive priority in the planning process and the implementation process should be carried out as per the planning. It suggests further policy reforms concerning effective participation of people, prioritisation of development needs of the people, and rationalisation of

required and available funds, considering the overall development goals of the people of the two states.

End Notes

1. Government of Odisha Ms No. 448, 449 and 450 of PR & RD (Election Rules) Department in October 2007.
2. The Odisha District Planning Committee Act 1998, Orissa Act 8 of 1998, Law Department, Government of Odisha, the 8th of October, 1998.
3. The Odisha District Planning Committee Rule, 2000, Planning and Coordination Department, the 11th of December, 2000.
4. Resolution No. 8429/DPC-69/06/P, June, 2010, Government of Orissa, Planning and Coordination Department, Bhubaneswar.

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MGNREGS and Migrant Labour: An Overview during COVID-19

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In the middle of the Coronavirus pandemic, the most vulnerable section of our society is the migrant labourers. Migrant labourers deserve the right of employment and living given by our Constitution during this pandemic. One of the biggest pull factors drawing the migrants back to villages is MGNREGA which insure 100 days of employment for every adult member of the family. During this pandemic, MGNREGS is the programme that eases the suffering of rural people and facilitating a minimum livelihood. The article unfolds scenario of how this large-scaled scheme is useful for people involved in reverse migration in this time of COVID-19 outbreaks.

Introduction

Coronavirus disease or COVID-19 is a respiratory illness, in which mostly affected people experience mild to moderate fever and cold which is being cured without special medical treatment. As of August 2020, globally more than 23 million people have been infected with more than 8 lakhs deaths and still counting. The first-ever case of COVID-19 was coming out from Wuhan, China in December 2019. This outbreak has taken all over the world and many kinds of research are being done in different laboratories of various regions. Based on the genetic structure to develop facilitate diagnostic tests, vaccines and medicines, this COVID-19 has been

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characterised in Severe Acute Respiratory Syndrome Corona Virus- 2 (SARS-CoV-2) (WHO, 2019). Since the beginning, WHO is publishing its safety guidance worldwide according to the research which includes immunity boosters, social distancing, quarantine, etc. In India, the Ministry of Health and Family Welfare facilitating updates on statics in the country, awareness, preventions and governmental supports. Update from Ministry as of August 2020 is active cases is more than 70 lakhs and deaths being approximately 60 thousand (MoHFW, 2020).

Those people who go from their home place to another city, state, or country for work and other reasons are generally recognised as migrant labour. Those labour are unskilled, uneducated and unemployed, they get training, education and employment in different places, this is the form of migration of the labours. In India, according to the 2011 Census (Provisional Report), 45 crore persons have changed their place of residence within the country and out of this, 4.6 crore or 10.22 per cent left their place for work (MoLE, 2019). There is a total of 13.9 crores of internal migrant labourers in the country according to the Census of India, 2011 (World Economic Forum, 2016).

Their earning is mostly used in agriculture, small enterprises, health, education and housing only. They usually do not live a fantasy life. They also risk their lives in dangerous work and losses their life in hazardous chemicals, long working hours and industrial accidents. There is a law in India that regulates the condition of living and protects workers whose services are allocated outside their native village or state. Inter-State Migrant Workmen (Regulation of Employment and Condition of Service) Act, 1979 has been the agreement between labour and contractor established in another state with or without the knowledge of the principal employer. The contents of this law are inter-state workers, contractors, principal employers, and state government. This law purposes to not encourage inter-state migration of workers against absorption and provides the provisions of wages and other conditions of service (Pandey, 2017).

When this pandemic started, the first-ever case in India came on 30th January. That was the time when the public screening started at the international airports. After that in March, the Prime Minister announced the 'Janata Curfew' for a whole day to stop the spreading of the virus. The country is having lockdown since 24 March 2020 (Lakshminarayana, 2020). The period when all the work, offices, factories, banks, railways, industries were shutdown. This caused a panic situation among the labour of India because more than half of labour population got unemployed and homeless.

Labour migration is as old as the economy but the challenges are being faced since their birth. The problem of migrant labour with economic depression caused by lockdown and how did MGNREGA helped them in uprising the conditions of migrants who were reversed to their home? In this study, the qualitative method is used with secondary descriptive data collection from various sources. This approach is most suitable as the current situation of the pandemic is recent most of the data are available in ethical consideration. Before analysis, the data was gathered from books, articles, journals and newspaper editorials which were examined by content analysis. The purpose of this study was to find the situation of migrant labours in India and the governmental support for the reverse migration with the help of MGNREGS. And the result shows that the situation of migrant labour had already harsh stability and when this coronavirus pandemic shut down the whole country's economy they returned to their home. The government enhanced MGNREGS which was supposed to deteriorate labour migration has no impact on the livelihood of rural workers as expected.

Reverse Migration

Reverse migration refers to matters once labourers, staff and other people begin migrating back to their native place within the scenery of non-availability of living and job opportunities (Tejada et.al., 2014). The cause of migration is economic (Ravenstein, 1885). Lee (1966) explains the role of pull (final settlement, marital responsibilities, death of parents, rural infrastructure development) and push factors (regional discrimination, large family size, high cost of living, lack of social identity, cultural conflict, increasing crime rate) to illustrate the causes and nature of migration. In the view of the investment theory of migration (Sjaatad, 1962), the benefit of migration should be higher than the cost of migration. But the 'new economics of migration' has brought new insights in understanding the migration decision in a broader perspective (Stark and Bloom, 1985) which includes economic and non-economic factors along with behavioural aspects (Stark and Bloom, 1985). It has been found that people migrate from one place to another as a part of household livelihood strategy. Recent economic growth and faster industrial development along with the growth of urbanisation is the major alluring effect at work that draws people from rural to urban areas (Mahapatra, 2014). Lower middle-class people are involved migrant workers and work in small and medium enterprises, security guards, housekeepers, drivers, fruits and vegetable vendors, plumbers, maids, etc. On 15 April 2020, these people started moving towards

home and the central government started the shramiktrains with the permission of state governments. Special trains ran for the migrant labour to bring them home and around 40 lakhs migrants travelled through buses. The sheer scale of the reverse migration that was on leash on 01 May 2020, because the first 'shramik special' trains carrying many thousand lucky migrant staff reached their destination whereas scores of others disorganised to register for evacuation, tried to sneak away from their own or assembled on the border (Times of India, 2020). The union government directed all state government to setup an immediate relief camp for the labourers who reaches their native state. In this context, one is reminded of Mahatma Gandhi's advice to first develop the rural economy and make it self-sufficient. Cassarino has questioned the validity of the 'decision to return' variable because it is determined by a destination country perspective, because it ignores the conditions in countries of origin, and because it is difficult to determine when return is voluntary or involuntary. While there is some validity in the objection, it is undeniable that some migrants return because of reasons beyond their control while others do not have to face similar circumstances. The difference makes an impact on the duration of the migration project and ultimately on the policy needed to address return (Cassirano, 2014). There are around 4.14 crore people who have migrated in response to COVID-19, in which 5-6 lakhs people travelled barefoot. There are many deaths reported from accidents, suicides and hunger during this pandemic. The central government announced to launch The National Migrant Information System on 16 May 2020. This is an online database created by NDMA (National Disaster Management Authority) to track the movement of migrant labourers during the lockdown.The portal can maintain a central repository of the migrants move from one state to different and aid involved tracing where central nodal ministries and the states can visualise the data of migrant workers moving from one state to another with unique identification generated by GIS (Kartikeyan, 2020).

Now the migrant labourer getting back to their jobs after such a huge escalation over the lockdown period in the pandemic which affected their lives. They are emerging into reopening to their work with: (i) '*kaamvapasi*' and other applications which are giving them desirous job back to their workplace; (ii) governmental schemes which they introduced for rural people like *Gareeb Kalyan Rojgar Abhiyaan* initiative to tackle the impact of COVID-19 on migrant labour; (iii) revised labour laws by the state government of Uttar Pradesh, Madhya Pradesh and Gujarat; (iv) announcement of relief security from PM Care Fund by Finance

Minister; (v) approval of '*Aatmanirbhar Bharat Package*' for migrants/stranded labour which allocates food grains; and (vi) *suo-moto* cognisance taken by Supreme Court for migrant labours.

A significant part of this workforce has reverse migrated from cities to rural areas. To address this migrant crisis, the government has allocated an additional fund for MGNREGA, as part of the stimulus package under *Aatma Nirbhar Bharat Abhiyan*. Mahatma Gandhi National Rural Employment Guarantee Act, 2005 was enacted for the employment security of unskilled labourers in India. MGNREGA is a demand-driven scheme that guarantees wage employment to volunteers prepared to do unskilled manual work. This scheme is one of the world's largest work guarantee programmes. MGNREGS provides work to the local rural people like sanitation, water conservation, construction of buildings and roads, irrigation, agricultural, plantation, cleaning and related work. This mandate of the scheme includes: (i) guarantee 100 days of employment in every financial year to adult members of any rural household willing to do public work related unskilled manual work; (ii) unlike earlier employment guarantee schemes, the scheme aims at addressing the causes of chronic poverty through a rights-based framework. It also ensures that out of all job cardholders, there must be at least one-third of beneficiaries from women population; (iii) wages must be paid according to the statutory minimum wages specified in the state under the minimum wages act, 1948; (iv) there is an emphasis on strengthening the process of decentralisation by giving a significant role of Panchayati Raj Institutionsin the country (Sarkar, 2018). The Act mandates Gram Sabhas to recommend the MGNREGS work that is to be undertaken and at least 50 per cent of the works must be executed by Gram Panchayats; (v) employment to be provided within 5 km. area from the job seeker's village; (vi) employment must be provided within 15 days or else the job seeker is entitled to for employment allowance. This demand-driven scheme enables the self-selection of workers; and (vii) significant aim of the scheme is to construct durable rural assets like canals, roads, dug wells, etc.

MGNREGS was enacted to give employment to rural people and discourage the migration of labourers from rural areas. Instead, migration of household members to out of village increased since 2005-06 that is after implementation of scheme (Kumar and Chaktaborty, 2019). Labour migration related to the implementation of the scheme has the following constraints (Saxena, 2015): (i) the wages were low compared to the wages offered outside the village; (ii) complaints like low or no wage payment on time, dud tools, improper monitoring and disobeying rules of the scheme;

(iii) the average days of employment provided are hardly 50 days and much below the mandated labour days; (iv) MGNREGS cause a shortage of labour in *Kharif* and *Rabi* seasons especially in March, April, July, August and September in agriculture; and (v) non-availability of Management Information System (MIS) of the panchayat to make corrective interventions. At this time of COVID-19 when nearly 8 crore migrant workers returning to their villages and an additional allocation of the fund could be a moment for the true revival of MGNREGA. However, to utilise the true potential, and there is a need to address the many challenges of this scheme such as inadequate financing, delay in payment of wages, the ineffective role of Panchayat Raj Institutions, a large number of incomplete work and fabrication of muster roles and job card, etc.

Budget

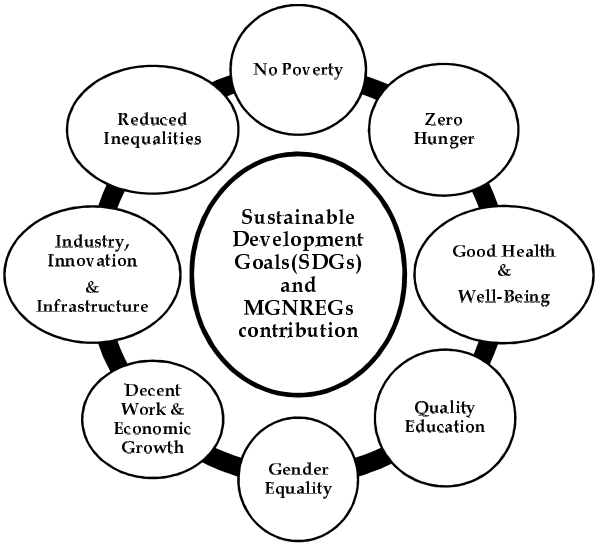
Union government had allocated Rs. 61,500 crore in Financial Year 2020-21 for MGNREGS which was 9 per cent less as compared to previous Financial Year 2019-20 which had Rs. 71,002 crore with revised estimates. In May 2020, additional Rs. 40,000 crore sanctioned for migrant labour to meet COVID-19 crisis, which makes a total of Rs. 101,500 crores with relief funds (Nimai, 2020). When the PM Garib Kalyan Yojna was announced, it included a relief measure for MGNREGA workers that the daily wage rate would be increased in Madhya Pradesh from Rs. 174 per day to Rs. 202 (April 1, 2020). CRISIL (Credit Rating Information Services of India Limited) is an Indian analytical company providing ratings, research, and risk and policy advisory services and is a subsidiary of American company S & P Global. According to the CRISIL report (CRISIL, 2020): (i) amid COVID-19 lockdown, the government has doubled the average income of MGNREGA workers, nearly Rs. 1000 per month in the first four months of the financial year 2020-2021; and (ii) in the period of April-July months, MGNREGA recorded 46 per cent growth in person-days execution. A record of 4.89 crore persons belonging to 3.44 crore households sought work under the MGNREGA in May 2020 for managing their livelihood.

Emotional and Economical Phenomenon

When the whole country went on lockdown, most of the migrant labour faced the end of their lives and due to the closure of the economy. To rehabilitate the livelihood of poor migrants and vulnerable people, the Government introduced a relief package of Rs. 1.7 lakh crores (Mehta et.al., 2020). The government used MGNREGA to give a push back to the economy

to the line and giving hope to the labourers. State governments to allow MGNREGA to provide work to returnee migrant labourers at their native place with all preventive measures like medical kits, soap, sanitisers and masks. In compliance with COVID-19 guidelines, workers were wearing masks and other forms of face protection in the work sites. MGNREGA works typically involve hard physical labour and workers are finding it challenging to breathe comfortably while working. Despite these, Indian Railways additionally demanded MGNREGA to keep up and supply work for migrant labour. They empowered the delivery system and availed engineers and supervisors to implement MGNREGS on site. Self-help groups and Rural Development Department also created employment opportunities by training them in industries like solar lights, battery repairing, etc., (Journal of Policy Development). It is a normative framework derived from internationally accepted human rights standards that poverty eradication provides a conceptual framework for the process of sustainable development. Removal of poverty is, therefore, a prerequisite for the protection of the environment; poverty magnifies the problem of hunger and malnutrition and is further compounded by the inequalities and inequitable access of the people to the food that is available (Azmat, 2013).

Figure1
Pathway for Achieving Sustainable Development Goals (SDGs) through MGNREGS



In this COVID-19 situation, the state government must ensure that public work gets started in every village. Workers turning up at the worksite should be provided work immediately, without much delay. Local bodies must proactively reach out for returned and quarantined migrant workers and help those in need to get job cards and adequate facilities such as soap, water and masks for workers must be provided free of cost, at the worksite. At this time, there is a need to speed up the payments to MGNREGA workers. Preferably, cash needs to reach the workers easily and efficiently.

The pandemic has demonstrated the importance of decentralised governance. Gram Panchayats need to be provided with adequate resources, power, and responsibilities to sanction work, provide work on demand, and authorise wage payments to ensure there are no delays in payments. MGNREGA should be converged with other schemes of the government. For example, the Green India Initiative, Swachh Bharat Abhiyan etc. Social auditing creates accountability of performance, especially towards immediate stakeholders. Hence, there is a need to create awareness regarding government policies and measures in rural areas. It is reported that, as of 26 June 2020, the GDP of India is 3.7 per cent in the year 2020 as compared to 4.2 per cent in 2019 and 6.1 per cent in 2018. India becomes the new epicenter of COVID-19 and the contraction of this year's GDP is declining the last four decades of positive growth. Against this, the Indian economy is expected to end this fiscal year with 7.9 per cent, if everything remains positive (OECD, 2020). According to the ILOSTAT and UN DESA estimates, the unemployment rate for the year 2019 was over 40 per cent of youth. The reason behind this includes gender inequality and underutilisation of labour (UNO, 2020). As per the quarterly statistical profile, labour participation rate in Jan-April 2019 was 42.85 m per cent and the unemployment rate was 6.87 per cent. Whereas, in Jan-April 2020 labour participation rate was 40.98 per cent and the unemployment rate recorded 10.40 per cent, which is very alarming for the Indian economy.

Conclusion

The mandate of MGNREGA is aimed to guarantee the right to work for the rural people. The goal of the scheme is to provide protection to the environment, women empowerment of rural folks, intensify socio-economic equality and reduction of rural-urban migration. After a decade and a half, there is a wide range of workers who are still migrating out for employment due to the malfunction of the implementation of MGNREGA.

Even when reverse migration happened in the lockdown period, on the 29th of June, an increase in the guarantee of work to 200 days/person and the daily wages rates to be Rs. 600, raised by many workers (Narayanan et. al., 2021). Allocation of relief fund for the Corona virus crisis is a good step but still, it is not sufficient as most of the fund is used to clear previous due payments and almost 68 per cent is not released on time for the labourers (O'Brien, 2020).

There is a peak demand for work in MGNREGS in April than the previous years, but the allocation of work, employment days, distribution of wages are still at the lowest point. The thousands of migrant workers who are returning to their native villages during the COVID-19 pandemic will soon begin searching for employment in their local areas. This will undoubtedly increase the demand for MGNREGA work. Uttar Pradesh, West Bengal, Odisha, Chhattisgarh, Madhya Pradesh and Bihar have shown the highest increase in the demand for registering. One of the world's largest programmes like MGNREGA needs a rejuvenation. Creation of millions of jobs is difficult at this time, but MGNREGS can be a key instrument to tackle the current situation of economic crisis and revamping the livelihood of migrant labourers.

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Book Review

Disguised Labour Force under Unpaid Care Work

Hema Prakash and Vinod Sen

Manakin Press (2020), Pages: 168, Rs. 495
ISBN 9789386677938978

Anand Sugandhe*

This book under review has critically addressed various aspects and issues of household unpaid care work, such as unpaid care workers and their linkages to female labour participation, labour market and economy. The book further explores the time-allocation pattern of unpaid care work. It provides a conceptual understanding of the statistical categorisation of paid and unpaid work. It presents an understanding about the inter-linkages between the unpaid work, its hidden monetary contribution to national income, the existence of household disguised female labour, risk of social and parental investment, visible participation of female labour force issues apart from labour market complexities, the monetary valuation and expected wage estimation of disguised labour and time input by a household female care worker.

With the shreds of evidence from the existing literature, this book came up with the issues that raised several significant questions; (i) why the

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contribution of household unpaid care workers is not considered in national accounts while they are providing very important tangible and non-tangible services to labourers to be part of the mainstream production process; and (ii) how complex is the caregiving and what is the impact of caregiving on caregivers. These are part of the invisible labour force which are devoting their labour and time to generate resources, to human development, economic and societal growth; and most important for the formation of human capital.

The cost of work done by these invisible labourers in the economy is remaining unknown and their work is deprived of economic recognition. According to 'The Theory of the Allocations of Time' time spent on unpaid work activities is greater than paid work activities. The proportion of unpaid work is higher for females than males in the households and society. Higher time allocation for unpaid work within the house, neighbourhoods and society creates constraints for women to give more time to paid activities. This led to the subordination of the economic status of women in the economy and labour market.

This book is divided into five chapters, in which chapter first is dealing with introduction along with the analytical research framework, research methodology and question to be sought through certain objectives. The second chapter of this book discusses the concept of unpaid work and the theoretical framework relating to it. It discusses the thoughts of different schools on unpaid care work, viz., the Classical economics view, Marxist view, Neo-classical and unpaid work, Becker's new household economics, and the Feminist view. The strong point of this book is that it gives a theoretical base for the research on unpaid work and its linkages to the labour force, labour market and the economy. The authors have used different thoughts of schools to establish the link between unpaid care work and the labour market while giving a profound conceptual understanding. Another good point of this book is that this book is able to give empirical shreds of evidence to the existing theories.

Chapters three and four of the book are based on the empirical evidence gathered through primary field survey data. The empirical evidences have been gathered from the Uttar Pradesh state of India. For the analysis, the authors have segregated the working class into three income classes i.e., Low-Income Group (LIG), Middle-Income Group (MIG) and High-Income Group (HIG). The third chapter of the book represents the socio-economic conditions of unpaid care workers in which the authors deals with the profiles of unpaid care workers and their housing conditions of the

caregivers, their household characteristics, education and health details, the economic profile of the household members and caregivers, the workforce and social class profile of the respondent's households. In this chapter, the analysis is provided in comparative figures for the socio-economic background of caregivers belonging to the aforementioned income groups.

The fourth chapter of the book throws light on how unpaid care work and time allocation patterns exist with complex behaviour. It has shown the intensity and magnitude of complex caregiving by females across regular days including Sundays and the weekly estimated unpaid hours allocated to a range of caregiving activities. In this chapter comparative understanding of the difference in the time allocation analysis according to family size, working and non-working women are analysed. The chapter also discusses the range of caregiving activities performed by the caregivers regularly gender-wise. It explains the huge gender disparity in performing the kind of unpaid care work and the time and labour input to it. Further, it analyses the understanding behind the significance of monetary valuation of the unpaid care work. This chapter derives the various reason explained by women for the monetary valuation of care work. It also includes the contradictory perspective of women over the monetary valuation of unpaid care work. The strong side of this chapter is that authors try to calculate expected money wages for range of caregiving unpaid care work done by a woman. It estimated the wages of particular caregiving based on third-person criteria. The chapter highlights how significantly a household woman is contributing to the economy directly and indirectly without receiving any wages.

The fifth and last chapter of the book is very important as it comes up with a well-articulated conclusion with constructive policy implications. In this chapter, the authors have discussed several aspects of policy-making required to recognise the unpaid caregiving and disguised unpaid labour force. The policy prescription is focused on the urgent need for statistical measurement of unpaid care in developing countries like India where more than half of the women are performing unpaid work. It highlights the need for policy formation regarding institutionalisation and the wage of caregivers.

In the concluding part of the review, it can be emphasised that such contemporary socio-economic issues need to be analysed with the observation based on a large sample size. Other aspect that is missing is the comparative analysis of time allocation patterns for child caregiving and old people caregiving that may provide the more detailed complex occurrence of

caregiving pattern in India. Nevertheless, the book is well articulated according to its objective. The most appreciable part is that the book has highlighted the less recognised issue existing in our socio-economic setup with empirical evidence and constructive conceptual understanding. This book will enrich the readers in different aspects of the caregiving economy in India. It will help researchers to understand the issues of unpaid work and economy and will help to develop insight to look into such an important issue. The book is informative for students and researchers dealing with the economics of unpaid work and the caregiving economy in India.

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