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## THE BEST MODEL FOR MICRO-LENDING: SELF-HELP GROUP OR JOINT LIABILITY GROUP?

Sushanta Kumar Sarma \*  
and Madhavi H. Mehta \*\*

### ABSTRACT

*Ideological schisms in Indian micro-finance have often been interpreted at the level of practice through the adoption of different delivery models including the community empowering Self-Help Group (SHG) model and the financially efficient Joint Liability Group (JLG) model. While the SHG is a saving-led slow growth model and unique to India, JLG is a credit-led fast growth model, loosely based on the Grameen model of Bangladesh. The article describes the two models and strives to develop a comparison between them along several parameters. The paper argues that both models have their advantages depending upon external factors like competition, homogeneity within population, among other factors. Both models live up to their optimum promise when in alignment with organisational features like culture and its strength, leadership etc. Country like India is often afflicted by duality of external factors ranging from socially-driven and stratified social structures in rural areas to the financially-driven urban poor population. It is this duality that necessitates the existence of both the models, matching to the diversity of target population and characteristics of the implementing micro-finance organisation.*

### Introduction

Perhaps few concepts vis-à-vis poverty alleviation in developing countries have generated as much excitement, as micro-finance. The concept that originated in Bangladesh in the early 1970s has become a global phenomenon. India, which offers one of the largest micro-finance landscapes, has garnered a significant place for itself in this thriving movement. All over the world, India included, most micro-finance organisations use a group-based model for service delivery. However, unlike many developing countries, India has a dual model of service delivery in micro-finance. On one hand, there is the Self-Help Group (SHG) model and on the other, there is the Joint Liability Group (JLG) model. These

two models are representations of two different methodologies accompanied by different sets of assumptions about the people served by them. The “home-spun” (Sa-Dhan) SHG model of micro-finance owes its origins to the “poverty alleviation school of micro-finance” and the “adapted” JLG model to the “financial system school.” The debate between these two schools has been an ongoing one in micro-finance discourse. Today, the debate has percolated down to the level of micro-finance models with micro-finance organisations displaying a strong preference for the two models mentioned earlier.

The rural banking sector in India witnessed a mass expansion after the nationalisation of banks in the 1960s with

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subsequent directives from the Reserve Bank of India (RBI) regarding encouraging banking in unbanked regions of the country through schemes and programmes including priority sector lending, Regional Rural Banks, etc. Apart from formal banking, credit-cooperatives were also promoted by the Indian States to cater to the unbanked poor population. However, despite efforts spanning several decades, the formal financial system and the state initiated poverty alleviation programme could not succeed in meeting their obligations towards the poor (Chakrabarti & Ravi, 2011; Mahajan & Nagasri, retrieved in 2013) and the need for an alternative model was felt. In response, the National Bank for Agriculture and Rural Development (NABARD) along with NGOs like Mysore Resettlement and Development Agency (MYRADA) came up with an SHG-based model of micro-finance in the late 1980s. As described by Fernandez (2010),

“To explain this a little further, we need to briefly trace the history and the concept of what a real SHG is.... Between 1984-1986 Myrada (an NGO) worked with the primary Cooperative Societies as the base institution. ....benefits went to a few powerful families including the President, Secretary and a few others.... Myrada encouraged them (*the poor*) to challenge this situation. They broke away and formed small groups - the members were self selected; we later realised that the groups were based on affinity among the members. Affinity in turn was based on relations of trust and mutual support which existed before we entered. ....Myrada encouraged them to meet weekly; each member contributed to the agenda which comprised issues related to health, domestic problems, need for credit etc. They were encouraged to save and Myrada staff kept records of meetings and accounts....(Fernandez, 2010 [online]).”

Thus, the Self-Help Groups (SHGs) are essentially affinity based savings and credit groups\* that are small in size (5-20 members) not necessarily registered entities, and have members with same social and financial backgrounds. The group meets on a regular basis together with a staff member from the promoting institution or organisation to collect and/or deposit money. The group members undergo some basic training in financial literacy, and social issues (Kabeer, 2005, p. 100-102; Aminur Rashid, 1997, p. 201). In other words, SHGs are groups of micro-entrepreneurs having homogenous social and economic background; voluntarily coming together to save regularly small sums of money, mutually agreeing to contribute to a common fund and to meet their emergency needs on the basis of mutual help. The SHG-based model is a community-based solution operating under a collective action framework and involves a time and human resource intensive process before the collective of the poor becomes fully functional.

After its successful experimentation in many parts of India, NABARD launched the SHG-Bank Linkage Programme (SBLP) in 1992 and thus started the largest micro-finance programme in the world, with more than 2000 NGOs involved in the SBLP (Chakrabarti & Ravi 2011).

With commercial banks showing more interest in the ‘micro-finance market’, largely inspired by a policy directive of the RBI, most NGO-MFIs were able to avail of debt funds easily. This led to reduced dependence on donors’ funds and a change in the hitherto commercial approach of some NGO MFIs aspiring to become giant financial intermediaries. Many of these

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\* In fact, the groups that Myrada worked with were called SAGs (Self-Help Affinity Groups).

MFIs adapted the Grameen model\*, termed as JLG, to expand their micro-finance operations. The adapted Joint-Liability Group according to NABARD guidelines, is also an informal group comprising preferably 4 to 10 individuals ... coming together for the purposes of availing bank loan either singly or through the group mechanism against mutual guarantee. The JLG members would offer a joint undertaking to the bank that enables them to avail of loans. The management of the JLG is to be kept simple with little or no financial administration within the group. A basic requirement for joint-liability security for bank loans is that the members form themselves into groups of people who know and trust each other. Each year the group members who want to borrow sign a contract in which they accept liability not only for their own individual loans, but also for the loans borrowed by other members of their group, hence the term 'joint-liability'. Another major difference between the two models is savings as a pre-requisite for the SHGs to initiate inter-lending and subsequent linkage with a bank whereas the NBFCs as legal entities are not allowed to collect deposits as per applicable regulation in India (Chakrabarti & Ravi, 2011).

JLG is a fast-growth model focusing on the supply side of micro-finance. It was felt that if micro-finance could be made profitable, an increasing number of operators would join the market eventually benefiting the customer, the poverty-stricken client. Commercial micro-finance organisations have witnessed unprecedented growth in recent years with a

majority of them having adopted the JLG model (Table 1). Eight of the top 10 micro-finance organisations, defined by their ability to operate in a scalable manner and measured through loan outstanding, have adopted the JLG model, indicating the model's growth potential. Interestingly, all these fast-growing organisations started their micro-finance operations during the post-liberalisation era when market-based models operating on the principle of profitability were being encouraged. Ironically, while the Grameen model of Bangladesh is a proponent of the poverty alleviation school, its translated Indian version – the JLG model – has become a symbol of commercialisation.

The intention of this paper is to clearly spell out the distinction between these two models along with their underlying assumptions. The paper also provides a framework for examining the link between the characteristics of the promoting organisation and the grouping model to be adopted.

### Delivery Models

**SHG And JLG: What Are They?** : The SHG is a savings-led model that has been mainly formed by women members. The group formation process in SHGs is generally facilitated by an NGO, an MFI, or a bank. Group formation is followed by members making regular savings contributions. The savings contributions may be collected on a weekly, fortnightly, or monthly basis and generally remain in the custody of the group's elected head till the group opens a bank account. It has been observed that the regular

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\* In the Grameen Model "A borrower can only receive loans by forming part of a borrowing group, as trust and peer pressure are the operational mandates for ensuring the repayment of loans. In this way, the pressures of collective responsibility replace the need for conventional collateral requirements and give the GB system its strength. Initially, only two group members receive a first loan, for which they are given a six-week period to begin repaying the principal and interest before the remaining members in the group become eligible for receiving loans. GB requires a repayment scheme based on 50 weekly instalments, and encourages savings by allowing 5 per cent of loans to be credited to a group fund.  
(Source: [http://www.persga.org/Files/////Common/Socio\\_Economic/BankPoor\\_Concept.pdf](http://www.persga.org/Files/////Common/Socio_Economic/BankPoor_Concept.pdf), retrieved on June 12, 2013)

**Table 1: Lending Model of Top Ten MFIs**

Name of the MFIs	Lending Model	Loan Outstanding as on Sep. 2008 (\$ Million)	Year of commencement of MF
SKS Microfinance Ltd	JLG	328.08	1998
Spandana Sphoorty Financial Ltd	JLG, Individual	215.76	2000
Share Microfin Ltd	JLG, Individual	154.22	2000
Asmitha Microfin Ltd	JLG	88.99	2002
Sri Khestra Dharmasthala Rural Development Project	SHG	73.08	1995
Bhartiya Smaruddhi Finance Ltd	Diversified	69.87	1997
Bandhan	JLG	61	2001
Cashphor Micro Credit (CMC)	JLG	25.75	1997
Grama Vidlyal Microfinance Pvt Ltd	JLG	23.68	1999
Grameen Financial Services Pvt. Ltd	JLG	23.16	1996

Source: CRISIL, 2009.

savings contributions may vary from \$0.18 to \$ 1.83 depending upon the members' economic status. In view of the caste-based social system prevalent in India, members are encouraged to form groups within the same community with members hailing from similar economic backgrounds. The size of each group varies from 12 to 20 depending upon geographical conditions, population density, and convenience of the community as well as the promoting NGO, etc.

The money saved by group members is used for inter-lending\*. The SHG members then start borrowing money for various purposes at an interest rate while adhering to the terms and conditions decided by group members jointly. The SHG opens a savings account under the name of the group by submitting valid documents including group constitution, meeting minutes etc. Generally, after six months of inter-lending, the group becomes eligible for

a bank loan. Banks give loans in the name of the group after checking the latter's record of inter-lending and other books of accounts. The SHGs may never go to the bank; they may satisfy their needs only by inter-lending or by simply saving money without ever withdrawing it (Harper, 2000). Group members generally use their group savings to meet emergency and consumption needs. The SHG offers its members the facility to borrow for purposes like family functions or illnesses, which are not met by any formal financial mechanism.

An SHG operates as an autonomous financial institution in its own right (Harper, 2002). Group members decide on the amount to be saved per member, the maximum loan size to be sanctioned, the repayment schedule, and guarantee mechanisms during loan sanctions. Members' loan applications are prioritised on a need basis with the group enjoying the flexibility for operating their businesses. The SHGs usually

\* A term commonly used to indicate borrowing by the members from the savings contributions available with the group.

hold weekly meetings to collect members' savings and maintain accounts. The emphasis on savings is based on the assumption that "forced saving will enable the poor to accumulate tangible and intangible capital, which they can use to climb out of poverty" (Mannan 2009, p. 221). The functioning of SHGs involves a substantial amount of documentation and often members are trained by promoting NGOs in recordkeeping. The SHGs are promoted by NGOs and sometimes by the branches of various banks, government agencies etc. According to the 'State of Sector Report 2011' the number of SHGs formed by 2011 totalled over 4.8 million with an outstanding loan of ₹306.27 billion (around 5.63 billion US dollars). NABARD has been one of the largest promoters of SHGs in India. Apart from NABARD, State governments have introduced various developmental schemes to promote SHGs across the country.

As reported in the previous sections, the JLG model, which is relatively new to Indian micro-finance, is an adaptation of the Grameen model. This model, having gained popularity since the beginning of the 21<sup>st</sup> century marked the beginning of viewing micro-finance with a commercial orientation. Many organisations engaged in SHG promotion decided to opt for the JLG model owing to its easy scalability. The JLG has two significant advantages compared to the SHG: it is more compatible with the supply-driven model of micro-finance because of its shorter gestation period for turning creditworthy. An SHG, on the other hand, takes around six months to become eligible for a bank loan. NGOs engaged in on-lending\* services to SHGs can reduce this time to a maximum of one month while compromising on the capacity building aspects of SHGs. Compared to this, a JLG can become eligible for a micro-loan from the very next week of its formation.

Second, unlike the SHGs, JLGs are free from the clutches of various subsidy schemes

floated by the government and hence, can't be 'hijacked' easily. There are many instances where SHGs formed by NGOs are nominated by Government development staff members to become part of Government schemes. These schemes invariably have a subsidy component that eventually serves to pollute group solidarity resulting in inefficiency. Contrasting this, JLGs are more private in nature as they are, in a way, 'owned' by the on-lending agencies. This means that MFIs can exercise greater control, making them more manageable. As shown in Table 1, most high performing commercial micro-finance organisations have adopted this model because of its convenient features suiting their operational needs. The JLG is a more tightly arranged mechanism as far as delivering micro-finance services is concerned. It is a credit-led model through which about five members come together and form a group to avail of credit from the MFIs. JLGs basically comprise a self-selected unit, which means that members generally live in the same neighbourhood. During the JLG formation process, the MFI employees ask interested people to organise themselves into five-member groups. Since members come from the same neighbourhood they are well versed with each other's cash flow and credit requirements. Also, members have intelligent insights about the willingness and ability of other members to repay which fact can't be assessed through any credit rating mechanism. Like the SHGs, this model too works without any physical collateral. Members take loans from the MFI on a mutual guarantee basis. This means that if any member fails to repay on time, others pool together the default amount and make the repayment on a scheduled date. In many cases the MFIs place a penalty on the whole group by delaying or cancelling their next loan should any member fails to repay on time.

Referring to the Indian experience, it has been discerned that most JLG members are already engaged in income generating activities;

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\* Lending money to SHGs that is borrowed from banks or other financial institutions.



often non-farm activities. MFIs promoting JLGs, generally, do not engage in any income generation training and hence, in many instances, do not encourage people who do not have a steady flow of income. Unlike SHGs, JLG members do not undergo any extensive training in group management and the group norms are formed by the MFIs usually. The loans given within the JLG model follow a 'cycle' in which a certain amount is given to the group in the first cycle. On successful repayment of that amount, a higher amount is given in the second cycle and so on. The first cycle usually lasts up to a year and the JLGs need to make the repayment in 50 or 52 instalments on a weekly\* basis. Unlike SHGs, in JLGs the terms and conditions of the loan, the maximum amount to be given as loan, purpose of the loan, etc., are normally decided by the on-lending agency. As far as Indian micro-finance is concerned, the loan amount given to an individual JLG member ranges between \$92 and \$920 over a period of several years. JLGs are easy to manage from the standpoint of MFIs as they have little flexibility for the members and thus, are more standardised in terms of delivering the services.

In the case of SHGs, several members join up to form a Federation which, in many instances, also takes up on-lending activities. Similar to this arrangement, the JLGs are organised around centres of five to six JLGs (comprising about 30 members). The members regularly attend centre meetings according to a compulsory meeting schedule and take out loans on a regular basis. JLGs may have an individual savings account with MFIs; however, considering the regulatory restriction on the collection of public deposit by organisations other than those regulated by the RBI, many MFIs are debarred from collecting savings from JLGs. So, savings is not a necessary component of the JLGs formed by many MFIs. The centres and groups primarily perform the function of financial intermediaries. Regular

meetings are held in groups and centres often supervised by MFI workers who also maintain the savings and credit records of the groups and centres.

Loans are sanctioned in these meetings to individual members within a group the purposes of which need to be approved by the MFI at rates fixed by them. In cases where the JLGs engage in saving, the deposits are collected under a group saving fund which are then used by the group for various purposes, usually decided by the MFI. During the meetings the members also take guarantees on each others' loans with conditions including no member of a group being able to take out a new loan in case of a default. Loan applications are also appraised in these meetings by the MFI staff.

#### **SHG And JLG: Advantages And Disadvantages:**

Both the SHG and JLG have their set of advantages and disadvantages depending upon the view one holds on micro-finance. Within the framework of a community-based micro-finance organisation of an SHG-driven model the objectives of micro-finance interventions go beyond the narrow confines of financial service delivery (Vasimalai & Narender, 2007). Micro-finance is seen as a powerful tool for organising the unorganised and for empowering women by allowing them to build their own institutions. The thrust is on developing the capacities of the poor so that they can manage their own financial services. This is reflected in the practices adopted by the SHG model in which most decisions are taken by the group members themselves with significant stress laid on members' skill building. On the contrary, the JLG model works primarily on the supply side framework of micro-finance wherein groups are considered to be a mere mechanism for loan disbursement which can be replicated quickly and effectively.

As presented in Table 2, SHGs are community-oriented units compared to the JLGs.

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\* Subsequent to the Andhra Pradesh Crisis, many MFIs have switched to monthly repayment in place of the original weekly schedule.

SHGs are owned and controlled by their members, as they decide each and every term and condition related to the functioning of the group. NGOs and banks act only as enablers and

**Table 2: Comparing SHG and JLG**

Organisational Parameters	SHG Model	JLG Model
Ownership and control	With member (community)	With promoting MFI
Financial Focus	Saving-led	Credit-led
Capacity Focus	Builds internal capacity	Based on external capacity
Decentralisation	High	Low
Functional Focus	Poverty focus	Finance focus
Cost-effectiveness	Low	High
Flexibility	High	Low

Adopted from (Vasimalai&Narender, 2007).

support providers so that these groups are able to flourish. The SHGs are controlled internally and sometimes this internal control restrains the longevity of the group due to internal conflict among members. The JLGs are more externally controlled by the MFIs promoting them. The terms and conditions of group functioning are often decided by the agency promoting them. Their operations may be more standardised compared to the SHGs and easy to replicate across diverse regions.

Under the SHG model, group members are asked to save before becoming eligible for a loan. The focus is on offering a saving facility to rural women along with building capital from the members' savings in the long run reducing, thereby, external dependency. Although the savings collected from members are minuscule, yet in the long run (over a period of ten years or so), the group's own capital amounts to more than \$3500, which is equivalent to the assistance from any Government scheme available to these SHGs. The provision of mandatory saving in SHGs has been criticised for overlooking many in the poorer section who are unable to save on a

regular basis. JLGs are formed with the sole purpose of accessing loan from promoting agencies. Much of the time MFIs have taken the initiative to form JLGs by asking members to organise themselves in groups if they want to get a loan. Unlike the SHGs saving is not compulsory with the JLGs and groups are not promoted with the aim of building internal capital for inter-lending.

Since SHGs function as autonomous financial institutions, the focus is directed more towards the building capacity of their members so that the groups can be managed by them. SHGs are often supported by more than one agency. Financial institutions like banks give them loans and donor agencies support in capacity building and skill development through NGOs. All the government schemes promoting SHGs have a large component of their budget earmarked for 'training and development'. In fact, because of the process of internal capacity building, SHGs take a longer time to become eligible for a loan from an MFI or a bank. JLGs focus very little on capacity building as they are managed externally. All operational

requirements including record keeping and group management are handled by the employees of promoting MFIs. This is one of the reasons for which JLGs may be linked through a loan very early in their formation. This is one of the reasons for which the JLG has been termed as a 'fast growth model'. The SHGs, on the other hand, because of their internal control, are managed in a more democratic and decentralised way compared to JLGs.

As mentioned in the beginning of this paper, the SHG is built within the framework of collective action representing the poverty alleviation school of micro-finance. The focus is on developing a strong institution for people that will address their own development issues including poverty. The purpose of group formation is to address wider developmental issues of economic as well as social concern. The JLG is more focused and confines itself to the goal of making credit accessible to its members. Within the SHG model of micro-finance poverty is considered multi-dimensional necessitating being addressed through various strategies including finance. The MFIs catering to the JLG model of micro-finance consider rural people as having a huge demand for credit which they can meet by acting as financial intermediaries. The SHG-based model of micro-finance is concerned about making SHGs self-sustainable in the long run by following a principle of mutuality. Sustainability of the JLG-based model is about making MFIs profitable in order to reduce dependency on donors and expand the services to cater to a larger segment of the population.

SHGs are relatively cost-effective when considered from the viewpoint of lenders (Tankha, 2002). Banks have to incur very little in making the groups credit-worthy as in most instances this is done by the MFIs with grant money. Moreover, groups are taught to be self-managed and oriented towards becoming self-reliant. An MFI worker has to spend less time over group management and a single staff

member may take care of a large number of groups resulting in low cost management. In the case of JLGs, the groups are managed by MFIs with employees also responsible for the group's routine operations. Thus, more employees are required to manage the JLGs compared to SHGs which makes it an expensive model.

The SHG model is entrenched at the community level as well as that of the larger banking system (Sriram, 2010). Its approach based on mutuality makes it time consuming since the understanding of how a collective based on the principle of mutuality works needs to be developed amongst group members. This approach requires members to empathise with the constraints of their fellow members. The members can't remain oblivious to the circumstances of other members during a repayment period. The SHG model is by design a slow model that goes through phases of forming, storming, norming, and performing before becoming a self-reliant people's institution (Kanitkar, 2002). The JLG-based model works on the principle of efficiency; the idea is to develop a market-based mechanism of inclusive finance whereby more and more people are covered within a short span of time under micro-finance. The principle of efficiency has brought in standardisation (Sriram, 2010) both at the level of the organisation as well as products. This standardisation of micro-finance through JLGs has taken a minimalist approach laying down that credit be made available quickly and sufficiently.

Both these models are empowering as they give women the power to take decisions regarding their finance. As an individual a woman may not have a voice in her family or society, but a group of women with financial independence can have a voice both at familial and societal levels. In India, SHGs have taken part in local politics through their federated structures and have raised their voices against many social malpractices through activism. Perceived as



autonomous financial institutions JLGs have a limited requirement regarding forming any federated structure. Enjoying greater immunity to external and internal threats they are better protected by the MFIs. While they are less vulnerable they are also less empowered compared to SHGs.

### **Model, Contexts and Organisations : Impact of MF**

The advantages of both these models do not accrue on their own; they are enabled by contextual factors and organisational (the implementing MFIs) features. The impact of an MFI is not only a direct function of the model adopted by it but depends to a large extent on where the model is adopted and by whom. There may be geographic regions that are more conducive to an SHG compared to a JLG and vice-versa. Similarly, not all types of organisations will be comfortable with a standardised model like the JLG and may prefer a more flexible model like the SHG. Some of the contextual and organisational aspects and their suitability with the model of micro-finance are discussed below.

In October 2010, a large number of suicides were reported from the southern State of Andhra Pradesh in India (Hulme, 2011; Nair, 2011). Most of these cases were related to micro-finance clients where the latter resorted to extreme measures after constant humiliation from peers and MFIs due to default on repayments. There were instances where clients took loans from eight different MFIs at one time and were repaying them by selling household properties. Critics of micro-finance argue that this overlapping in loans from different MFIs is due to severe competition amongst MFIs operating in the regions. Most MFIs follow a JLG-based model with a commercial approach. The mandate to seek high growth compels these MFIs to adopt coercive measures leading to suicides.

The situation aggravated with State governments in southern States launching their

own micro-finance projects and competing with the MFIs for clients. The State-sponsored micro-finance projects are SHG-based and are implemented through State promoted autonomous bodies. Apart from competition amongst MFIs there exists competition between MFIs and the State government in the market of micro-finance. The southern States of India have a 45.3 per cent share of the total micro-finance clientele (clients covered under JLGs, SHGs promoted outside the SBLP and individual clients) while 55.3 per cent of SHGs promoted under the SBLP hail from these southern States entirely (Srinivasan, 2011). Contrary to the predictions of proponents of the financial system approach, extreme competition has not improved efficiency having rather adversely affected client interest to the maximum. None of these models of service delivery have been effective under intense competition.

SHGs work in areas with a suitable banking network whereby the group can be linked to the banks post-formation. Since the SHGs consider the relevance of caste and class they work well in a society which is heterogeneous in composition. SHGs are easy to form in areas with a tradition of informal financial services like the Rotating Saving and Credit Associations (ROSCA). Since the SHGs require community leadership to survive and flourish, they function in a better way, where there is a tradition of community leadership. Finally, SHGs require extensive support from NGOs in the initial years. Hence, the survival and growth of SHGs are directly related to the presence of NGOs and dedicated workers apart from banks and formal financial institutions.

JLGs are appropriate in populations with greater homogeneity. Similarity, in cash flows as opposed to parity in social backgrounds is crucial to forming JLGs. The urban poor are generally organised under the JLG model considering the low sensitivity towards caste factors amongst urban populations. Since the JLGs are controlled externally, they can be formed in areas that have

no history of traditional informal finance or any collective actions. Since the JLGs do not require any activism, they may be promoted without stressing on the development of community leadership. MFIs working as financial intermediaries with a minimalist approach do not intend to link groups with formal banks etc. So, the JLGs are good options in places where the networks of formal financial institutions are low. Since the JLGs are formed using a credit-led approach they are apt for places with numerous small business opportunities requiring a push in the form of affordable credit. Finally, since the JLGs do not require much capacity building support they may be easily promoted in areas with a low presence of NGOs.

To summarise, JLG best suits places that are sites of intense competition owing to external control. The SHG model, on the other hand, suits organisations intending to target those sections of the population that are without assets and want to start a new business. JLG works aptly in places where the people are already engaged in some sort of income-generating activities and require a bit of a financial push to expand their businesses. The SHG model has a stronger socio-economic development focus and attempts to uplift the unbankable from sheer poverty. The JLG model, on the other hand, focuses on the promotion of small businesses and can take in those as clients who are just above the poverty line.

Indian micro-finance organisations may be broadly divided into two categories based on their original agenda of intervention. The first category includes those organisations that started their development interventions with activities other than micro-finance. Such organisations are inspired to act as voluntary organisations to address some social problem; in most cases the problems are local in nature. Having started their intervention and experiencing success they extend their operations to address other relevant

problems. For such MFIs another relevant problem is the paucity of affordable credit for the rural population, hence the urge to join the micro-finance sector. These organisations are generally managed by individuals who are greatly motivated by the idea of development. They may not be professionally qualified but are driven intrinsically to do good to the society. These organisations often hire employees with low skills and qualifications. They generally do not get carried away by management practices borrowed from business houses.

These organisations find the SHG-based model more appealing because of its collective action approach. SHGs may be used to implement various other developmental schemes and they can be effective in the long run for developing a proper withdrawal strategy for these organisations. Also, for an organisation not tempted by the lure of financial sustainability, profitability and growth, an SHG is the appropriate micro-finance vehicle. People's Education and Development Organisation (PEDO)\*, an MFI based in the west Indian State of Rajasthan, has been working with SHGs since the late 1980s. PEDO has been promoted by Mr. Devi Lal Vyas who hails from the Udaipur district of Rajasthan. In the beginning, PEDO worked with tribal communities on issues related to natural resources helping them with livelihood generation. While working with tribal women, PEDO realised the need for an intervention that would make credit easily accessible to these women. This motivated them to start a micro-finance project. Since the demand for micro-finance came from the community, they focused on building a sustainable community-based micro-finance organisation.

The second category of organisations includes those managed by professionally qualified young leaders who are driven by the romantic idea of social reform through financial activism. These organisations joined the micro-

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\* For more details on PEDO, please refer to: <http://www.pedomada.org/default.aspx>

finance sector because at the time of its inception the sector was booming with grant money pouring in. Such organisations are relatively young compared to those in the first category. They are ambitious and focused on organisational growth and scalability of operations. They aspire to turn into large-sized organisations and generally find the JLG model to be more suitable.

Swayam Krishi Sangam (SKS)\* micro-finance is one of the largest MFIs in Asia and the second one in the world to offer IPO. SKS was registered as a not-for-profit organisation in 1997 and was promoted by Vikram Akula, a non-resident Indian. Dr. Akula received his education in the US. Inspired by the Grameen model of micro-finance he started micro-finance operations in the State of Andhra Pradesh which later on spread to almost all parts of India. SKS, the MFI founded by Dr. Akula, embraced the JLG model of micro-finance to cater to the largest possible population and replicate the micro-finance success story across rural India. In later years, SKS converted itself into a for-profit organisation and earned huge profits from their operations. SKS has tie-ups with many business houses and follows practices borrowed from the corporate world. It is keenly focused on achieving efficiency defined in terms of financial ratios and has been projecting micro-finance as a viable business proposition while doing good to the people. The pocketing of huge dividends by the senior management after the offering of IPO and incidents of farmers' suicides linked to SKS operations maligned the image of SKS in the recent past. But with well-managed PR and gradual improvement in operations, SKS regained its lost status. Nevertheless, the initial success of SKS inspired many MFIs to take the commercial route for scaling up micro-finance operations in India. SKS may, therefore, be hailed as a path-defining organisation in the history of

Indian micro-finance. The JLG model is apt for a professionally managed and rapidly growing organisation like SKS Micro-finance.

Thus, the initial mushrooming and growth of SHGs may be attributed to a need for collective action vis-à-vis poverty eradication while recognising India's stratified social structure. The growth has been the result of external influences as well an outcome of the vision of the founders. The introduction of the JLG model and its subsequent exponential growth and that of the adopting organisation also indicate the changing external and internal influences including expanding urbanisation causing reduced sensitivity towards caste structure and a romanticised view of development that has financial sustainability and scalability at heart.

There are organisations working with both models of service delivery. For some organisations the mixing of methods works well but for others the adoption of one in the presence of the other introduces complications within the organisation. The Self-Employed Women's Association (SEWA)\* is a case in point. SEWA is an Ahmedabad-based organisation in Western India. SEWA, had been working through its women's cooperative bank with an SHG-based model till recently before going on to expand with the help of a JLG-based model. The organisation's larger focus on urban women necessitated a quick proliferation of operations spanning several districts within the State and beyond. Finding the JLG model to be a more suitable option, the associated bank adopted it for the existing employees in the current neighbourhood. While complete adoption of the JLG-based model is yet to be accomplished there have been employee-grievances regarding its efficacy. The adoption is accompanied by new practices borrowed from

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\* For more details on SKS, please refer to: <http://www.sksindia.com/>

\* For more details on SEWA, please refer to: <http://www.sewa.org/>

commercial business organisations that many existing employees entrenched in the SHG culture find to be a 'soul-less' intervention. Thus, the increasingly complex environments in which social service organisations operate do determine the nature and design of the programmes (Helting & Botein, 2010). However, it also needs to be recognised that programme fidelity or the lack of it is also a function of internal (organisational) factors.

### Conclusion

This paper presents the two prominent models of micro-finance in the Indian micro-finance sector bringing in contextual factors along with organisational features to assess the suitability of these models. SHGs complement a region with a higher number of NGOs and formal financial institutions and with implementing organisations having a clear development agenda not limited to micro-finance only.

Similarly, JLGs are best for regions with homogeneous and enterprising populations not having easy access to formal financial institutions; they should be adopted by organisations with a commercial approach and professionally managed manpower. Organisations often adopt models based on their ideological inclination and availability of funding support either from banks or donors. Not much attention has been given to the internal strength of organisations and regional characteristics. Organisational culture, leadership and structure and their relationship to the adopted model and its effect on the performance of the MFI require a more detailed examination substantiated by additional empirical studies. Similarly, the reason SHGs flourish in certain communities and JLGs fail in others requires a more detailed empirical investigation of the external forces. Findings from these empirical studies will be of immense use to strategic decision-makers in micro-finance organisations.

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**Annexure A**


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Organisation	Websites
Swayam Krishi Sangam (SKS) Microfinance Ltd	<a href="http://www.sksindia.com/">http://www.sksindia.com/</a>
Spandana Sphoorty Financial Ltd	<a href="http://www.spandanaindia.com/">http://www.spandanaindia.com/</a>
Share Microfin Ltd	<a href="http://www.sharemicrofin.com/">http://www.sharemicrofin.com/</a>
Asmitha Microfin Ltd	<a href="http://www.asmithamicrofin.com/home.html">http://www.asmithamicrofin.com/home.html</a>
Sri Khestra Dharmasthala Rural Development Project	<a href="http://www.skdrdpindia.org/">http://www.skdrdpindia.org/</a>
Bhartiya Smaruddhi Finance Ltd	<a href="http://www.basixindia.com/">http://www.basixindia.com/</a>
Bandhan	<a href="http://www.bandhanmf.com">http://www.bandhanmf.com</a>
Cashpor Micro Credit (CMC)	<a href="http://www.cashpor.in/">http://www.cashpor.in/</a>
Grama Vidyal Microfinance Pvt Ltd	<a href="http://gvmfl.com/">http://gvmfl.com/</a>
Grameen Financial Services Pvt. Ltd	<a href="http://gvmfl.com/">http://gvmfl.com/</a>

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## IMPLEMENTATION OF MGNREGA IN KARNATAKA: ISSUES AND CHALLENGES

Prasanna V. Salian\* and D.S Leelavathi \*\*

### ABSTRACT

*India in general and Karnataka in particular have predominating number of workers in the unorganised sector. The workers in the unorganised sector are denied of basic social security measures such as health facility, income, employment etc. Against this backdrop, the MGNREGA is a refuge for employment source which is ploughed to make significant difference for providing livelihood security in rural areas especially rural poor.*

*The MGNREGA was introduced in Karnataka since 2006 as an additional source of wage employment to eradicate poverty and unemployment. Rural areas of Karnataka have two-pronged issues i.e., poverty and unemployment, marred by low wages, seasonal agricultural employment and informal nature of work. However, it has been observed that the performance under MGNREGA in Karnataka is not in consonance with the rate of poverty and unemployment in the State. The low performance in Karnataka in MGNREGA compared to many better performing States has been attributed to various programmatic and implementation issues. The paper explores on three objectives viz., (i) to analyse the status of rural poverty and unemployment in Karnataka (ii) to evaluate the performance of MGNREGA in Karnataka since inception and (iii) to examine the issues and challenges in the implementation of MGNREGA in Karnataka and way forward. Overall, the paper assesses the programme on the pre-requisites for an inclusive growth model warranting reductions in unemployment and poverty alleviation in rural areas of Karnataka.*

### Introduction

The poor face absence of basic capabilities to function in society and lack opportunities such as access to public infrastructure and income earning. A majority of them earn their livelihood through unskilled, casual manual labour and exploitation of the natural resource base. This dependence makes them more vulnerable to crises, like climate shock, natural disaster, ill-health, all of which adversely impact their employment opportunities and reduce their ability to move out of the poverty trap. According to the latest estimates of Planning Commission (2011-12),

around 21 per cent of total population is living below poverty line. On the other side, 25 per cent of rural people are poor. The rate reduction in poverty especially in rural areas of Karnataka in 2011-12 compared to 2009-10 figures is quite low against the all India rate. Further, the higher rate of unemployment in CDS measure (2009-10) indicates prevalence of high seasonal employment in both rural Karnataka and rural India.

India in general and Karnataka in particular, the number of workers in unorganised sector is overwhelmingly high and so also their preponderance across all occupations and

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activities. Most of the unorganised sector workers are deprived of basic social security measures, like, health, income, employment etc. In this context, the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) as a fall back employment source is designed to make significant difference to livelihood security in rural areas especially rural poor.

The Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), a self-targeting labour intensive public works programme, in the first phase was implemented in most backward 200 districts of the country from February 2006. In April 2007, additional 130 districts were included under phase II, bringing the total districts under it to 330 districts. From April 2008, under phase III, MGNREGA has been extended to all 644 rural districts in the country to guarantee at least 100 days of wage employment to every rural household every year and to reinforce the commitment towards livelihood security in rural areas.

### Literature Review

MGNREGA has attracted a considerable amount of academic interest because of its features, size and implications for rural India. The review of literature helped in understanding the entire process of MGNREGS planning and implementation related issues particularly in Karnataka.

A study conducted in Karnataka in 2010–11 by N. Pani and C. Iyer (2011), shows that the multiplier effects of expenditure from MGNREGA are quite significant, ranging from 3.1 in the north-west region to 3.6 in the Malnad and coastal districts of the State. The effect of the multiplier on the rural economy would be influenced by how much of the additional purchasing power generated from a rural employment scheme is spent on items produced in the rural economy. The study found that a greater proportion of the income, from 48 to 66 per cent for men and women, generated from MGNREGA tends to be spent on the rural economy.

NIRD, Hyderabad (2010) based on the study in the States of Andhra Pradesh, Karnataka and Tamil Nadu stated that MGNREGS becomes primary source of income for one-third of households. Household's average income has increased significantly in all the three States. The study further found that MGNREGS acted as social security measure to the aged women, widows divorced/deserted women and female dependency level has declined after execution of MGNREGS.

A study conducted by the Indian Institute of Science Bangalore (2010) in Chitradurga district, Karnataka has found reduction in water vulnerability index, agriculture vulnerability, livelihood vulnerability index. There has been an increase in groundwater level, water percolation and improvement in soil fertility. These in turn have led in improvement of land productivity.

University of Agricultural Sciences, Bangalore (2009), in the study in four districts of Chitradurga, Davanagere, Shimoga and Hassan of Karnataka has noted improvement in groundwater recharge to the tune of 1500 GPH to 2500 GPH and improvement in water table by 50 to 100 ft in all districts. Practice of double cropping has also been undertaken in all districts.

The STEM (2011) as per the study on "Impact Assessment of NREGA and Evaluation of System and Process in the State of Karnataka" covering five districts viz., Bidar, Chitradurga, Davangere, Gulbarga and Raichur of Karnataka, has observed that there is delay in payment, lack of technical personnel with the implementing agencies, lack of staff for supervision, not giving adequate training, ineffective involvement of NGOs, insufficient awareness among villagers and untrained representatives. The case studies also indicated lack of publicity and awareness, violation of guidelines, Gram Sabha meeting, unscientific way of preparation of plans, lack of technical and administrative staff etc., in few districts.



Ritesh Singh & Vinay Vutukuru (2009) compared the performance of MGNREGS-Karnataka and Andhra Pradesh for the years 2007-08 & 2008-09. The results showed significant improvement in the size of the programme in terms of persondays of employment in Andhra Pradesh compared to Karnataka and recommended to replicate the Andhra Pradesh's Social Audit model elsewhere in the country.

### Methodology

The paper focuses on three objectives: first, to analyse the status of rural poverty and unemployment in Karnataka. Secondly, to evaluate the performance of MGNREGA in Karnataka since inception of the Act. Thirdly, to examine the issues and challenges in the implementation of MGNREGA in Karnataka and way forward.

To fulfill the objectives of the paper following research issues have been outlined:

- i. What is the level and trend in rural poverty and unemployment in Karnataka since 2004-05
- ii. Whether the performance of MGNREGA is inconsonance with the rate of poverty and unemployment in the State?
- iii. What are the programmatic and implementation issues and challenges in MGNREGA?
- iv. What are the possible solutions for the better implementation of MGNREGA?

The study relies on various rounds of NSS Employment and Unemployment survey to shed light on the picture about employment and unemployment, and work participation in rural Karnataka. To analyse the level and trend in poverty in rural Karnataka, secondary data have been collected from Planning Commission. Physical and financial performance under MGNREGS has been obtained from Programme MIS ([www.nrega.nic.in](http://www.nrega.nic.in)) and [www.karnrega.nic.in](http://www.karnrega.nic.in).

### Status of Poverty and Unemployment in Karnataka

Reductions in unemployment and poverty alleviation measures are the main pre-requisites for an "inclusive growth" model. However, during the last two decades, a divergent trend has been experienced in employment and poverty reduction, i.e. even though poverty figures have shown a declining trend, employment growth has been fluctuating in Karnataka. It is well recognised that employment leads to poverty alleviation if it is accompanied by a reasonable level of income. Workers in the unorganised sector, agricultural labourers and many self-employed in agriculture and other informal activities constitute a majority of poor, not only because they are unemployed, but because their productivity and income are low and often irregular and uncertain. In this context, it is important to examine the rural employment situation because a vast majority of Karnataka's population still live in rural areas.

Table 1 presents the status of rural population and households in Karnataka for the period 2001 and 2011 as per census report. Out of the total rural households in the country, 4.7 per cent rural households reside in Karnataka. In 2011, around 61.3 per cent of the total population in Karnataka resides in rural areas. Out of the total rural population in the State, 20 per cent is scheduled caste (SC) and 9.2 per cent is scheduled tribe (ST) as per 2011 Census report.

#### **Rural Poverty Rate and Numbers in Karnataka :**

This section is based on the findings of the latest National Sample Survey (NSS) 68th round consumer expenditure data (2011-12) as well as the findings of 66th (2009-10) and 61st round (2004-05). Comparison of these rounds enables an understanding of the progress made in the area and allows for an examination of the level of deprivation. The poverty estimates presented in this section are based on the Tendulkar methodology.

**Table 1: Status of Rural Population and Households in Karnataka in 2001-2011**

Items	Karnataka		All-India	
	2001	2011	2001	2011
State-wise Rural Households (numbers) (2001–11)	6,725,882	7,946,657	137,747,384	168,565,486
State-wise Compound Annual Growth Rate (CAGR) of Rural Households (Per Cent) (2001–11)		1.7		2.0
State-wise share of Rural Households (Per Cent)	5	4.7	100	100
Total Rural Population (in lakhs)	348.8	374.7	7,424.9	8,334.6
State-wise Proportion of Rural Population to Total Population (Per Cent) (2001 and 2011)	66.0	61.3	72.2	68.8
State-wise Share of Rural Population in Total Rural Population of India (Per Cent) (2001 and 2011)	4.7	4.5	100	100
State-wise Proportion of Scheduled Caste (SC) Population (Rural) (Per Cent) (2001 and 2011)	18.4	20.0	17.9	18.5
State-wise Proportion of Scheduled Tribe (ST) Population (Rural) (Per Cent) (2001 and 2011)	8.4	9.2	10.4	11.3

Source: Census of India, 2001; 2011.

Table 2 depicts the number and percentage of people below the poverty line in Karnataka and at All India level for different time periods. As per the latest estimates of the Planning Commission released in 2013, for the year 2011-12 (Tendulkar Methodology), the poverty ratio in Karnataka was 20.9 per cent (129.8 lakh) compared to 33.3 per cent (186.5 lakh) in 2004-05. Similarly, the poverty ratio at all India has come down to 21.9 per cent (2697.8 lakh) in 2011-12 from 37.2 per cent (4072.2 lakh) in 2004-05. The rural poverty in Karnataka has come down from 37.5 per cent (134.7 lakh) in

2004-05 to 24.5 per cent (92.8 lakh). On the other hand, the figure at all India level was 41.85 (3258.1 lakh) in 2004-05 and 25.7 per cent (2166.6 lakh) in 2011-12. A noteworthy feature is that the faster rate of poverty reduction has led to a fall in absolute number of poor in the State. Even though, the poverty in percentage and absolute terms in Karnataka is lower than at all India level, the rate of poverty reduction in 2011-12 compared to 2004-05 is not impressive, particularly in rural areas compared to all India figure.

**Table 2: Population Below Poverty Line (Rural/Rural+Urban) in Karnataka and All India (Lakh) (2004-05, 2009-10 and 2011-12)**

State	2004-05		2009-10		2011-12	
	Rural	Rural+Urban	Rural	Rural+Urban	Rural	Rural+Urban
Karnataka	134.7 (37.5)	186.5 (33.3)	97.4 (26.1)	142.3 (23.6)	92.8 (24.5)	129.76 (20.9)
All India	3258.1 (41.8)	4072.2 (37.2)	2782.1 (33.8)	3546.8 (29.8)	2166.58 (25.7)	2697.83 (21.9)

Note: Figures are based on Tendulkar Methodology; All-India includes figures for rest of the UTs; Figures in parentheses indicate percentage of poverty below poverty line.

Sources: Press Note on Poverty Estimates, 2009-10, Planning Commission, Government of India website ([http://planningcommission.nic.in/news/press\\_pov1903.pdf](http://planningcommission.nic.in/news/press_pov1903.pdf), accessed on 4 April 2013); Press Note on Poverty Estimates, 2011-12, Planning Commission, Government of India website. ([http://planningcommission.nic.in/news/pre\\_pov2307.pdf](http://planningcommission.nic.in/news/pre_pov2307.pdf), accessed on 26 August 2013).

Further, the incidence of poverty by social groups shows that there was higher concentration of poverty among the socially disadvantaged groups of SC and ST population especially in rural areas.

**Rural Employment-Unemployment in Karnataka :** In Karnataka, agriculture is the predominant source of livelihood for the majority of the population and employment is largely unorganised, rural and non-industrial in nature. Despite rapid economic growth in recent years, the unemployment problem remains well-entrenched. The National Sample Survey estimated aggregate unemployment at 6.6 per cent on a current daily status (CDS)\* basis for 2009-10 with 4.7 per cent in urban areas and 4.0 per cent in rural areas. In addition, a large part of the labour force in Karnataka is underemployed. This problem of unemployment/underemployment poses a serious challenge.

The MGNREGA was introduced in February 2006; thus the comparative analysis of

NSSO data from 61<sup>st</sup> (2004-05) and 66<sup>th</sup> round (2009-10) will shed some light on how the Act was designed and implemented to tackle the issue of employment guarantee in rural Karnataka, whether it has been able to achieve its purpose and what further improvements can be suggested by analysing the unemployment data.

**Structure of Employment in Rural Karnataka :**

The regular paid employment is generally considered secure in terms of income, duration of work and other benefits for the typical casual workers, neither the duration of employment nor income is certain. The self-employment though fairly secure, but income from certain types of self-employment activities might be highly irregular, inadequate and even uncertain. In rural area, there is gradual shift from salaried employment to casual wage employment and regular employment is visible both at national and State level (Table 3).

\* Current Daily Status measures unemployment in terms of persondays of unemployment of all persons in the labour force during the reference week. This measure of unemployment fully captures open unemployment.

**Table 3: Percentage Distribution of Workers by Category of Employment, 2004-05 and 2009-10**

Category	Karnataka		All India	
	2004-05	2009-10	2004-05	2009-10
Self-Employed	49.3	46.3	60.2	54.2
Regular Employed	5.1	6.4	7.1	7.3
Casual Employed	45.7	47.3	32.8	38.6

Note: Figures related to Usual Principal and Subsidiary Status (UPSS)\* of individuals.

Source: 61st and 66th Round of Employment and Unemployment Survey, NSSO.

It has been observed that at all-India level (rural areas), over the years self-employment base is gradually eroding and that of the casual employment share is increasing, while the proportion of workers in regular employment is almost stagnating. Unlike at the national level, the casual employment is the predominant form of employment in Karnataka. In Karnataka, the share of self-employed in rural areas has come down to 46.3 per cent in 2009-10 from 49.3 per cent in 2004-05. However, the share of casual employed in rural Karnataka has increased from 45.7 per cent in 2004-05 to 47.3 per cent in 2009-10. Similarly, the regular employment has increased from 5.1 per cent in 2004-05 to 6.4 per cent in 2009-10.

Further, the share of casual employment in the State is especially very high in rural females

which is a cause of immense concern. Clearly, casualisation in the State is conspicuous phenomenon and increasing casualisation has profound implications in the labour market. When work is casual and irregular, the people depending on such kind of employment will have little or no opportunity to enhance their skill base which is critical from the standpoint of view for bettering employment and livelihoods.

**Rural Labour Force Participation Rate:** Persons categorised as working (employed) and also those who are seeking or available for work (unemployed) together constitute the labour force. The estimates of rural Labour Force Participation Rate (LFPR) based on (Principal and Subsidiary status) in Karnataka and all India level by male and female between 2004-05 and 2009-10 are presented in Table 4.

**Table 4: Rural Labour Force Participation Rates for All Ages (in per cent): 2004-05 and 2009-10**

Gender	Karnataka		India	
	2004-05	2009-10	2004-05	2009-10
Female	46.2	37.2	33	26.5
Male	62.8	62.7	55.4	55.6
Persons	54.6	49.9	44.5	41.4

Note: Figures correspond to UPSS of individuals.

Source: 61st and 66th Round of Employment and Unemployment Survey, NSSO.

\* Usual Principal & Subsidiary Status (UPSS): The usual activity status relates to the activity status of a person during the reference period of 365 days preceding the date of survey. The activity status on which a person spent relatively longer time (i.e., major time criterion) during the 365 days preceding the date of survey is considered the principal activity status of the person. If a person spent his major time working in an economic activity, he is said to be a worker on the basis of principal status. If he pursued some economic activity spending only minor time during the reference period of 365 days preceding the date of survey, he is said to be a subsidiary status worker. If these two are taken together, the measure of UPSS i.e. is obtained.

Between 2004-05 and 2009-10, the LFPR shows a declining trend both at the State as well as at the all India level. Across gender, it is evident from Table 4 that decline in LFPR is much higher among rural females, whereas in case of males the LFPR is either stagnant or shows very little change. During 2009-10, LFPR for males and females in rural areas in Karnataka were higher compared with all India level. The LFPR is significantly lower among females than males in rural Karnataka and at all India level. To elaborate, in 2009-10, the LFPR for males was 62.7 per cent and females 37.2 per cent in rural Karnataka. Across gender, it is evident from Table 2 that decline in LFPR is much higher among

females especially among rural females. Among the rural females, the LFPR declined by 9 per cent in Karnataka compared to about 7.5 per cent at the all India level.

**Rural Work Participation Rate :** Persons engaged in any economic activity constitute the workforce. Like the LFPR, the Workforce Participation Rates (WPR) in rural areas and among males and females are higher in Karnataka in general compared to all India figures. Details are given in Table 5. Similarly, the WPR in rural females is considerably lower than the male WPRs during 2009-10 both at Karnataka and all India level.

**Table 5: Rural Work Participation Rates/Worker Population Ratio ( in per cent) : 2004-05 and 2009-10**

Gender	Karnataka		India	
	2004-05	2009-10	2004-05	2009-10
Female	45.9	37	32.7	26.1
Male	62.3	62.4	54.6	54.7
Persons	54.2	49.7	43.9	40.8

Note: Figures correspond to UPSS of individuals.

Source: 61st and 66th Round of Employment and Unemployment Survey, NSSO.

In Karnataka, the WPR (2009-10) for rural males was 62 per cent while it was 37 per cent for rural females. Similar to LFPR, during the period 2004-05 to 2009-10, the WPR according to usual status remained almost the same for rural males but decreased by about 10 percentage points for rural females.

**Rural Unemployment Ratio :** Persons are considered unemployed, if he/she was not working, but was either seeking or was available for work (labour force) for a relatively long time during the reference period. This in effect gives the unutilised portion of labour force. It is a more refined indicator of unemployment in population than the proportion of unemployed, which is nearly the number of unemployed per 1000 persons in the population as a whole. This higher

rate of unemployment in CDS measure indicates prevalence of high seasonal unemployment. For unemployment rate, the CDS measure has been used, as this measure has been widely agreed to be the one that most fully captures open unemployment.

Table 6 indicates that the rural unemployment rates in Karnataka as well as at all India levels decreased from 2004-05 to 2009-10. In Karnataka, the rural unemployment rate has however decreased from 6.7 per cent in 2004-05 to 4 per cent in 2009-10. Similarly, at all India level, the rural unemployment rate has declined from 8.2 to 6.8 per cent during the same period. This shows that the rural unemployment in Karnataka are relatively lower than the all India average

**Table 6: Rural Unemployment Rates ( in per cent ) : 2004-05 and 2009-10**

Gender	Karnataka		India	
	2004-05	2009-10	2004-05	2009-10
Female	7.2	4.1	8.7	8
Male	6.3	3.9	8	6.4
Persons	6.7	4	8.2	6.8

Note: Figures related to CDS of individuals.

Source: 61st and 66th Round of Employment and Unemployment Survey, NSSO.

The gender differential in unemployment rate in 2009-10 is observed in both rural areas of Karnataka and all India. The unemployment rate among females in rural areas in Karnataka is higher than those of the males. The rural female unemployment rate in Karnataka is 4.1 per cent which is higher compared to 3.9 per cent for rural male. At the all India level also female unemployment rate in rural areas is higher than that of the males. One of the reasons for decline in unemployment rates in rural areas especially rural females during

2009-10 may be due to implementation of MGNREGA in the State and at all India.

**Rural Wages and Earnings in Karnataka :** The wages and earnings is one of the indicators to judge the quality of employment and important determinant that has profound implications for bettering employment and productivity of the workers. It is well known that regular employment is considered better, secure and durable and returns associated are usually higher than casual and intermittent nature of employment.

**Table 7: Average Wage/Salary Earnings (in ₹) Per Day Received by Casual Labourers (15-59 years ), Engaged in Works Other Than Public Works in Rural Areas**

Karnataka			All India		
Male	Female	Persons	Male	Female	Persons
2009-10					
96.91	62.77	84.5	101.53	68.94	93.06
2004-05					
48.33	30.74	41.32	55.03	34.94	48.89

Source : 61st and 66th Round of Employment and Unemployment Survey, NSSO.

Average wage salary earnings of casual labourers in Karnataka are lower for males and females in rural areas compared to rural areas at all India level (Table 7). In Karnataka, rural wages/ salary earning differences among males and females, casual labourers engaged in works other than public works is higher compared to difference in all India level. Further, the

percentage increase in male wage rate in rural Karnataka in 2009-10 compared to 2004-05 is 100 per cent and female of 104 per cent. Similarly, during the same period, the increase at all India level is 85 and 97 per cent, respectively for males and females.

The wage difference between males and females is very huge in non-public works in rural

areas. On the other hand, there is non-discriminatory wage under MGNREGA. However, the female wages are far above in the MGNREGA scheme in Karnataka than the non-public casual works in the State. However, it has been noted that market wage is far higher for unskilled wage labour per day in the State. This has obvious implications that in the labour market; male members generally do not come forward for MGNREGA works but attracts females in large numbers.

The 66<sup>th</sup> Round NSS report on Employment and Unemployment has indicated

that wages in private works are more than the wages in MGNREGA works and public works other than MGNREGA. Further, the gender disparity in wages in public works other than MGNREGA (₹ 12.22) was found be lowest followed by wages in works other than public works (₹ 32.59).

Table 8 shows the difference between the actual wages paid under MGNREGA works and the notified MGNREGA wage rates in Karnataka. It is noted that, since 2011-12 the wage rate under MGNREGA has been linked to the CPI -AL.

**Table 8: Notified and Average Wage Cost Per Day Per Person under MGNREGA in Karnataka, 2006-07 to 2012-13 (in ₹)**

FY	MGNREGA Notified Wage Rate	Karnataka	
		Average Wage Cost Per Day Per Person	Average Wage Cost Per Day Per Person in All India
2006-07	69	67	65
2007-08	74	72	75
2008-09	82	81	84
2009-10	82	80	90
2010-11	100	98	100
2011-12	125	123	111
2012-13	155	145	118

Source: Ministry of Rural Development ([www.nrega.nic.in](http://www.nrega.nic.in)).

MGNREGA works have immensely contributed to the gender-neutrality in wages. For the first time, women wage-earners began to earn equal wages and this has a positive impact on women-wages in non-MGNREGA works. Female workers are paid much less in non-public works than their male counterparts, and the statutory minimum wages. A higher wage offered in MGNREGA works compared to prevailing wages adds additional incentive for female workers to work. Similarly, the Act stipulates that work be provided locally, within five kilometers of the residence. This makes

participation in MGNREGA work feasible for women as they continue to bear the main responsibility of household work (Khera and Nayak, 2009). The MGNREGA appears to have helped in reduction of disguised employment of female workers and improvement in wages of unskilled workers in the State.

The para 7 of schedule 1 of MGNREGA states that the State Government shall link the wages with the quantity of work and it shall be paid according to the schedule of rates fixed by the State government for different types of work every year, in consultation with the State Council.



As seen from Table 8, there is a marginal gap between MGNREGA notified wage rate and actual wage rate paid to the workers. One of the main reasons, as reported in many studies is that, in Karnataka, irrespective of the quantum of work, full wage rate is being paid. Further, there is irregular measurement of works by the Technical Assistants/Junior Engineers in Karnataka.

### **The MGNREGA in Karnataka**

To tackle the problem of unemployment and underemployment and poverty among the rural people in Karnataka, the MGNREGA has been introduced in the districts of Karnataka in phased manner since 2006. In the first phase, MGNREGA was implemented in five most backward districts viz., Bidar, Gulbarga, Raichur, Davangere and Chitradurga w.e.f. 02-02-2006. Subsequently, the scheme has been extended to six more districts namely Belgaum, Bellary, Chikmagalur, Hassan, Shimoga and Kodagu under II phase with effect from 1 April 2007. The Scheme was further extended to cover the remaining districts of the State from 1 April 2008 to guarantee at least 100 days of wage employment to every rural household every year and to reinforce the commitment towards livelihood security in rural areas.

The programme could be regarded as having significant achievements in terms of coverage of households, inclusion of women and socially disadvantaged groups as well as the relevance of the types of assets created. Considering the low rate of reduction in rural poverty and unemployment in Karnataka, it is essential to appraise the performance of MGNREGS in Karnataka for the last seven years. Secondary data pertaining to some important indicators were obtained from the official website(s) and presented in Tables 9 to 11.

**Physical Performance of MGNREGA in Karnataka:** Table 9 presents the summary fact sheet of physical performance of MGNREGA in Karnataka. In the FY 2006-07, about 2.2 crore persondays of employment was generated by

5.5 lakh participating households. Persondays generation and participating households increased to 2.8 crore and 34.2 lakh, respectively in the FY 2008-09. This sharp increase in employment generation is due to the increase in the number of MGNREGA districts from 5 to all the 30 districts by 2008-09.

Further, the total persondays has gone up to 22.03 crore with the participating households of 36.3 lakh in financial year 2009-10. The performance of 2009-10 was significantly higher than other years due to severe drought situation in the State and cry for employment from rural workforce due to lack of employment opportunities in agriculture sector. However, the performance in terms of household participation and persondays generation has been decreasing since 2009-10.

The share of SC and ST persondays has been decreasing both in absolute and percentage terms since FY 2010-11. The share of SC in total persondays in Karnataka has been decreasing over the years from 33 per cent in FY 2006-07 to 17 per cent in FY 2012-13. Similarly, the share of ST in total persondays generated has come down to 9 per cent in FY 2012-13 from 20 per cent in FY 2006-07.

Two important changes can be noticed from Table 10. Firstly, the share of ST in the total persondays generated declined from 20 per cent to 9 between 2006 and 2013, presumably owing to the fact that the initial 5 districts had particularly high share of ST households in the rural population. One more imperative aspect is that providing employment to SC and ST is not the objective of MGNREGA as no such reservation to SC & ST workers was seen in the Act. But the share of employment to SC & ST is still less than their share in the population at State level.

Para(6) of Schedule II of MGNREGA stipulates that while providing employment priority shall be given to women in such a way that at least one-third of beneficiaries shall be women who have registered and requested for



**Table 9: Physical Performance Indicators of MGNREGS in Karnataka, 2006-07 to 2012-13**

Indicator/FY	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
No. of households provided with Job cards (in lakhs)	7.6	15.2	34.2	52.2	52.9	55.9	54.0
Households demanded employment (in lakhs)	5.5	5.5	7.3	36.3	24.1	16.6	15.0
Employment provided to households (in lakhs)	5.5	5.5	7.0	35.4	22.2	16.5	13.0
Total persondays generated (in lakhs)	222.0	197.8	287.6	2003.4	1097.9	701.0	622.0
No. of persondays generated by SC (in lakhs)	73.4 (33)	59.8 (30)	79.9 (28)	334.6 (17)	177.4 (16)	110.7 (16)	105.0 (17)
No. of persondays generated by ST (in lakhs)	45.2 (20)	37.9 (19)	39.9 (14)	171.8 (9)	102.7 (9)	58.1 (8)	56.0 (9)
No. of persondays generated by women (in lakhs)	112.2 (51)	99.4 (50)	145.0 (50)	685.7 (34)	505.1 (46)	323.4 (46)	288.0 (46)
Average persondays of employment per participating HH	41	36	41	57	49	42	48
% of HHs completed 100 days of employment	12.8	4.2	3.0	12.6	5.9	2.7	7.7

Note: Figures in parentheses are percentage against total persondays generated.

Source: Ministry of Rural Development ([www.nrega.nic.in](http://www.nrega.nic.in)).

work under the scheme. In Karnataka, the share of women persondays is more than the stipulated 33 per cent as per the Act. But the women share in persondays has come to 46 per cent in FY 2012-13 from 51 per cent in FY 2006-07.

In Karnataka, the average number of days or employment provided per participating household has increased from 41 in FY 2006-07 to 57 in FY 2009-10, but declined to 48 in FY 2012-13. The Act mandates that at least 100 days of employment to be provided to each rural

household. However, Table 10 shows that the percentage of households completed 100 days of employment was very low in Karnataka. Except for the FY 2006-07 and 2009-10 (where around 13 per cent of households completed 100 days of employment), in the remaining financial years the percentage is in the range of 3 to 8 which is quite low considering the rate of rural poverty and unemployment in the State.

**Financial Performance of MGNREGA in Karnataka:** The total fund availability in the FY 2006-07 in Karnataka was ₹ 341.31 crore and

exceptionally high in FY 2009-10 of ₹ 3407.30 crore and in the FY 2012-13 it is ₹ 1788.76 crore (Table 10). During 2009-10, due to drought condition in the State, demand for MGNREGA was high and higher performance was visible. Similarly, the utilisation of fund has increased

from ₹ 248.30 crore in FY 2006-07 to 2569.20 crore in FY 2009-10. As mentioned above, this is mainly due to implementation of the scheme in all the districts of the State since 2008-09. However, the total utilisation has come down to ₹ 1456.86 crore in FY 2012-13.

**Table 10: Financial Performance of MGNREGS in Karnataka, 2006-07 to 2012-13**

Indicator/FY	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Central Release (₹ in crore)	229.71	247.84	398.51	2769.98	1573.05	662.57	1231.94
Total funds available (₹ in crore)*	341.31	436.72	727.33	3407.30	2587.90	1957.016	1788.76
Total expenditure (₹ in crore)	248.30	236.51	373.61	2569.20	2116.29	1528.25	1456.86
Expenditure on unskilled wages (₹ in crore)	147.74	143.07	232.96	1592.90	1290.94	956.53	903.44
% of expenditure on unskilled wages	60	60	62	62	61	63	62
Average wage cost per day per person (in ₹)	67	72	81	80	98	123	145
% of utilisation of available funds	73	54	51	75	82	78	81

Note: Total funds available includes opening balance, Central release, State release and miscellaneous receipt.

Source: Ministry of Rural Development ([www.nrega.nic.in](http://www.nrega.nic.in)).

The primary objective of MGNREGA programme is to provide unskilled employment to rural poor. It is the mandate of the programme that a district/block/GP should spend at least 60 per cent of total expenditure on wages through creating unskilled work. The percentage of expenditure on unskilled wages at all India is around 66 over the last seven years, whereas it ranges from 60 to 63 in Karnataka during the same period. Similarly, the percentage of utilisation of total available fund ranges between 51 in 2008-09 and 81 in 2012-13.

**Asset Creation under MGNREGA in Karnataka :**  
Apart from the primary objective of enhancing

the livelihood security of the rural households, by providing on demand up to 100 days of guaranteed wage employment to every rural household for doing unskilled manual work, creation of durable assets is also an important objective of MGNREGA. The choice of works suggested in the Act addresses causes of chronic poverty like drought, deforestation, soil erosion, water availability etc. so that the process of employment generation is maintained on a sustainable basis and durable assets are created in rural areas by strengthening the natural resource base.

Under MGNREGA, there is a great scope for building social capital on a massive scale. Indeed, MGNREGA gives an ample opportunity to reverse the prolonged neglect of productive and durable rural infrastructure. The community assets created under MGNREGA has both direct and indirect benefits to the villagers. This list of the assets to be undertaken under the scheme clearly indicates that the scheme is expected to enhance the livelihood opportunities in the

mainstream economy in agriculture and allied activities, protect and regenerate environmental resources and improve infrastructure as well as quality of life of people. In short, the scheme is expected to promote sustainable, employment intensive and pro-poor development of the region. Apart from its contribution to households, NREGS is also beneficial to the community and village economy through creation of durable assets (Dreze and Khera 2009).

**Table 11: Category-wise Number of Works Started and Completed under MGNREGA During 2006-07 to 2012-13 in Karnataka**

S.No.	Category	No. of Works Started	No. of Works Completed	Work Completion Rate (%)
1	Anganwadi	10	0	0
2	Bharat Nirman Rajeev Gandhi Sewa Kendra	1906	507	27
3	Coastal Areas	26	2	8
4	Drought Proofing	135815	106947	79
5	Fisheries	80	16	20
6	Flood Control and Protection	94204	72777	77
7	Micro Irrigation Works	180979	147648	82
8	Other Works	60027	47711	79
9	Playground	50478	37849	75
10	Renovation of Traditional Water Bodies	66	0	0
11	Rural Connectivity	54439	39082	72
12	Rural Drinking Water	115608	89403	77
13	Rural Sanitation	1128	285	25
14	Water Conservation and Water Harvesting	93689	27645	30
15	Works on Individuals Land	161395	124251	77
16	Total	949850	694123	73

Source : Ministry of Rural Development ([www.nrega.nic.in](http://www.nrega.nic.in)).

As per section 16 of MGNREGA, Gram Panchayats in the meetings of Gram Sabha and Ward Sabha are to determine the order of priority of the works to be taken up under the MGNREGA. As per Section 13 of MGNREGA, the Panchayats at district, intermediate and village levels shall be the principal authorities for planning and implementation of the schemes made under this Act. As stated in the Schedule 1 of the MGNREG Act, 'creation of durable assets and strengthening the livelihood resource base of the rural poor shall be an important objective of the Scheme'. MGNREGA is a safety net programme and thus should result in protection from requirement of another safety net programme. The works undertaken under the scheme should result in productive activities and assets for livelihood security.

Table 11 indicates that out of the total 9,49,850 works taken up, 6,94,123 works have been completed during 2006-07 to 2012-13 with the work completion rate of 73 per cent. Even though the work completion rate in Karnataka is higher than all India average of 65 per cent, the performance in terms of number of works taken up in absolute terms is quite low. Out of the total works taken up and completed, the large number of works related to major five categories viz., micro irrigation works, works on individual lands, drought proofing related works, rural drinking water and water conservation and water harvesting related works. These five categories constitute 72 per cent each of the total works taken up and completed.

To achieve the ultimate objective for promoting sustainable rural development through MGNREGA, the delay in completion and poor quality of the work done under MGNREGA should be avoided.

### **Issues and Challenges in the Implementation of MGNREGA**

**Issues in the Implementation :** From the preceding sections, it has been observed that the performance under MGNREGA in Karnataka

is not inconsonance with the rate of poverty and unemployment in the State. The low performance in Karnataka in MGNREGA compared to many better performing States have been attributed to various programmatic and implementation issues. The following are the major programmatic and institutional issues:

**Weak IEC:** As per the Act and operational guidelines of Government of India, IEC activities have to be undertaken to popularise the scheme and to bring awareness among the rural households and general public to know about the objectives of the scheme and their basic entitlements wherever the low ground awareness is noticed. The poor and the potential beneficiaries in the State do not have adequate knowledge about the MGNREGS. This is largely because of the poor dissemination of the scheme.

**Social Audit:** Across Karnataka, social audits are not held regularly, further, but their very purpose is defeated by the extremely low levels of popular interest. Further, the social audit is not conducted as per norms which resulted in shortfall. Lack of adequate publicity at the people's level-ward and panchayat level-is the prime reason for this.

**Labour Budgeting:** A trend analysis of Labour Budget (LB) projection and achievement during the last few years indicates that the State has not been able to make a realistic LB estimate. During 2011-12, against a projected LB of 1155.88 lakh persondays, only 700.76 lakh persondays (61 per cent) of employment could be generated. Similarly, during the FY 2012-13, against the projection of 890.42 lakh persondays, only 70 per cent could be generated. This large gap between the projections and achievement of LB indicates that the processes (as mandated under Section 13 to 16 of MGNREG Act 2005) viz. identification and planning of works, consolidation of plans, preparation of appropriate shelf of projects, implementation of these projects through PRIs and their regular monitoring have not been fully adhered to.

The wide gap between the projections and achievement results in sub-optimal deployment of funds, as on the one hand, funds lie unutilised at several places and on the other, State and implementing agencies find it difficult to meet their fund requirements.

**March Rush:** Over the years, there have been huge liabilities carried forward to next financial year. Carrying forward of liabilities results in inordinate delay in payments of wages and clearing of material bills. This clearly indicates that transfer of funds to panchayats is not being managed efficiently. The need to withdraw money from panchayats that do not need funds and redeploy these in others is required. However, with the introduction of eFMS this could be avoided to a greater extent.

Trend in expenditure and person-days generation as per MIS since FY 2009-10 shows that there has been huge expenditure booking in the last quarter of financial year especially during the month of March. One of the main reasons for this may be treatment of MGNREGA as an allocation based scheme and trying to utilise the available fund or reach the labour budget target. This may give scope for misappropriation of funds.

**Grievance Redressal Mechanism:** The various forms of grievance redressal mechanism available in the State are Ombudsman, Lokayukta and Helpline, social audit and third party inspection of works done under MGNREGA. But due to lack of adequate publicity, particularly among the wage-seekers and the poor, these mechanisms are not accessed. To make the scheme more transparent, effective use of these mechanisms is required.

**Delay in Payments:** A major reason cited for the delay in payments across region is the measurement of work done. Among others, one of the main reasons for this has been paucity of technical hands; therefore, the measurements and billing was practically getting lumped. Further, there is no proper measurement of

quantum of works undertaken by the Technical Assistants and Junior Engineers regularly. Irrespective of the quantum of work, all the workers get full wage rate. It is also recommended that an easily accessible mechanism should be set up to provide compensation for delays in payment.

Further, the C&AG in the Report on Performance Audit of Implementation of MGNREGA in Karnataka during 2009-10 to 2011-12 inter alia has made several observations viz. (i) lack of coordination among the functionaries in the field (ii) delay in preparation of Annual Plan/Development Plan at G.P level, Block level, District level and delay in preparation of Labour Budget (iii) shortfall in execution of works in annual plans (iv) shortage of technical assistants (v) non-formulation of Information, Education and Communication Plans (vi) expenditure on inadmissible items and diversion of funds (vii) non-conduct of door to door survey for job cards (viii) non-maintenance or poor maintenance of records (ix) undue delay in completion of works rendered the expenditure unfruitful (x) use of machinery in execution of works (xi) absence of convergence activities and (xii) lack of monitoring of the implementation of the scheme.

**Initiatives by the State Government of Karnataka:** For the successful implementation of MGNREGA, the government of Karnataka has taken many initiatives which are as under:

- i. 100 per cent works of MGNREGS are implemented by GPs.
- ii. From 2009 onwards the online data entry in MIS is being carried out at GP level.
- iii. Electronic Fund Management System (eFMS) has been launched in all 30 districts of the State for both unskilled wages and material payments. In this regard Karnataka is disbursing 100 per cent wages electronically directly into accounts of the labourers. Therefore,

- highest standards of transparency and rigorous method of labour payment have been introduced.
- iv. Independent Directorate of Social Audit has been established in the State.
- v. Ombudsmen are working in all the districts. Separate software is under development of monitoring the working system of the Ombudsman.
- vi. Task of preparation of model perspective plan for five years in selected Gram Panchayats of different regions has been entrusted to ASTRA, Mangalore.
- vii. Quality Monitoring cum Third Party independent checks have been done across the State to ensure quality of work and maintenance of transparency.
- viii. *Kayaka Sangha* (Labour Group of 20-25 persons) headed by *Mate (Kayaka Bandhu)* who mobilises the workers and manages worksite facilities.
- ix. Nine line departments viz., Forest, Agriculture, Horticulture, Fisheries, Sericulture, Watershed (*Jalanayana Abivruddi*), Minor Irrigation, Animal Husbandary & Panchayati Raj Engineering for Elimination of Rural Poverty (SERP) and Panchayati Raj Engineering Departments have been declared as implementing agencies for execution of works viz., Horticulture plantation, Forest plantation, execution of works in ITDA areas, Sustainable Dryland Agriculture, Rural Connectivity and Rajiv Gandhi Bharat Nirman Seva Kendras, respectively by these departments.
- x. Karnataka has also initiated the innovative measure in which physically challenged persons working under MGNREGS are provided 25 per cent relaxation on the work turn and 10 per cent extra.

- xi. Software named "JANMITRA" is developed under RD&PR Department, to address grievance and redressal mechanism.

### Suggestions and Conclusion

It is important that the MGNREGA is treated as an exercise in empowering the poor economically and politically to help them get out of poverty and share the benefits of development. Successful implementation of the MGNREG Act ultimately depends on the commitment of the government to the goals of the Act. In order to take advantage of the processes of MGNREG Act 2005, the following major programmatic and institutional implementation issues under MGNREGA need to be urgently addressed by the State Government:

- i. A quality awareness campaign (IEC) with a focus on details of the provisions and entitlement of the scheme should be undertaken to popularise the scheme and to bring awareness among the rural households and general public to know about the objectives of the scheme and their basic entitlements wherever the low ground awareness is noticed. Literature on the programme, success stories and other relevant material need to be documented and disseminated for creating awareness.
- ii. Realistic estimation of labour demand through household survey of job card holders, appropriate planning of works and their execution to ensure adequate worker participation rate in MGNREGA is very much essential as the performance of Karnataka has been declining since 2009-10. The Planning exercise should be made more scientific by identifying works that bring sustainable benefits to the community and beneficiaries. Further, the State Government should initiate measures to ensure adequate participation of villagers and wage-



- seekers in Gram Sabha meetings for planning of MGNREGA works, so that the 'bottom-up' approach to planning is effectively implemented.
- iii. Strengthening of demand registration processes so that all those who wish to apply for work under MGNREGA are facilitated and unmet needs for wage employment are fully addressed.
  - iv. The works on the land of marginalised sections viz., SC, ST households should be given more priority and special efforts should be made to provide full 100 days of employment to these households.
  - v. Adequate steps towards timely work completion should be ensured.
  - vi. For the poor households in the rural areas, wage is the main source of income. Therefore, timely payment of wages to workers as mandated in the Act should be ensured. The Unemployment Allowance payable as per provisions of the Act for non-provision of works within 15 days of registering of demand for work also needs to be made operational.
  - vii. Social audits have to be conducted effectively and regularly and findings of it have to be put up in the public domain. The action plans for the successful conduct of social audits in the State include (i) training and sensitisation of the middle level officials and social audit coordinators about the need and importance of social audits (ii) identification and training a pool of volunteers of social audits including the volunteers identified from the wage seeker committees and (iii) wide publicity to the follow-up action so as to generate maximum impact on the stakeholders involved in the programme.
  - viii. Focus should be given for the productivity and durability of the works to avoid unproductive expenditure. Therefore,
- ix. establishment of a robust quality management system by recruiting independent quality monitors to ensure quality of durable assets created under MGNREGA is essential. Quality monitoring systems consisting of State level quality monitors and district level monitors shall be standardised so that every work taken up under MGNREGA shall be verified with reference to the expected outcomes.
  - x. Through convergence of MGNREGA with other programmes/schemes, we will be able to attain more effectively the objective of creation of durable assets and strengthening the livelihood resource base of the rural poor. The convergence efforts will enable planned and coordinated public investments in rural areas and more employment opportunities. Creating awareness among the poorest of the poor, apart from other stakeholders, about MGNREGS and convergence with other patterning departments should be done on a campaign mode.
  - x. Provision of adequate human resources at all levels of programme implementation holds the key to success of MGNREGA. The PRIs need functionaries, especially at Gram Panchayats to perform to their fullest potential. Lack of staff results in delays in work provision, payments, and shoddy record keeping. Further, all who are involved with the planning and implementation under the Act need some kind of capacity building. Some of them need information and education, some need awareness and organisation, while others need training in the different skills and capabilities. As mandated in Section 18 of the MGNREGA, 2005 the State Governments should provide necessary staff and technical support as may be necessary for effective implementation of the scheme.

- xi. Involvement of local organisations and local people in the planning and implementation is essential for the effective implementation of MGNREGA. Further, labourers should be facilitated to meaningfully participate in gram sabhas, preparation of work plans, to go out and demand work, maintain their own muster rolls through their chosen leader(s), and to train them to measure work and calculate payments.
- xii. To ensure more women participation in MGNREGA, (i) worksite facilities such as crèches, drinking water, shade etc., should be provided (ii) encourage participation of women groups, including Self-Help Groups (Sthree Shakti) in awareness generation, capturing of demand, planning, implementation, monitoring and maintenance of works.

Thus, poverty and unemployment are the two major issues in Karnataka in general and rural areas in particular. Majority of the poor people are living in rural areas. Agriculture wage earners, small and marginal farmers and casual workers engaged in non-agriculture activities constitute the bulk of the rural poor. The high incidence of poverty is directly related to prevalence of under-employment and unemployment on large scale. The rural workforce continues to suffer due to excessive seasonality of employment, lack of wage

employment opportunities and low wage rates. Migration of labour, discrimination between wages paid to men and women, distressed child labour etc., are therefore, common features of rural areas. The problems of low wage rate, seasonality of agriculture employment, informal nature of work are some of the causes for the prevalence of large scale unemployment in Karnataka.

In continuation to the earlier wage employment programmes, MGNREGA has been implemented in the State since 2006 to eradicate poverty and unemployment by providing legally guaranteed 100 days of employment to each rural household. However, by analysing the physical and financial performance, it has been observed that the performance of Karnataka is far from satisfactory in providing supplementary employment to the rural people considering the rate of rural poverty and unemployment in the State. The success of MGNREGA depends on enabling workers in rural areas to receive their entitlements under the Act as well as to leverage resources provided under the Scheme to access development opportunities through other programmes, for transiting from wage employment to sustainable livelihood. However, successful implementation of the Act is a big challenge to the State. With a view to ensuring effective execution and to fulfill the desired objectives of MGNREGA, the State should address to the various programmatic and institutional issues mentioned above.

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## **WOMEN WORKERS AND THEIR STATUS IN MGNREG PROGRAMME: A STUDY IN JHARKHAND**

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### **ABSTRACT**

*Mahatma Gandhi National Rural Employment Act (MGNREGA) is a programme of rural development which aims at enhancing livelihood security of households in rural areas of the country by providing at least one hundred days of guaranteed wage employment in a financial year to every household whose adult members volunteer to do unskilled manual work. In this programme a minimum of 33 percentage participation of women is envisaged. However, the participation has wide inter-State variation ranging between 94 in Kerala and 19 per cent in Uttar Pradesh during the financial year 2012-13. Participation percentage of Jharkhand is 32 which is 1 percentage below the minimum requirement. Under this backdrop the paper makes a critical enquiry of the status of women in MGNREGA in the State of Jharkhand. Based on the State level data on implementation of this scheme, this paper examines the status of women participation in MGNREGA in Jharkhand. The paper presents inter-district variation drawing on secondary source and forwards reasons for the same.*

### **Introduction**

Rural development in response to international development discourse, particularly following globalisation, has been a shifting paradigm with ever changing schemes and programmes (Behera, 2006). Among other things one of the objectives emphasised in such programmes is to ensure participation of women in the process of development. Necessarily, gender mainstreaming happens to be one of the critical concerns in all development policies and programmes in recent years. In this regard introduction of rural development programme in India as per the provisions of the Mahatma Gandhi National Rural Employment Guarantee Act (hereafter MGNREGA) is an important step.

The MGNREGA, in general, aims at enhancing livelihood security of households in rural areas of the country by providing at least one hundred days of guaranteed wage employment in a financial year to every household whose adult members volunteer to do unskilled manual work. In particular, the programme emphasises on women participation in development process with the provision of at least one-third of women beneficiaries from among those who have registered and requested for work under the scheme. There are studies which evidently show that the National Rural Employment Guarantee Schemes (hereafter NREGS) have broadened the scope for wage employment of rural women by opening up of new avenues and enlarging

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their choices and capability (Pankaj & Tankha, 2010: 46). Ministry of Rural Development, Government of India records 54 per cent participation of women on an average in the country during the financial year 2012-13. Nevertheless, empirical studies show that achievement of this target of 33 per cent across the States happens to be erratic. It has wide inter-State variations ranging between 94 in Kerala and 19 per cent in Uttar Pradesh during the financial year 2012-13. Participation percentage of Jharkhand is 32 which is 1 percentage point below the minimum envisaged in the programme (Ministry of Rural Development, 2013).

With this backdrop the paper examines the status of women beneficiaries of MGNREGA in Jharkhand in general and with reference to inter-district variations in particular. It has also tried to identify factors contributing to such an emerging status of women in the process. Being a preliminary inquiry it has some shortcomings. Beneficiaries apart, we have not interviewed the mates and the implementing agencies to address the issue. Moreover, the male participation is not analysed to situate the female participation in a comparative perspective. The qualitative analysis also draws on a single focused group discussion and its generalisation for the State might have its own limitation.

As Acharya & Ghimire maintain, 'The impact of any development programme or any approach on gender must be measured in terms of changes in life option for women which are determined not only by material assistance provided by the project but by the overall gender ideology and socio-economic structure' (Acharya & Ghimire, 2005: 4726). It is to be mentioned that the status of women is normally examined in broader frame of gender relations in social context. But such relations also manifest in various fields consequent upon development programmes. Therefore, Acharya & Ghimire suggest to examine gender relations in any development programme with reference to

'access to resources and economic opportunities, impact on the division of labour and workload, household decisions and women's role in them, decision-making in the public arena and their effectiveness and the ideology of exclusion on the basis of gender' (*ibid*:4726). It is to be further mentioned that the 'status' of women in this paper is not studied in terms of changing role relations along gender line, but in terms of participation of women in NREGS.

### Methodology

The study is empirical in nature and by and large a preliminary enquiry into the research problem formulated for investigation. Data were collected from both the primary and secondary sources for analysis. Secondary source consists of State and district level implementation statistics available in government records, basically Jharkhand government's website on MGNREGA and Registrar General of India. Secondary data were analysed to study overall performance of the schemes and the issue of participation in relation to expenditure, sex-ratio, and literacy rate. Simple statistical tools like covariance and percentage were employed for the analysis.

Primary data were collected through Focus Group Discussion (FGD) organised and conducted in Senha Block of Lohardaga district which is one of the tribal dominated districts of Jharkhand. For the FGD representatives of Mahila Vikash Mandal (MVM), Senha were interviewed. Mahila Vikash Mandal is a block level Self-Help Group (SHG) Federation having 180 SHGs as constituent members, formed in February 2010. A total of 22 members participated in this discussion, out of whom four were male members and employed as service providers of this Federation. This FGD was carried out for about two hours and all the participants discussed on the topic titled 'MGNREGA- local problems and women'. Reason behind selecting the Federation was that it represents the whole SHG members of the block as the informants of this study are the representatives of them.

In order to investigate the issue of the status of women in relation to their participation in MGNREGA the following assumptions are made:

- There is a positive relationship between the level expenditure, along with its components like wage expenditure and administrative expenditure, and participation of women in MGNREGA.
- There is a positive relationship between literacy and women beneficiaries in the programme.
- The favourable sex-ratio and women participation in the programme are positively related.
- The efficient implementation process and level of participation are positively related.

#### **MGNREGA: Status of Implementation in Jharkhand**

MGNREGA is the first ever law in India that guarantees wage employment at an unprecedented scale (Ministry of Rural Development, 2013) with a focus on gender mainstreaming. It came into force on February 2, 2006 and was implemented in a phased manner. In Phase I it was introduced in 200 of the most backward districts of the country. Then in Phase II additional 130 districts were included under this programme in 2007-08 and it covered all the districts of India in 2008. The main objective of this Act is to ensure wage employment along with strengthening resource management through works that address the cause of chronic poverty such as drought, deforestation, soil erosion (*ibid*). MGNREGA aims to provide a steady source of income and livelihood for the poor through wage employment and infrastructure creation.

Of course, NREGS following the guidelines in MGNREGA is not the first scheme to guarantee wage employment. There were other schemes like Jawahar Rojgar Yojana (JRY)

with the same objective. But NREGS differs from earlier one in that it has a comprehensive approach to rural development where income generation through wage employment is associated with gender concerns and sustainability to address local issues in a cultural perspective.

In Jharkhand, the Phase I included 21 districts namely Bokaro, Chatra, Deoghar, Dhanbad, Dumka, Garhwa, Giridih, Godda, Gumla, Hazaribagh, Jamtara, Koderma, Latehar, Lohardaga, Pakur, Palamu, Ranchi, Sahebganj, Saraikela, Simdega and West Singhbhum. East Singhbhum was included in Phase II and the Phase III included remaining districts namely Khunti and Ramgarh. The overall data on the financial and physical performance in Jharkhand show that MGNREGA does provide basic income assurance to a large number of beneficiaries. Another important achievement of the MGNREGA is that 68.42 per cent out of total outlay allocated is spent on wages and 31.58 per cent on material heads for FY 2012-13 ([nrega.nic.in](http://nrega.nic.in)). Thus it maintains the 60:40 ratio of fund allocation between wage payment and material heads.

The performance of MGNREGA in Jharkhand presents a mixed picture as transpires from Table 1. There is increase in the allotment of job cards in FY 2012-13 as compared to FY 2011-12, but there is decline both in demand to employment and assurance of job to demand employment. This may be because of low participation of women in this programme which we have dealt with in following paragraphs. However, one positive aspect which is visible is the gap between demand over employment and actual employment which has decreased in FY 2012-13 over the preceding year. Although the percentage of households which completed 100 days of work, both in the FY 2011-12 and 2012-13, is very low, 3.67 and 3.98 per cent, respectively, there is slight increase over the previous year.

**Table 1 : Performance of MGNREGA in Jharkhand in FY 2011-12 and 2012-13**

Performance of different heads		2011-12	2012-13
Cumulative No. of Households Issued Job Cards	Total	4012789	4051059
	SC	540157	545356
	ST	1491165	1513570
	Others	1981467	1992133
Cumulative No. of Households demanded Employment		1563750	1334437
Cumulative No. of Households provided Employment		1556569	1327618
Percentage of Households provided employment to the demand		99.54	99.48
Cumulative number of Households completed 100 days		57163	52789
Percentage of Households completed 100 days to total number of households provided employment		3.67	3.98

Source: Mahatma Gandhi National Rural Employment Guarantee Act (official website), <http://nrega.nic.in>

The official data show that the MGNREGA notified wages have increased across the nation since 2006 (Shah, 2012), but in case of Jharkhand it is fluctuating and it is still below the legal minimum agriculture wage in the State as is presented in Table 2. Moreover, in Jharkhand the MGNREGA average wage is still below the MGNREGA notified wage rate for the FY 2011-12. Whereas the MGNREGA notified wage is ₹ 122, minimum agricultural wage is recorded ₹ 127 during the period of reference. As per field data, surprisingly, the average wage paid to beneficiaries was found to be ₹ 119.77. Moreover, if we calculate the average annual wage of the households then we will find that it is far below the notified annual wage rate. The annual average wage income of the households should be ₹ 12700.00 if we take ₹ 127.00 as minimum wage rate, but the data of 2012-13 show that average wage income of households in Jharkhand was only ₹ 4454.80, which is 35.08 per cent to notified average annual wage rate of the household. Further, it was also observed that the average annual work days is also very less which is calculated to be 35 days only if we

keep average wage rate as ₹127.00. Thus there is data inconsistency in records which could be due to ineffective implementation of the schemes or/and practice of corruption.

#### **MGNREGA and Participation of Women in Jharkhand**

As mentioned above, one of the major objectives of MGNREGA is to ensure women participation in development process. Accordingly, this participation level is fixed at 33 per cent following the guidelines of MGNREGA. But in Jharkhand still the participation of women in this programme is below the required percentage. The data for 2012-13 show that the participation rate of women in this programme in Jharkhand is only 32.53. Out of all 24 districts, 11 districts have shown the required performance and remaining 13 districts the participation is below the 33 per cent (Appendix I). The districts which have above 33 per cent participation are Saraikela, Latehar, West Singhbhum, Lohardaga, East Singhbhum, Hazaribag, Chatra, Ranchi, Koderma, Garwa and Ramgarh. In remaining 13 districts the performance is

**Table 2 : Increase in MGNREGA Notified Wages in Jharkhand from FY 2006-07 to FY 2011-12 and Minimum Agricultural Wage (₹ per day) FY 2011-12**

State	MGNREGA wage 2006-07	MGNREGA wage 2007-08	MGNREGA wage 2008-09	MGNREGA wage 2009-10	MGNREGA wage 2011-12	Minimum agriculture (Minimum Wage Act) 2011-12
Jharkhand	76.68	76.68	99	120	122	127
India	72.52	79	101.07	126.88	93.87	104.67
Differences	4.16	-2.32	-2.07	-6.88	28	22.33

Source: - Mahatma Gandhi National Rural Employment Guarantee Act (official website), <http://nrega.nic.in>

below 33 per cent. Saraikela records highest with 44.31 per cent from among all the districts, while Deogarh records lowest performance with 18.51 per cent only. From among the districts registering below 33 per cent performance Simdega shows the highest performance at 32.58 per cent.

One of the objectives of this paper is to test the hypothesis stated above to find out the relation between the participation of women in MGNREGA and other variables such as sex ratio, education, and expenditure on the programme. For this we have calculated the correlation co-efficient between these variables for the FY 2012-13.

For a better understanding, the districts of Jharkhand have been classified into two categories viz. a) districts with above 33 percentage participation of women named as category-1, (b) districts with below 33 percentage of participation of women named as category-2 (Appendix-I).

Table 3 shows that there is no significant co-relation between the level of participation of women in the programme and the different variables such as female literacy, sex ratio, total expenditure, wage expenditure and administrative expenditure. It has also been found that except female literacy all other

variables such as sex ratio, total expenditure, wage expenditure and administrative expenditure have a positive relation with participation of women in MGNREGA. It follows that with an increase in these variables the participation of women in MGNREGA in Jharkhand is likely to increase. There seems to be a causal connection between sex ratio and women participation in the programme. In category-I the sex ratio is 1000:955 and the participation rate is 39.37 per cent, the correlation coefficient being 0.77. On the other hand, the sex ratio recorded in category –II is 1000:957 and the participation rate is found 26.96 with coefficient correlation being 0.11. In other words, the favourable sex ratio is negatively related to women participation in NREGS. A cursory look with reference to Appendix-III at Saraikala, Latehar and West Singhbhum districts with sex ratio of 1000:958, 1000:964 and 1004:43.54 shows that these districts have registered participation rates at 44.31, 44.17 and 43.54 per cent, respectively. The trend is obvious and declining. But Lohardaga district with sex ratio of 1000:985 registers 43.32 per cent of participation which does not fall into the trend. Similar is the case with Simdega, Palamu and Giridih and Khunti districts where sex ratio is 1000:1000, 1000:929, 1000:943 and 1000:994, respectively, but the corresponding participation rates are 32.58,



**Table 3 : Result of the Correlation Study**

Variables	Category-1	Category-2
Participation and Female Literacy	-0.20	-0.04
Participation and Sex Ratio	0.77	0.11
Participation and Total Expenditure	0.13	0.32
Participation and Wage Expenditure	0.22	0.32
Participation and Administrative Expenditure	0.02	0.34

Source : Interpreted from the data available in Government records drawn from official website [www.nregra.nic.in](http://www.nregra.nic.in)

32.10, 31.85 and 31.85 without displaying any trend. It is to be mentioned that Garhwa district which is included in category-I is identified as gender critical district in Census of 2011 out of 8 gender critical districts (other 7 are included in category-II) of Jharkhand. In this district the sex ratio is 1000:933, but the participation rate of women in the programme is 33.18 per cent, less than, say that of in Saraikala district where the sex ratio is 1000:958 and participation rate is 44.31 per cent. The comparison between the two does not hold to the premise that favourable sex ratio is negatively related to the rate of women participation. Therefore, it needs to be substantiated with further investigation because while considering a few individual cases the trend is found to be erratic.

Although rate participation of women and administrative expenditure do not have very significant relation in both the categories of districts, it has been observed that the co-efficient value is more in category- II than category-I. Surprisingly the rate of women participation as can be seen from Appendix I comes to 39.37 and 26.96 per cent, respectively. In other words, higher correlation coefficient between participation and administrative expenditure does not confirm to higher rate of women participation in the programme. So is the case with women participation and wage expenditure. The higher coefficient correlation between the two in category –II has not ensured

higher level of women participation in the programme. The effort of the State government through more expenditure in administrative component to create awareness among the community members about the programme by different governmental and non-governmental organisations such as PRADAN, AROHAN etc., and creating women self-help groups for gender mainstreaming have not been effective. However, this needs further scrutiny with reference to number of mobilising agencies in the districts and the level of participation which has not been taken up in this analysis. Further, whether the administrative expenditure has gender bias or not needs to be examined with reference to male participation in the programme. This also holds in the case of the relationship between the level of women participation and wage expenditure. There are some other factors which could not be captured from the analysis of data available in government records. This has been attempted through Focus Group Discussion (FGD).

Three major factors have come to the fore from FGD and these are late payment or no payment, corruption in Panchayati Raj Institutions and lack of awareness about the programme.

All the members who participated in the FGD had the same view point regarding payment in MGNREGA. According to them, people do not want to work in MGNREGA as

they are paid late or they are denied the wages of their work. According to guidelines of the Act, wages are to be paid on weekly basis and not beyond a fortnight in any case. But it was revealed during focused group discussion that the guidelines are not strictly followed while implementing the programme. Payments are delayed; and in some cases these were delayed for over a year. One of the participants shared that she has not been paid till the date of interview (25 March, 2013) for the work she did last year in MGNREGA. Even one participant ironically remarked, NREGA *kodaga to bhodega* (if you work in NREGA then you have to suffer). No doubt, as the members shared, it is very difficult for a wage labourer to continue to work if they are not paid regularly. As a result, the programme has become less attractive for women. People, due to late payment or no payment to their work, prefer to work in other places where they are paid regularly even though they are paid less wage. Earlier studies also have found similar results. (Abraham, 2010; Khera & Nayak, 2009). Abraham in his study in Khunti district of Jharkhand found that there are many cases of late payment and no payment (Abraham, 2010). Delayed payment is found to be the major factor for low participation of women in the programme in the studied area as "delays in wage payment make things particularly difficult for single women, who cannot afford to wait for work and wages as they are the sole earners in the family." (Khera & Nayak, 2009:10).

Delayed payments however do not explain the increase in the level of participation of women in the programme as registered in the records of the government. There is a slight increase of this participation, by 1, in Jharkhand from 31 per cent in 2011-12 to 32 per cent in 2012-13. This trend is also reported at national level where 47 per cent participation in 2011-12 has increased to 53 per cent in the 2012-13 registering a 6 percentage point increase over a year. This increasing trend could be due to

coverage of new beneficiaries to the programme along with some of those who are also reported working in the following year having no other alternative avenue. Delayed payments discourage participation, but the rural unemployed people do not keep themselves 100 per cent away from participation in the NREGS due to this reason in the absence of any other alternative. There seems to be an element of exploitation in the process of implementation of NREGS because people have to work under the scheme in the absence of any other alternative choice in the village. This has also been proved by the data of government as the average wage paid to the wage labourers of Jharkhand in MGNREGA is less than the actual payment.

According to the guidelines of the plans and decisions regarding the nature and choice of work, planning process are to be made in Panchayati Raj Institutions (PRI). PRI has been envisaged to play a major role by this Act. However, it was revealed during field work at FGD that lack of transparency and accountability in PRIs also discourage women in participating in this programme. Members present in FGD said that wage jobs were assigned to those people who have good relation with the representatives of the PRI or the workers who agree to give some portion of their earning from their wage. It was also reported that annual plans are prepared without taking most of the people's views and without involving them in the process in general and excluding all women in particular. The representatives in PRI, obviously through MGNREGA create a power centre in place of decentralising it as envisaged in Panchayati Raj guidelines. It is because of the gender and power bias in implementation process in which women are excluded from decision making that low participation of women is recorded. This premise also needs to be substantiated with a comparison with the male participants in the programme.

"The placement of mates at the worksite is considered particularly important in the

context of Jharkhand" (Mishra, 2010: 40). They are responsible for making entries in the job cards, maintaining attendance in the master rolls, measuring the work and ensuring on-site facilities. Participants also informed that it is mate or site in-charge who directly interacts with them and provides them information on available work. As they are made solely responsible for implementation of work in worksite and there is lack of transparency in PRI, there are examples of exploitation of the beneficiaries by the mates. From the FGD it came out that generally mates give job or information regarding the new works to those beneficiaries with whom they have good relation or from whom they can extract commission. It seems that it excluded lots of beneficiaries for whom this programme has been introduced. Moreover, there are other examples of mis-utilisation of job cards of the beneficiaries by the mates. Two members during focused group discussion reported that their job cards were appropriate by the mate who returned to them after a long time. They also said that their job cards were used to show their participation in the worksite and to avail of their wage. In such a situation women are found victim of PRI representatives' manipulation because of low female literacy and lack of decision-making power.

It is also revealed during the FGD that women have low awareness about the programme. Most of the participants were unaware of the different provisions of the programme. They do not know about unemployment allowances and probably because of this ignorance and consequent lacking in political pressure, "Jharkhand is yet to notify the State Unemployment Allowance Rules" (Aind, 2013: 7). This apart, people in general and women in particular do not have awareness about the procedural formalities of making complaints against the non-payment or late payment of wages. Thus, all these reasons affected their participation in the programme.

## Conclusion

From the analysis of data available in government sources we find that the level of participation of women in NERGS in Jharkhand is low as compared to national level. Although the gap of women participation in Jharkhand to average national participation is decreasing year by year, still the gap is of about 22 percentage points which is very alarming for gender mainstreaming to development process. A number of factors are found to be responsible for the low participation of women in the programme.

The analysis made with reference to government records finds a positive relationship between level of women participation in the programme and sex-ratio, total expenditure, wage expenditure and administrative expenditure. On the other hand, it also shows a negative relationship between such participation and female literacy, meaning that literacy level has no positive impact on the level of participation. While negative relationship between level of participation and female literacy could be used to explain the issue of low level of participation of women, the positive relations as we find do not help in explaining it. In other words, the positive relationships between participation and wage expenditure, for example, do not explain the low level of women participation in MGNREGA. That is why qualitative approach to understand the issue was applied by conducting focused group discussion. From the discussion, three major factors have emerged from FGD, namely late payment, corruption in Panchayati Raj Institutions and by mates, and lack of awareness of women about the programme, which explain the low level of participation to a greater extent. This proves the hypothesis that efficient implementation process and level of participation are positively related. Alternatively, it means that inefficient implementation process with women lacking in awareness, practice of late payment and existence of corruption results in low level of participation.

However, a comparative study with male participation is suggested to capture the ground reality to explain the emerging issue of low level of participation of women more analytically.

This study thus finds that there are serious problems in the nature of implementation which discourage women to participate in this programme. There is an urgent need to remove these problems. Although the Government of India has directed the State to involve Self-Help Groups in planning process of MGNREGA (Ministry of Rural Development, 2012), actually in field it has not taken place.

Still women SHGs are excluded from decision making in the planning process. It is important for both the State Government and the implementing agencies to implement the recommendation of earlier studies to speed up the participation of women in this programme. It has also been observed that the average annual wage income of household and average annual work days of household in Jharkhand in MGNREGA is very poor. This study has not studied the average annual income of and workdays of women separately. Despite this shortcoming, this study has tried to find out the reasons which affect the participation of women in this programme, though it has not addressed many questions such as the reasons for late payment or no payment, the role of administration, why the PRI is ineffective, etc., which need further investigation on the issue.

It has been observed that the success of MGNREGA in Jharkhand is not significant in terms of 100 days employment of beneficiaries and

participation of women. Moreover, the Government data show that the actual payment to MGNREGA worker is less than the notified wage rate of MGNREGA. All the beneficiaries are victimised through this process of late payment, no payment and less payment but women are victimised in double way. First they remain absent in decision making and secondly, they are paid late. Already women have low voice about the wages. This is evident from the fact that except in government works, women are paid unequally in other works. Wage rate in Jharkhand in all other works is unequal as mentioned by all the participants of the FGD. Thus, socially women are marginalised. May be it is one of the reasons why women are not raising voice against the late payment or no payment system in MGNREGA. The status of women participation in NREGS is not unique in Jharkhand only. It is a general state of affairs when we look at gender mainstreaming through policy programmes. Therefore, it is not a surprise when we are informed that despite numerous UN resolutions and agreements requiring gender mainstreaming in policies, programmes and institutions (Chant & Pedwell, 2008 and Momsen, 2004), it is a fact that women's presence remains largely absent in global policy making arenas and institution. This is because, as is the case in Jharkhand, "gender equality in most cases does not feature as an explicit goal of the project, and this may be because of the assumption that gender has been mainstreamed into the project design, yet in practice it leads to the exclusion of women, particularly from decision-making and control position" (Rao, 2005: 4704).

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## STATUS OF BASIC AMENITIES IN KARNATAKA: AN INTER-DISTRICT ANALYSIS

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### ABSTRACT

*This paper attempts to examine availability and accessibility of basic amenities to the households in the State of Karnataka. Data from 2001 and 2011 census along with secondary sources have been used by the researcher. Data relating to prominent household amenities like housing condition, drinking water, separate kitchen, LPG connection and toilet facilities have been analysed to estimate progress during the specified census years. District-wise comparison has also been attempted to analyse the influence of urbanisation, literacy and GDP on the status of basic amenities. The study has found that there is improvement in relation to availability and accessibility of most basic amenities, both quantitatively and qualitatively. However, there is need for improving the quantum of all facilities in most of the districts.*

### Introduction

All societies have been making conscious and planned efforts to provide basic amenities to all the members. These facilities are not only essential but also necessary for human existence and healthy living. The extent of utilisation of amenities is likely to have a direct impact on day-to-day life of people. The health status of an individual or a member of a society mainly depends on the extent of availability and accessibility to basic amenities. The most prominent amenities like good housing, potable water, separate place for cooking, use of LPG, toilet and drainage facilities are needed for quality living. Both the Union and State Governments have been making efforts to provide good quality of amenities to all. However, such efforts have been found to be neither adequate nor effective.

Our Five-Year Plans have been playing a major role in providing basic amenities to people in a phased manner. So far, 11 Plans have been put in operation. The 12<sup>th</sup> Five Year Plan (2012-17) which is currently under implementation aims at faster, sustainable and inclusive growth for the country. It envisaged an improvement in the provision of basic amenities like housing, drinking water, electricity, roads and sanitation. However, these efforts have not been able to overcome inter-State and inter-district variations and in achieving balanced growth of infrastructure across the country. The importance of adequate basic amenities for the maintenance of good health and well-being has been an important issue of scientific analysis and public health policy.

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### Basic Amenities and Their Implication on Health: An Overview

Research studies have been carried out on basic amenities in relation to health. Most scholars have studied these two areas to understand their relationship. Many attempts have been made to examine as to how non-availability or poor quality of basic amenities affect health of an individual or society. One of the areas of concern is the basic amenity of housing. This has been emphasised by Bonnefoy. He states, "housing and health are a complex construct, and require composite approaches. Given the variety of issues that may eventually limit the health condition of the residents, it is necessary to approach housing and health in a cross-sectional and multidisciplinary way. Any research on housing and health, therefore, needs to place itself in the holistic concept of housing and evaluate the impact of individual housing factors such as noise, air quality, or temperature against the reality of housing conditions" (Bonnefoy, 2007: p.424).

The World Health Organisation's estimates indicate that nearly two million people in developing countries die from indoor air pollution caused by the burning of biomass and coal in leaky and inefficient household stoves. It recommends international guidance on "healthy housing" to help and prevent a wide range of diseases and unintentional injuries that can be effectively addressed through better housing. This observation emerged from an international consultation of 40 experts from 18 countries hosted by W.H.O in Geneva during 13-15 October, 2010. The team indicated housing-related health risks like respiratory and cardiovascular diseases from indoor air pollution; illness and deaths from temperature extremes; and spread of communicable diseases due to poor living conditions.

The linkage between housing and health is studied by Krieger and Higgins (2002). They have highlighted that poor housing conditions

are associated with a wide range of health problems, including respiratory infection, asthma, lead poisoning, injuries, and mental health. A study by Vijay *et.al* (2003) has analysed household energy, women's destitution and health impacts in rural Rajasthan. Researchers collected data from 1,989 households sampled from 13 villages. The study found that women had to do a lot of hard work and spend a lot of energy as they use bio-fuel. It concludes that the health impact due to the use of bio-fuel is quite high among adult women in Rajasthan.

The W.H.O (2009) has emphasised the importance of drinking water on individual's health. The availability of quality drinking water is a powerful environmental determinant of health. Safe drinking water is a foundation for the prevention and control of water-borne diseases. Another study by Mara *et.al* (2010) pointed out that adequate sanitation, together with good hygiene and safe drinking water are the basic requirements to good health and socio-economic development. Improvements in one or more of these components can substantially reduce the rates of morbidity and severity of various diseases. Such a situation would invariably lead to improvement in the quality of life of a significant number of people, particularly women and children. Thus, it could be concluded that basic amenities have direct influence on health condition of people.

This paper makes an attempt to analyse the availability of basic amenities along with their accessibility to people. It is true that a lot of efforts have been made by the Government to provide these facilities. However, there is significant variation in the availability and accessibility of basic facilities across districts. Besides, people in many backward regions also have the problem of limited amenities with problems in quality. It is in this context that an understanding of the availability and accessibility of basic amenities becomes crucial and significant.



## Methodology

One of the main objectives of this paper is to analyse the prevalence of basic amenities to the households in Karnataka State. It also proposes to compare the status of basic amenities and their variation across districts.

Data for the paper were collected from Census 2001 and 2011. Since the nature of data is primary, supportive secondary sources have also been used through the review of related literature. Data relating to GDP of the most recent estimate have been collected from documented sources. In spite of variation in the number of districts between 2001 and 2011 Census, the present study used the list of districts given in 2001 Census.

## Basic Amenities in Karnataka State

The presence of many diseases like malaria, dengue, fever and tuberculosis are the indications of poor health. These health hazards emanate from lack of basic amenities such as sanitation, drinking water and housing. Besides, lack of awareness about the need to take precautionary measures against preventable and infectious diseases also affects health of an individual. The quality and extent of availability of basic amenities is examined in the context of good health and hygiene.

**Nature of Dwelling Unit :** The significance of housing is widely recognised today. Housing occupies a place next only to food and clothing as the primary needs of people. It is an indispensable need for healthy living. Inadequate housing causes or contributes to many preventable diseases including respiratory, nervous system disorder and cardiovascular diseases. Use of proper building material and good construction could prevent pollution, and thereby prevent asthma, allergies or respiratory diseases. Further, a strong association between housing conditions and health is emphasised (Bonney, 2007).

As per 2011 Census, more than half of the houses in Karnataka are in good condition while a little more than one-third are in livable, and the rest are in dilapidated condition. Most of the houses are either in good condition or in livable situation. The efforts of an individual, family and the housing programmes implemented by the Government have played a key role in changing the situation of housing condition in the State. However, the situation of housing condition is deteriorating in about four per cent households, while in about 16 per cent of households, there has been improvement in both the categories of 'Good' and 'Livable' housing units.

Data provided in Table 1 indicate district-wise housing condition in Karnataka. The Table indicates that the number of households with good housing facilities in the State has increased from 43.9 per cent in 2001 to 60.1 per cent in 2011. There are five districts having housing condition which is more than the State-average with a decline in the number of houses having 'livable condition'. There is also a decline in the percentage of 'dilapidated' houses. The houses in Bidar district are placed in the least position whereas houses in Bangalore urban district are placed in a better position in terms of quality. There are less than half of the houses falling in 'good condition' in the districts of Chamarajanagar, Uttara Kannada and Hassan while about 50 to 60 per cent of the houses are in good condition in rest of the districts of the State. Similarly, about seven per cent of the houses are in dilapidated condition in Chamarajanagar district indicating backwardness of the households with poor quality, while Bangalore Urban district (1.2 per cent) has least number of 'dilapidated houses' in the State. Overall, about four per cent of the houses in Karnataka are in 'dilapidated condition' category. The population living in the 'dilapidated houses' would directly or indirectly face one or more health problems. However, the overall situation of housing condition in the districts of Karnataka

is marginally better in 2011 compared to previous Census (2001). But, most of the districts in the State have a larger share of 'good housing'

facilities. The most striking feature is associated with Bangalore Urban district with 78.1 per cent households belonging to 'good condition'.

**Table 1: Conditions of Houses in Karnataka**

S. No.	District	Condition of Census Houses					
		Good		Livable		Dilapidated	
		2001	2011	2001	2011	2001	2011
1.	Bagalkot	42.7	55.7	53.4	39.6	3.9	4.7
2.	Bangalore Rural	36.7	57.2	56.7	38.1	6.6	4.7
3.	Bangalore Urban	63.5	78.1	33.7	20.7	2.8	1.2
4.	Belgaum	45.1	61.0	51.0	35.1	3.8	3.9
5.	Bellary	43.2	60.0	52.2	35.5	4.7	4.5
6.	Bidar	34.2	45.3	59.6	50.2	6.0	4.5
7.	Bijapur	37.4	55.8	57.4	38.3	5.1	5.9
8.	Chamarajanagar	29.7	47.6	62.7	45.8	7.5	6.6
9.	Chikamagalur	36.6	52.7	56.3	42.3	7.1	4.9
10.	Chitradurga	37.4	52.6	57.1	42.3	5.5	5.1
11.	Dakshina Kannada	45.6	63.5	48.8	33.8	5.6	2.7
12.	Davanagere	39.6	54.1	54.2	41.0	6.2	4.8
13.	Dharwad	45.9	63.4	50.5	33.8	3.6	2.8
14.	Gadag	41.6	55.9	54.6	39.6	3.8	4.5
15.	Gulbarga	47.8	55.0	48.5	41.4	3.8	3.6
16.	Hassan	35.8	49.9	58.6	44.8	5.7	5.4
17.	Haveri	39.6	53.9	55.2	41.6	5.2	4.5
18.	Kodagu	37.9	56.6	55.2	39.0	6.9	4.4
19.	Kolar	44.4	58.0	51.5	37.1	4.1	4.0
20.	Koppal	42.4	58.0	53.8	37.2	3.8	4.9
21.	Mandya	36.5	53.8	57.9	41.9	5.5	4.3
22.	Mysore	39.8	56.2	55.0	39.9	5.2	4.0
23.	Raichur	45.4	53.9	52.0	39.9	3.7	6.2
24.	Shimoga	40.6	53.3	51.6	40.9	7.8	5.8
25.	Tumkur	37.7	56.9	56.7	38.1	5.5	5.1
26.	Udupi	44.5	64.7	46.5	31.7	9.0	3.6
27.	Uttara Kannada	36.8	49.6	55.1	45.0	8.1	5.4
	Karnataka :Total	43.9	60.1	51.2	36.0	5.0	3.9

Source: Census Reports, 2001 & 2011.

**Place for Cooking :** Industrialisation and modernisation have made some changes in the structure and pattern of houses including the provision of kitchen. Today, majority of people including rural folk would like to have a separate kitchen either inside the house or outside. As a matter of fact, people have also begun to

perceive 'separate kitchen' in their household as a status symbol and modernity. It is an important determinant factor in establishing healthy environment in the households. Data provided in Table 2 reveal that the households in most of the districts have separate kitchen. As many as 16 districts have more than 90 per cent

households with separate kitchen facility. The ratio of these households has doubled between 2001 and 2011. However, the lowest number

of households in Bidar and Gulbarga have separate kitchen when compared to households in other districts.

**Table 2: Distribution of Households with Separate Kitchen and LPG Connection**

S. No.	District	Per cent of Households Having			
		Separate Kitchen		LPG	
		2001	2011	2001	2011
1.	Bagalkot	74.1	87.3	09.8	13.9
2.	Bangalore Rural	87.2	90.7	08.1	25.7
3.	Bangalore Urban	92.4	96.3	47.2	75.3
4.	Belgaum	71.9	89.1	16.8	25.0
5.	Bellary	74.1	85.3	12.2	23.7
6.	Bidar	48.5	61.3	05.5	11.1
7.	Bijapur	56.0	75.1	07.8	14.5
8.	Chamarajanagar	75.5	78.5	05.9	16.8
9.	Chikamagalur	94.6	95.2	13.6	27.4
10.	Chitradurga	82.3	86.0	07.3	17.1
11.	Dakshina Kannada	97.4	97.3	25.1	41.2
12.	Davanagere	89.5	92.4	14.9	24.9
13.	Dharwad	89.8	96.1	29.5	37.8
14.	Gadag	79.4	91.6	10.7	14.8
15.	Gulbarga	54.6	69.8	07.9	14.5
16.	Hassan	95.9	96.4	11.5	21.1
17.	Haveri	89.4	94.2	08.0	12.8
18.	Kodagu	94.7	95.2	20.1	29.6
19.	Kolar	84.0	87.2	10.4	20.1
20.	Koppal	61.5	83.5	05.6	12.2
21.	Mandya	89.6	92.6	08.2	18.9
22.	Mysore	89.2	91.9	20.8	39.8
23.	Raichur	65.6	75.5	06.5	14.3
24.	Shimoga	93.3	94.6	20.8	31.9
25.	Tumkur	88.8	90.9	09.6	18.3
26.	Udupi	97.6	97.2	22.8	34.0
27.	Uttar Kannada	91.9	94.2	21.1	27.6
	Karnataka:Total	82.4	89.3	17.9	32.5

Source: Census Reports, 2001 & 2011.

**Use of Liquefied Petroleum Gas (LPG) for Cooking:** Wood, dung cake, coal and other solid fuels have been a major source of energy for cooking and other domestic needs. Most of the households from rural areas mainly rely on these sources for cooking. It is an established fact that

these sources have been frequently associated with chronic respiratory diseases. It is estimated that every year, the killer in the kitchen is responsible for 1.5 million deaths with more than two-thirds of deaths occurring in South-East Asia and sub-Saharan African countries (WHO, 2006).

The modern fuels have begun to replace solid fuels in urban areas while partial switching over tends to occur in rural areas. The prospect for modern fuels to combat indoor air pollution is therefore, significantly better in urban areas than in rural areas. This is primarily due to the reason that majority of the households in rural area continue to depend on wood, dung cake and other solid fuels for cooking even today. This has been found to adversely affect the health condition of members of households in general, women and children in particular.

The use of LPG as a fuel has brought many changes in the lives of people. Most important of all, it enhances hygiene and health. LPG produces far less emissions than most other sources of energy. The extent of LPG usage has increased in urban areas significantly than in rural areas. As per the NFHS-3 (2005-06), about one-fourth of households in India were having LPG connection. In Karnataka, the situation of households owning LPG connection has been changing with nearly one-third of households having LPG connection by 2011, whereas about 18 per cent households had this facility during 2001 Census (Table 2). The most distinct pattern has been found in Bangalore Urban district. All other districts with the exception of Dakshina Kannada, Mysore, Dharwad, Udupi and Shimoga have LPG connection in less than 30 per cent households. More importantly, less percentage of households from Bidar, Koppal and Haveri have access to LPG connection. Thus, most of the households continue to use traditional fuels for cooking. This has been particularly true of households in rural areas. As a result, hygiene and health condition needs improvement in majority of the households.

**Availability of Drinking Water:** Water is the life source for all living creatures and plants. It is a fact that without adequate water, no living creature can survive. Humans also need water for survival. Availability of water is an important lifeline in any community. The demand and supply factors of both surface and groundwater

determine the quantum of water available to people. In recent times, there is decline in groundwater level along with limited availability of surface water, especially during summer. Scarcity of water would invariably compel people to explore and use water from all possible sources. Sometimes, people may be forced to use contaminated water. Use of contaminated water could lead to acute health problems such as nausea, lung irritation, skin rash, vomiting, dizziness, and so on. It is important to note that the effects of contaminated/impure water on children are far more severe than on adults.

People in different parts of the country including Karnataka have been experiencing problems of limited availability or scarcity of drinking water. This has been mainly due to population pressure, shortage in the rainfall, inadequate planning and improper management of water. The problem is multifaceted in nature. It is in this context that the data collected through census about availability of drinking water within the premises of dwelling units have been analysed.

Data given in Table 3 indicate that about less than half of the houses in Karnataka have drinking water facility within the premises (2011) and the remaining households depended on public/private facility. It was about 32 per cent in the previous census. There is about 13 per cent of improvement between 2001 and 2011. In spite of this, availability of drinking water needs further improvement to cater to all segments of people. The district-wise analysis about drinking water facility shows a varied pattern across the State. For example, Bangalore Urban, Dakshina Kannada and Udupi were the only three districts with around 60 per cent households having drinking water facility in 2001. The number of districts with about 60 per cent households having drinking water facility increased to five districts by 2011. At the same time, majority of the houses in Koppal, Raichur, Chitradurga and Bijapur districts were deprived of drinking water facility. Although the number of houses having

water facility has improved by 2011, the State average is 44.5 per cent households. However, the position has improved in seven districts with more than 50 per cent households having

drinking water within their premises. In spite of this, efforts to provide potable water in rural areas continue to remain elusive.

**Table 3: Availability of Drinking Water within the Premises**

S. No.	District	Availability of Drinking Water within Premises	
		2001	2011
1.	Bagalkot	21.0	28.8
2.	Bangalore Rural	18.7	28.1
3.	Bangalore Urban	61.0	76.8
4.	Belgaum	25.9	35.3
5.	Bellary	20.7	34.2
6.	Bidar	25.4	29.4
7.	Bijapur	18.2	25.8
8.	Chamarajanagar	22.4	31.6
9.	Chikamagalur	26.3	39.7
10.	Chitradurga	17.3	24.5
11.	Dakshina Kannada	60.5	79.3
12.	Davanagere	19.9	30.0
13.	Dharwad	40.8	57.3
14.	Gadag	21.2	29.6
15.	Gulbarga	19.6	27.9
16.	Hassan	23.5	34.5
17.	Haveri	18.4	28.2
18.	Kodagu	35.3	55.0
19.	Kolar	21.2	24.7
20.	Koppal	13.6	22.7
21.	Mandya	27.1	37.7
22.	Mysore	42.2	59.5
23.	Raichur	14.9	24.1
24.	Shimoga	34.1	45.0
25.	Tumkur	19.4	25.7
26.	Udupi	59.3	75.3
27.	Uttara Kannada	49.1	58.3
	Karnataka :Total	31.7	44.5

Source: Census Reports, 2001 & 2011.

**Toilet Facility :** The households having its own toilet facility is considered as a symbol of personal achievement and social status. A household having toilet in its premises ensures healthy living with a sense of pride. This is especially true in case of low income families. In India, a majority of rural households do not have toilet facility even now. Absence of toilet facility has

compelled rural masses to resort to open defecation. This has invariably resulted in major public health hazards and problems of sanitation. Many programmes have been implemented through various schemes of the Government to provide toilet facility and to promote healthy environment.

Data provided in Table 4 reveal that a little more than half of the households in Karnataka have toilet facility within their premises by 2011. The situation in 2001 was poor with just a little less than one-fourth of houses having toilet facility. There is improvement in possessing toilet facility by 2011 as the number of households covered increased by 124 per cent. This could be attributed to the efforts made by individuals as well as Government. In spite of this, there has been a greater degree of impediment in improving conditions in rural areas. There are nearly half of the households which are deprived

of toilet facility in their premises. The district-wise analysis indicates that only Bangalore Urban district had the majority of households with toilet facility in 2001. This condition improved by 2011 with most of the households (94.8 per cent) having this facility. There is significant improvement in districts like Dakshina Kannada, Kodagu, Udupi and Shimoga as a majority of the households in these districts have toilet facility within their premises. Although there has been a steady increase in the number of households having toilet facility, still there is need for further improvement.

**Table 4: Availability of Toilet and Drainage Facility**

S. No.	District	Toilet Facility within the premises		Drainage Facility	
		2001	2011	2001	2011
1.	Bagalkot	08.0	18.8	33.8	38.0
2.	Bangalore Rural	13.2	59.5	59.5	71.4
3.	Bangalore Urban	58.9	94.8	88.7	95.3
4.	Belgaum	13.7	32.8	34.8	46.6
5.	Bellary	14.2	32.4	45.3	56.2
6.	Bidar	11.8	23.2	35.6	43.2
7.	Bijapur	08.2	18.1	24.5	32.4
8.	Chamarajanagar	08.9	23.5	53.3	58.0
9.	Chikamagalur	19.2	61.5	44.5	56.0
10.	Chitradurga	09.2	30.3	35.0	47.7
11.	Dakshina Kannada	43.8	92.7	43.3	48.8
12.	Davanagere	14.5	46.4	60.3	72.4
13.	Dharwad	31.8	57.0	57.7	67.9
14.	Gadag	09.4	21.2	43.5	53.4
15.	Gulbarga	11.2	21.2	36.8	40.3
16.	Hassan	14.2	39.9	41.8	49.5
17.	Haveri	11.5	37.3	48.9	67.7
18.	Kodagu	24.3	81.4	54.2	64.1
19.	Kolar	15.5	39.9	55.3	62.5
20.	Koppal	06.7	18.5	36.4	41.3
21.	Mandya	14.5	37.5	58.2	65.1
22.	Mysore	30.8	55.0	65.8	73.1
23.	Raichur	08.0	20.7	30.5	36.3
24.	Shimoga	26.6	71.2	54.2	68.1
25.	Tumkur	12.1	32.5	40.7	46.2
26.	Udupi	40.9	87.2	32.6	27.0
27.	Uttar Kannada	26.6	59.3	44.5	34.8
	Karnataka :Total	22.9	51.2	51.2	60.7

Source: Census Reports, 2001 & 2011.

**Sanitation** : Health status is a key indicator of human well-being. Now-a-days, maintaining good health and wellness is a challenging task for both the individuals and society at large. It is true that environmental pollution affects health in many ways and contributes to a wide variety of diseases. The condition of health does not depend only on the number of doctors and hospitals available but also on clean and healthy environment in the vicinity. It is in this context that improved sanitation has significance.

Data in Table 4 indicate the presence of drainage facility in different districts of Karnataka. It is evident that about 60 per cent houses in Karnataka have drainage facility in 2011. There is an improvement in drainage facility for houses between 2001 and 2011 Census with an increment of 10 per cent. The district-level data reveal that Bangalore Urban (95.3 per cent) district occupies the top position followed by Mysore, Davanagere and Bangalore Rural districts. However, the coastal district of Udupi (27 per cent) is placed at the bottom of the list. There is a similar trend prevailing in other coastal districts like Dakshina Kannada and Uttara Kannada. Of course, in these areas, there is a natural system of drainage. Moreover, maintenance of the drainage facilities is a difficult task in undulated landscape. This situation in the coastal districts need not be viewed negatively as most of these districts have other health indicators with progressive attainment for healthy living. As many as 10 districts have been able to provide drainage facility for majority of the households by 2011. This also however, needs further improvement.

#### **Status of Amenities: District-wise Analysis**

It is evident from the above analysis that the status of basic amenities varies from one district to another. One of the main reasons for such variations is local conditions or socio-economic growth. In order to explore the possible correlation between availability of basic amenities and socio-economic development,

the present paper proposes to use three variables, namely, literacy, urbanisation and GDP.

**Literacy** : This is one of the indicators of social development. It directly influences all aspects of life. It is a fact that rate of literacy is directly correlated with the life styles of people. It influences the extent of availability and accessibility of all amenities. Tiwary and Nayak (2013) investigated availability of drinking water and sanitation facility in the State of Uttar Pradesh. They highlighted a wide range of inter-regional disparities in access to drinking water and sanitation facilities in the State. The study suggests female literacy as a tool to have access to these facilities. The study also stated that disparities in availing of basic amenities prevail across districts and States. The present study however, found that the districts with higher literacy rate (Dakshina Kannada, Udupi and Bangalore Urban) have a higher percentage of households with good/livable condition. They also have higher percentage of households with separate kitchen, LPG connection and drinking water facility within their premises (Table 5.1). These districts have been found to possess higher percentage of houses with toilet and drainage facilities. It is also observed that the districts with relatively lower rate of literacy have lower ratio of households with all the basic amenities. It could be stated that higher rate of literacy will enable people to understand the need and importance of basic amenities. They will invariably make efforts to improve and avail of all basic amenities which enhance quality of their life. Similar trend is observed with regard to toilet and drainage facilities. It is found that the percentage of households with toilet and drainage facilities is higher in case of districts with higher percentage of literacy with Udupi being an exception. This imbalance could be due to the re-organisation of the district from Dakshina Kannada. Simultaneously, the districts with lower levels of literacy have been found to possess relatively lower percentage of households with the above mentioned



amenities (Tables 5.1 & 5.2). All this implies that the extent of availability and accessibility of basic

amenities is directly correlated with the literacy level.

**Table 5.1: Distribution of Literates and Availability of Select Amenities**

S. No.	District	Level of Literacy	Housing Condition		Percentage of Households with		
			Good	Livable	Separate Kitchen	LPG	Drinking Water
1.	Bagalkot	68.8	55.7	39.6	87.3	13.9	28.8
2.	Bangalore Rural	77.9	57.2	38.1	90.7	25.7	28.1
3.	Bangalore Urban	87.7	78.1	20.7	96.3	75.3	76.8
4.	Belgaum	73.5	61.0	35.1	89.1	25.0	35.3
5.	Bellary	67.4	60.0	35.5	85.3	23.7	34.2
6.	Bidar	70.5	45.3	50.2	61.3	11.1	29.4
7.	Bijapur	67.1	55.8	38.3	75.1	14.5	25.8
8.	Chamarajnagar	61.4	47.6	45.8	78.5	16.8	31.6
9.	Chikamagalur	79.2	52.7	42.3	95.2	27.4	39.7
10.	Chitradurga	73.7	52.6	42.3	86.0	17.1	24.5
11.	Dakshina Kannada	88.6	63.5	33.8	97.3	41.2	79.3
12.	Davanagere	75.7	54.1	41.0	92.4	24.9	30.0
13.	Dharwad	80.0	63.4	33.8	96.1	37.8	57.3
14.	Gadag	75.1	55.9	39.6	91.6	14.8	29.6
15.	Gulbarga	64.9	55.0	41.4	69.8	14.5	27.9
16.	Hassan	76.1	49.9	44.8	96.4	21.1	34.5
17.	Haveri	77.4	53.9	41.6	94.2	12.8	28.2
18.	Kodagu	82.6	56.6	39.0	95.2	29.6	55.0
19.	Kolar	74.4	58.0	37.1	87.2	20.1	24.7
20.	Koppal	68.1	58.0	37.2	83.5	12.2	22.7
21.	Mandya	70.4	53.8	41.9	92.6	18.9	37.7
22.	Mysore	72.8	56.2	39.9	91.9	39.8	59.5
23.	Raichur	59.6	53.9	39.9	75.5	14.3	24.1
24.	Shimoga	80.4	53.3	40.9	94.6	31.9	45.0
25.	Tumkur	75.1	56.9	38.1	90.9	18.3	25.7
26.	Udupi	86.2	64.7	31.7	97.2	34.0	75.3
27.	Uttara Kannada	84.1	49.6	45.0	94.2	27.6	58.3
	Karnataka :Total	75.4	60.1	36.0	89.3	32.5	44.5

Source: Census Reports, 2011.

**Table 5.2: Distribution of Literates and Availability of Select Amenities**

S. No.	District	Literacy Level %	Percentage of Households with Toilet	Access to Drainage
1.	Bagalkote	68.8	18.8	38.0
2.	Bangalore Rural	77.9	59.5	71.4
3.	Bangalore Urban	87.7	94.8	95.3
4.	Belgaum	73.5	32.8	46.6
5.	Bellary	67.4	32.4	56.2
6.	Bidar	70.5	23.2	43.2
7.	Bijapur	67.1	18.1	32.4
8.	Chamarajnagar	61.4	23.5	58.0
9.	Chikamagalur	79.2	61.5	56.0
10.	Chitradurga	73.7	30.3	47.7
11.	Dakshina Kannada	88.6	92.7	48.8
12.	Davanagere	75.7	46.4	72.4
13.	Dharwad	80.0	57.0	67.9
14.	Gadag	75.1	21.2	53.4
15.	Gulbarga	64.9	21.2	40.3
16.	Hassan	76.1	39.9	49.5
17.	Haveri	77.4	37.3	67.7
18.	Kodagu	82.6	81.4	64.1
19.	Kolar	74.4	39.9	62.5
20.	Koppal	68.1	18.5	41.3
21.	Mandya	70.4	37.5	65.1
22.	Mysore	72.8	55.0	73.1
23.	Raichur	59.6	20.7	36.3
24.	Shimoga	80.4	71.2	68.1
25.	Tumkur	75.1	32.5	46.2
26.	Udupi	86.2	87.2	27.0
27.	Uttara Kannada	84.1	59.3	34.8
	Karnataka :Total	75.4	51.2	60.7

Source: Census Reports, 2011.

**Rural-Urban Variations :** The rural-urban population ratio is not only a demographic composition but also indicates the levels of socio-economic development. The ratio of population in urban areas is likely to contribute towards better conditions in the availability of basic amenities. This is evident from the fact that most of the urban residents have either 'good' or 'livable' conditions of housing (Table 1). Simultaneously, it is observed that lower levels of urbanisation are invariably associated with less number of households with good housing condition. Thus, it could be concluded that a higher ratio of urbanisation is invariably associated with better conditions of housing (Table 6.1). The districts of Bangalore Urban, Dharwad and Dakshina Kannada with higher levels of urbanisation have a large share of 'good' condition of houses.

Similar trend prevails with regard to the ratio of households having separate kitchen and LPG facilities. While most of the districts with higher ratio of urban households have separate kitchen and higher percentage of LPG connection, there is a slight variation with regard to Udupi district. This could be due to the fact that the district is a newly re-organised. It is also true that Udupi has certain progressive attainments like higher literacy rate. This implies that the rate of urbanisation is positively associated with the availability of basic amenities to a higher ratio of people in a given district. There are other amenities like drinking water, drainage and sanitation available to a majority of the households in Dharwad, Dakshina Kannada, Mysore and Kodagu with higher ratio of urban households. Correspondingly, lower levels of urbanisation or districts with higher ratio of rural households invariably manifest a contrary situation where only a limited number of households have access to most of the basic amenities. This trend could be seen in Chitradurga, Koppal and Manday districts.

Urbanisation has also been found to have limited influence on basic amenities in certain

districts. The districts of Hassan and Udupi have higher percentage of households with separate kitchen and LPG connection. This cannot be attributed to urbanisation as both districts have a higher ratio of rural population. Although this contradicts the general trend, improved level of amenities could be attributed to factors like literacy and economic condition of households. Similar trend could be seen with regard to drainage facility in Davanagere district (Table 6.2). This could be attributed to awareness at the household level and impact of developmental activities carried out in the districts. However, it could be concluded that rural-urban composition of population will invariably influence availability and accessibility of amenities due to economies of scale.

**Gross Domestic Product (GDP) and Basic Amenities :**

The GDP is a broad measure of economic activity. It is based on the market value of all officially recognised final goods and services produced within a State or country during a specified period of time. Its components are consumption, net exports, government expenditure and investment. The 'gross domestic product (GDP) at current prices' is GDP at prices of the current reporting period. It reflects the economic status of the people of the country. It indicates status of the economic attainment on the part of households. The GDP of districts indicates the level of economic development and correspondingly it contributes towards economic empowerment of individuals or households. It is in this context that an attempt has been made to analyse the relationship between GDP and basic amenities.

It is observed that higher levels of GDP of different districts have empowered people to possess or avail of good and livable houses. The districts with higher GDP (Bangalore Urban, Belgaum and Dakshina Kannada) have higher percentage of houses with either 'good' or 'livable' condition. There are also certain districts like Udupi having a higher percentage of good condition of housing in spite of having a

**Table 6.1: Distribution of Urban Population and Availability of Select Amenities**

S. No.	District	Population (%)		Housing Condition Good	Percentage of Households with			
		Rural	Urban		Livable	Separate Kitchen	LPG	Drinking Water
1.	Bagalkot	68.4	31.6	55.7	39.6	87.3	13.9	28.8
2.	Bangalore Rural	72.9	27.1	57.2	38.1	90.7	25.7	28.1
3.	Bangalore Urban	09.1	90.9	78.1	20.7	96.3	75.3	76.8
4.	Belgaum	74.7	25.3	61.0	35.1	89.1	25.0	35.3
5.	Bellary	62.5	37.5	60.0	35.5	85.3	23.7	34.2
6.	Bidar	75.0	25.0	45.3	50.2	61.3	11.1	29.4
7.	Bijapur	76.9	23.1	55.8	38.3	75.1	14.5	25.8
8.	Chamarajanagar	82.9	17.1	47.6	45.8	78.5	16.8	31.6
9.	Chikamagalur	79.0	21.0	52.7	42.3	95.2	27.4	39.7
10.	Chitradurga	80.1	19.9	52.6	42.3	86.0	17.1	24.5
11.	Dakshina Kannada	52.3	47.7	63.5	33.8	97.3	41.2	79.3
12.	Davanagere	67.7	32.3	54.1	41.0	92.4	24.9	30.0
13.	Dharwad	43.2	56.8	63.4	33.8	96.1	37.8	57.3
14.	Gadag	64.4	35.6	55.9	39.6	91.6	14.8	29.6
15.	Gulbarga	67.4	32.6	55.0	41.4	69.8	14.5	27.9
16.	Hassan	78.8	21.2	49.9	44.8	96.4	21.1	34.5
17.	Haveri	77.7	22.3	53.9	41.6	94.2	12.8	28.2
18.	Kodagu	85.4	14.6	56.6	39.0	95.2	29.6	55.0
19.	Kolar	68.8	31.2	58.0	37.1	87.2	20.1	24.7
20.	Koppal	83.2	16.8	58.0	37.2	83.5	12.2	22.7
21.	Mandya	82.9	17.1	53.8	41.9	92.6	18.9	37.7
22.	Mysore	58.5	41.5	56.2	39.9	91.9	39.8	59.5
23.	Raichur	74.6	25.4	53.9	39.9	75.5	14.3	24.1
24.	Shimoga	64.4	35.6	53.3	40.9	94.6	31.9	45.0
25.	Tumkur	77.6	22.4	56.9	38.1	90.9	18.3	25.7
26.	Udupi	71.6	28.4	64.7	31.7	97.2	34.0	75.3
27.	Uttara Kannada	70.8	29.2	49.6	45.0	94.2	27.6	58.3
	Karnataka :Total	61.3	38.7	60.1	36.0	89.3	32.5	44.5

Source: Census Reports, 2011.

**Table 6.2: Distribution of Urban Population and Availability of Select Amenities**

S. No.	District	Population %		Toilet	Drainage
		Rural	Urban		
1.	Bagalkot	68.4	31.6	18.8	38.0
2.	Bangalore Rural	72.9	27.1	59.5	71.4
3.	Bangalore Urban	09.1	90.9	94.8	95.3
4.	Belgaum	74.7	25.3	32.8	46.6
5.	Bellary	62.5	37.5	32.4	56.2
6.	Bidar	75.0	25.0	23.2	43.2
7.	Bijapur	76.9	23.1	18.1	32.4
8.	Chamarajanagar	82.9	17.1	23.5	58.0
9.	Chikamagalur	79.0	21.0	61.5	56.0
10.	Chitradurga	80.1	19.9	30.3	47.7
11.	Dakshina Kannada	52.3	47.7	92.7	48.8
12.	Davanagere	67.7	32.3	46.4	72.4
13.	Dharwad	43.2	56.8	57.0	67.9
14.	Gadag	64.4	35.6	21.2	53.4
15.	Gulbarga	67.4	32.6	21.2	40.3
16.	Hassan	78.8	21.2	39.9	49.5
17.	Haveri	77.7	22.3	37.3	67.7
18.	Kodagu	85.4	14.6	81.4	64.1
19.	Kolar	68.8	31.2	39.9	62.5
20.	Koppal	83.2	16.8	18.5	41.3
21.	Mandya	82.9	17.1	37.5	65.1
22.	Mysore	58.5	41.5	55.0	73.1
23.	Raichur	74.6	25.4	20.7	36.3
24.	Shimoga	64.4	35.6	71.2	68.1
25.	Tumkur	77.6	22.4	32.5	46.2
26.	Udupi	71.6	28.4	87.2	27.0
27.	Uttara Kannada	70.8	29.2	59.3	34.8
	Karnataka :Total	61.3	38.7	51.2	60.7

Source: Census Reports, 2011.

relatively low GDP. Data in Table 7.1 indicate that higher levels of GDP are invariably associated with 'good and livable' condition of house. This trend is also true in case of facilities of separate kitchen and LPG connection in the districts of Bangalore Urban and Dakshina Kannada. There are also a few districts like

Dharwad, Udupi and Hassan having relatively higher percentage of households with separate kitchen and LPG connection for other reasons like better awareness level.

Simultaneously, it is observed that the districts with higher GDP (Bangalore Urban and Dakshina Kannada) have a higher percentage

of households with drinking water, toilet and drainage facilities (Table 7.2). There are a few districts like Udupi, Belgaum and Mysore having specific facilities in higher proportion rather than having higher percentage of households with all amenities. This kind of situation could be explained in terms of improper planning and execution of schemes in providing amenities to the households in different districts. In some

districts, the priorities of people to avail of amenities might have influenced the status of amenities.

However, the analysis confirms the fact that higher GDP would invariably contribute to availability of amenities along with their accessibility to higher percentage of households.

**Table 7.1: District-wise GDP and Availability of Select Amenities**

S. No.	District	(GDP) ₹ in lakh	Per cent of GDP to State	Housing Condition		Per cent of Households with Separate	
				Good	Livable	Kitchen	LPG
1.	Bagalkot	659183	2.0	55.7	39.6	87.3	13.9
2.	Bangalore Rural	903462	2.8	57.2	38.1	90.7	25.7
3.	Bangalore Urban	11368043	34.9	78.1	20.7	96.3	75.3
4.	Belgaum	1867466	5.7	61.0	35.1	89.1	25.0
5.	Bellary	1352540	4.2	60.0	35.5	85.3	23.7
6.	Bidar	456152	1.4	45.3	50.2	61.3	11.1
7.	Bijapur	647041	2.0	55.8	38.3	75.1	14.5
8.	Chamarajnagar	316562	1.0	47.6	45.8	78.5	16.8
9.	Chikamagalur	592486	1.8	52.7	42.3	95.2	27.4
10.	Chitradurga	641439	2.0	52.6	42.3	86.0	17.1
11.	Dakshina Kannada	1713437	5.3	63.5	33.8	97.3	41.2
12.	Davanagere	817362	2.5	54.1	41.0	92.4	24.9
13.	Dharwad	1159069	3.6	63.4	33.8	96.1	37.8
14.	Gadag	386748	1.2	55.9	39.6	91.6	14.8
15.	Gulbarga	761251	2.3	55.0	41.4	69.8	14.5
16.	Hassan	783730	2.4	49.9	44.8	96.4	21.1
17.	Haveri	489766	1.5	53.9	41.6	94.2	12.8
18.	Kodagu	483831	1.5	56.6	39.0	95.2	29.6
19.	Kolar	741369	2.3	58.0	37.1	87.2	20.1
20.	Koppal	455208	1.4	58.0	37.2	83.5	12.2
21.	Mandya	572759	1.8	53.8	41.9	92.6	18.9
22.	Mysore	1502137	4.6	56.2	39.9	91.9	39.8
23.	Raichur	588391	1.8	53.9	39.9	75.5	14.3
24.	Shimoga	846798	2.6	53.3	40.9	94.6	31.9
25.	Tumkur	1069963	3.3	56.9	38.1	90.9	18.3
26.	Udupi	754789	2.3	64.7	31.7	97.2	34.0
27.	Uttara Kannada	597833	1.8	49.6	45.0	94.2	27.6
Karnataka :Total		33751571	100.0	60.1	36.0	89.3	32.5

Source: Directorate of Economics and Statistics-Bangalore, Karnataka at a Glance, 2010-11 and Census Reports, 2011.

**Table 7.2: District-wise GDP and Availability of Select Amenities**

S. No.	District	(GDP) ₹ in lakh	Per cent of GDP to State	Drinking Water	Percentage of households with	
					Toilet	Drainage
1.	Bagalkot	659183	2.0	28.8	18.8	38.0
2.	Bangalore Rural	903462	2.7	28.1	59.5	71.4
3.	Bangalore Urban	11368043	33.7	76.8	94.8	95.3
4.	Belgaum	1867466	5.5	35.3	32.8	46.6
5.	Bellary	1352540	4.0	34.2	32.4	56.2
6.	Bidar	456152	1.4	29.4	23.2	43.2
7.	Bijapur	647041	1.9	25.8	18.1	32.4
8.	Chamarajanagar	316562	0.9	31.6	23.5	58.0
9.	Chikamagalur	592486	1.8	39.7	61.5	56.0
10.	Chitradurga	641439	1.9	24.5	30.3	47.7
11.	Dakshina Kannada	1713437	5.1	79.3	92.7	48.8
12.	Davanagere	817362	2.4	30.0	46.4	72.4
13.	Dharwad	1159069	3.4	57.3	57.0	67.9
14.	Gadag	386748	1.1	29.6	21.2	53.4
15.	Gulbarga	761251	2.3	27.9	21.2	40.3
16.	Hassan	783730	2.3	34.5	39.9	49.5
17.	Haveri	489766	1.5	28.2	37.3	67.7
18.	Kodagu	483831	1.4	55.0	81.4	64.1
19.	Kolar	741369	2.2	24.7	39.9	62.5
20.	Koppal	455208	1.3	22.7	18.5	41.3
21.	Mandya	572759	1.7	37.7	37.5	65.1
22.	Mysore	1502137	4.5	59.5	55.0	73.1
23.	Raichur	588391	1.7	24.1	20.7	36.3
24.	Shimoga	846798	2.5	45.0	71.2	68.1
25.	Tumkur	1069963	3.2	25.7	32.5	46.2
26.	Udupi	754789	2.2	75.3	87.2	27.0
27.	Uttara Kannada	597833	1.8	58.3	59.3	34.8
	Karnataka :Total	33751571	100.0	44.5	51.2	60.7

Source: Directorate of Economics and Statistics-Bangalore, Karnataka at a Glance, 2010-11 and Census Reports, 2011.

### Conclusion

The situation of housing condition in Karnataka has improved both quantitatively and qualitatively during 2001-2011. The number of households with amenities like separate kitchen, L.P.G connection, drinking water, toilet and

drainage facilities increased. The most striking aspect is the decline in the number of dilapidated housing units. Some of these developments have been the outcome of special housing schemes initiated and implemented by the governments in the State and at the Centre. The



district-wise progress in the provision of basic facilities to the people has been encouraging. However, there are inter-district variations in the availability of basic amenities for people belonging to different districts. The most striking observation is that socio-economic variables like literacy, urbanisation and GDP contributed towards improvement in the availability and accessibility of basic amenities.

The task of providing basic amenities to people has been the focus of development in post-Independent India. There has been improvement in most of the States with

significant progress at the all-India level. The situation in different districts of Karnataka indicates that efforts are not very appreciable in reaching the desired number of beneficiaries. There is need for proper planning, effective implementation and monitoring, relating to basic / core services of the programmes. Besides involvement of non-governmental agencies, there is also a need for an active participation of local people to ensure the desired levels of providing 'quality amenities' to all the households.

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## A STUDY ON THE SOCIO-ECONOMIC CONDITIONS OF HANDLOOM WEAVERS

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### ABSTRACT

*Handloom industry occupies an eminent place in preserving country's heritage and culture, and hence plays a vital role in the economy of the country. Production in the handloom sector recorded a figure of 6900 million sq. meters in the year 2011-12, which is about 25 per cent over the production figure of 5493 million sq. meters recorded in the year 2003-04. As an economic activity, handloom sector occupies a place second only to agriculture in terms of employment. The sector with about 23.77 lakh handlooms provides employment to 43.31 lakh persons of whom, 77.9 per cent are women, and 28 per cent belong to Scheduled Castes and Scheduled Tribes. Handloom sector contributes nearly 15 per cent of the cloth production in the country and also contributes to the export earnings as 95 per cent of the world's handwoven fabric comes from India. However, this sector is faced with various problems, such as, obsolete technology, unorganised production system, low productivity, inadequate working capital, conventional product range, and weak marketing links. Further, handloom sector has always been a weak competitor against powerloom and mill sectors. Against this backdrop, the present work attempts to make an indepth study into the life and misery of handloom households. It covers households located in select prominent areas of this sector.*

### Introduction

The objective of this study is to examine the socio-economic conditions of handloom weavers working in the sample area of Guntur district. The study emphasises the issues covering gender, age composition, social grouping and educational levels, annual income and per capita income of the respondents, expenditure pattern of the weavers, category of assets owned by the weavers, indebtedness, organisational support for financial assistance and possession of ration cards of the selected weavers. The need for yet another study is felt only to highlight the fact that there has been no much change in the social and economic well-being of the handloom workers in spite of several initiatives and measures.

### Study Area and Sample Selection

Guntur district is one of the districts having significant number of weaving population in Andhra Pradesh. The district occupies fifth place in terms of number of weaving population and fourth place in terms of number of cooperative societies. It is also a fact that many of the prominent weaving centres like Addepalli, Bhattiprolu, Mangalagiri, Ilavaram, Repalle, Nidubrolu, Sattenapalli, Tenali, Phirangipuram and Chebrolu are located in this district. Against this backdrop, Guntur district was chosen purposefully for the present study and it intends to focus on the socio-economic conditions of handloom weavers, drawing a sample from the major production centres in the district.

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As per the official records of Assistant Director of Handlooms (2012), in Guntur district handloom weavers are found in 34 Mandals only. A two-stage stratified random sampling technique has been employed for the selection of sample weavers. At the first stage, 13 Mandals out of 34 Mandals were excluded from purview of the present study, since they have weaver households below 100. Thus, 21 Mandals were shortlisted for the present study. At the second stage, 5 per cent of the weaver households were selected for the survey from each of the 21 Mandals. Details of the sample selection are given in Table 1.

Out of 629 sample weavers, 68 (11 per cent) weavers are independent weavers, 454

(72 per cent) weavers are working for master weavers and 107 (17 per cent) weavers are working as members of the cooperative societies. In pursuance of the objectives set for the study, primary and secondary methods were used for data collection. Primary data were collected from the selected sample of weaver households in the selected Mandals, with the help of a schedule. Data collected from various sources were analysed by using Statistical Package for the Social Sciences (SPSS). Simple statistical techniques like tabulation, averages, percentages and Chi-square test were employed to analyse the collected data.

**Table 1: Particulars of Sample Selection**

S. No.	Name of the Mandal	No. of Weaver Households	Sample Size( i. e. 5 per cent)
1.	Mangalagiri	5,914	296
2.	Bhattiprolu	1,426	71
3.	Repalle	994	50
4.	Cherukupalli	844	42
5.	Ponnuru	436	22
6.	Tenali Urban	434	21
7.	Sattenapalli	379	19
8.	Chebrolu	314	16
9.	Chilakaluripet	305	15
10.	Phirangipuram	212	10
11.	Nekarikallu	200	10
12.	Guntur Urban	179	9
13.	Durgi	128	6
14.	Tsundur	125	6
15.	Ipur	125	6
16.	Tadikonda	114	5
17.	Pedakurapadu	113	5
18.	Nadendla	106	5
19.	Prattipadu	103	5
20.	Machavaram	100	5
21.	Piduguralla	100	5
	Total	12,651	629

**Age-wise Distribution of Sample Weavers:** Age is one of the important social factors which influences social, economic and demographic situation of any country. Age is an achieved characteristic in the life cycle of a human being. The position in a family or society or group and

performance of certain activities and also achieving some other aspects of life in the human life cycle are determined by age. The young age distribution of a population reveals higher rate of growth of population in the country.

**Table 2: Distribution of Handloom Weaver Households by Age Groups**

Age Group		Category of Weavers			Total
		Independent Weavers	Weavers under MWs	Weavers under Cooperative Societies	
18 - 35 years	Count	7	49	10	66
	Row %	10.6%	74.2%	15.2%	
	Column %	10.3%	10.8%	9.3%	
36 - 45 years	Count	28	112	36	176
	Row %	15.9%	63.6%	20.5%	
	Column %	41.2%	24.7%	33.6%	
46 - 60 years	Count	22	185	52	259
	Row %	8.5%	71.4%	20.1%	
	Column %	32.4%	40.7%	48.6%	
Above 60 years	Count	11	108	9	128
	Row %	8.6%	84.4%	7.0%	
	Column %	16.2%	23.8%	8.4%	
Total	Count	68	454	107	629
	Row %	10.8%	72.2%	17.0%	
	Column %	100.0%	100.0%	100.0%	

Note: Pearson Chi-Square value: 20.865, df: 6, Level of Significance: 0.002\*\*

It is clearly evident that weaving does not appear to be a preferred choice for the youth below the age group of 18 years (see Table 2). Similarly, the percentage of respondents in the age group of 18-35 years is only 10.5 as against the national average of 49.1. Similar trend could also be observed in respect of persons in the age group of 36-45 years. Perhaps, this could be an indication for the migration of people from weaving to other activities. The number of

people entering weaving profession after they cross 18 years is also very low. Another startling revelation is that the number of people engaged in weaving after the age of 60 years is significant. Around 20 per cent of the sample weavers above the age of 60 years are still forced to continue in the occupation for making a living without retirement. From the chi-square results, it is clear that there is significant relationship between age group and weavers.

**Gender-wise Distribution of Sample Weavers :**

Gender is another important social dimension among handloom weavers. Distribution pattern of population between males and females affects their relative and economic relations. Weaving is one of the activities which has scope for women participation. Distribution of handloom workers by gender in the present study is dominated by the presence of males. The ratio between males and females stood at 82:18.

**Social Grouping:**

Indian society is broadly divided into different communities such as OCs, BCs, SCs and STs. Traditions and customs depend upon the community which in turn influence the social fabric. Caste is an important social variable, especially in the present day Indian context. Communities are broadly sub-divided into various sub-castes and people are grouped as per the caste criteria.

**Table 3: Distribution of Handloom Weaver Households by Social Groups**

Social Class		Category of Weavers			Total
		Independent Weavers	Weavers under MWs	Weavers under Cooperative Societies	
Scheduled Caste (SCs)	Count	4	7	8	19
	Row %	21.1%	36.8%	42.1%	100.0%
	Column %	5.9%	1.5%	7.5%	3.0%
Backward Caste (BC)	Count	64	447	99	610
	Row %	10.5%	73.3%	16.2%	100.0%
	Column %	94.1%	98.5%	92.5%	97.0%
Total	Count	68	454	107	629
	Row %	10.8%	72.2%	17.0%	100.0%
	Column %	100.0%	100.0%	100.0%	100.0%

Note: Pearson Chi-Square value: 12.543, df: 2, Level of Significance: 0.002\*\*

Distribution of workers by caste in the present study reveals that 97 per cent of the weavers belong to backward caste, followed by scheduled caste (3 per cent) (see Table 3). The study area is dominated by the backward caste weavers, viz. Padmasali, Devanga, Puttusali, etc. From the chi-square results, it is clear that there is significant relationship between social class and weavers.

**Religion:** In India, religion plays an important role in the social structure and people are influenced by religion to a great extent. Every religion has

its own norms and customs, which in turn influence the social fabric of the society. It is evident from the present study that the weavers who belong to the Hindu religion constituted 98.3 per cent, followed by Christians to the extent of 1.7 per cent. There are no persons belonging to other religions in the study area.

**Educational Background of Weavers:** Literacy is one of the important social variables that influences both social and economic development of a country. Education is considered the inner capability of man that

guides him continuously at various levels. Education is the process which leaves an impact upon the mind, character and moral strength and plays a vital role in the human development.

The survey conducted for the present study indicates that 18.3 per cent of the sample weavers are illiterates (see Table 4). Most of the sample weavers i.e., 70.7 per cent have education up to primary level and only 11 per cent of them have education up to secondary level. Weavers under cooperative set up are educationally in a better position compared to independent weavers and weavers under master weavers. The study clearly shows that none of

the weavers had college education in the entire sample. The growth of the handloom industry depends on the education of weavers to a certain extent. The poor education background of sample weavers does not help them to understand about the modernisation plans and Government policies. There is a general feeling that the benefits of different schemes introduced for the development of handloom industry and welfare of weavers are grabbed by middlemen because of their better education. From the chi-square results, it is clear that there is significant relationship between level of education and weavers.

**Table 4: Distribution of Handloom Weaver Households by Level of Education**

Level of Education	Category of Weavers				Total
		Independent Weavers	Weavers under MWs	Weavers under Cooperative Societies	
Primary Education	Count	53	300	92	445
	Row %	11.9%	67.4%	20.7%	100.0%
	Column %	77.9%	66.1%	86.0%	70.7%
Secondary Education	Count	5	54	10	69
	Row %	7.2%	78.3%	14.5%	100.0%
	Column %	7.4%	11.9%	9.3%	11.0%
Illiterate	Count	10	100	5	115
	Row %	8.7%	87.0%	4.3%	100.0%
	Column %	14.7%	22.0%	4.7%	18.3%
Total	Count	68	454	107	629
	Row %	10.8%	72.2%	17.0%	100.0%
	Column %	100.0%	100.0%	100.0%	100.0%

Note: Pearson Chi-Square value: 21.624, df: 4, Level of Significance: 0.000\*\*

**Education Levels of Children of Sample Weavers:** Social status of individuals can also be understood from the opportunity available to provide good education to their children. An attempt has been made to find out the education levels of children of the respondents. It is

unfortunate to note that of the 629 respondents, 70 per cent of respondents' children are not going to any school. The percentage of children that completed at least school final stood at only 8.9 and those that entered the portals of University are about 5.7 per cent. However, the



study area is educationally prominent in the State of Andhra Pradesh. Nevertheless, the schemes introduced by both the Central and State Governments like Education for All, Education Guarantee Scheme, Rashtriya Madhyamik Shiksha Abhiyan (RMSA), Mid-Day Meal Scheme, etc., are not touching the lives of the people involved in the handloom sector. It is also important to note that the provisions of Right to Education are also not able to improve the level of education of the sample weavers. This is mainly due to the innocence and poor educational background of the selected weavers.

**Type and Size of Weavers' Family :** In Indian society, families are broadly grouped into nuclear, joint and extended joint families. By tradition, joint family and extended joint families are more popular in the society. Whereas nuclear family system is widely prevalent in the present society and are mainly found in the urban areas. Slowly, this trend is also extending to the rural areas.

Type and size of the family are important issues in the study of social conditions of any group of respondents. Nuclear families have turned out to be the general social norm. The same situation is also found among the respondents. Of the total, 85.9 per cent of the respondents are organised as nuclear families, thus devoid of the elderly care and advice. The respondents in the study area felt that the joint families get more earnings than the nuclear families, since weaving is a group activity.

Size of the family is also an important factor in terms of economic status and extent of help available for carrying out handloom operations. Though the respondents are maintaining nuclear families, the size of the family is larger, up to six members. However, majority of the respondents have only up to three members as their family size.

**Number of Dependents :** A family in general consists of head, wife, children, other kith and

kin some of whom may be earning. Attempt has been made to study the number of dependents of the respondents. For the purpose of this study, 'dependent' is considered as one who completely depends on the earnings of the head of the family.

The survey on this aspect revealed that the number of dependents for each respondent varied. Out of the sample, majority of respondents (representing 29.9 per cent) have three dependents, followed by 28.1 per cent who have two dependents. Only 4.9 per cent of the respondents did not have any dependent. There are, in total, 598 dependents and average number of dependents is 2.49. It can be concluded that majority of the weavers have a considerable number of dependents, less than the national average of 4.59.

**Migratory Character :** Migration is an important feature of human civilization. It reflects human endeavour to survive in the most testing conditions, both natural and man-made. Migration in India is mostly influenced by social structures and pattern of development. Uneven development is the main cause of migration. The landless poor who mostly belong to lower castes, indigenous communities and economically backward regions constitute the major portion of migrants.

The weaving community in Guntur district cannot escape from the phenomenon of migration. It is evident from the particulars of migration among the respondents that out of 629 sample handloom households, 386 respondents (61 per cent) migrated from the other mandals and districts. It is to be noted that out of 386 migrated families, 47 weavers are independent weavers, 306 weavers are working under master weavers and remaining 33 are weavers under societies.

About 28 per cent of the migrants came to the present place of work, around 20 years ago. About 28 per cent of the respondents migrated between 20 and 40 years. Majority of

the migrants i.e. 35 per cent came to Guntur district long ago, beyond 40 – 60 years. Another 9 per cent of the weavers migrated to the present place around 60 years back. It is concluded that the weavers under master weavers mainly migrated from one handloom centre to another handloom centre, where they expect to get adequate work throughout the year and payment of higher rates of wage.

**Occupational Diseases of the Handloom Weavers :** The best wealth of a man is health. Good health can be defined as the state of well-being where a person is free from all kinds of physical or mental illness. It is the most precious possession of a man. Better health is one of the prerequisites for improved productivity and production. The better the health of the individual, the better will be his productive capacity. It is too common for handloom weavers to suffer from a variety of occupational health hazards and these problems become severe and acute, as they become aged. Occupational diseases are induced by prolonged work, excessive physical exertion, association of psychological stress in work, harmful factors inherent in materials used by the weavers, and working in poor ventilated and illuminated conditions. Some of the health hazards associated with handloom workers include : eye sight, early cataract, loss of vision for the work, high or low blood pressure, heart problem, damage of lungs, filaria, arthritis and musculo-skeletal disorder,

The other important serious health hazards akin to handloom weavers are those related to malnourishment. This is largely evident by their disproportionate body structure, under-weight, loss of hair and anemia. The aging process among the handloom weavers appears to be very rapid. A majority of them appear much older than their age due to continuous movement of the body in their weaving activity.

It is true that the sample weavers are suffering from more than one type of disease.

But to highlight the incidence of particular disease all of them are put together. Details given in Table 5 reveal that majority of the respondents (31.3 per cent) are suffering from anemia and a significant percentage of workers also have been suffering from occupational diseases. From the chi-square results, it is clear that there is significant relationship between type of disease and weavers.

**Health Conditions of Children of Handloom Weavers :** A startling fact is that majority of the children of handloom weavers are found to be malnourished, leading to under-weight and serious stunting – meaning their height is much lower for their age. An attempt has been made to find out the health conditions of children of the respondents. It is unfortunate to note that of the 629 respondents, children of 68 per cent respondents are suffering from the problem of malnourishment and stunting. The low income level of the weavers is considered as the main reason and that they are unable to spend enough amount for providing nutritional food to their children.

**Exposure of Health Insurance :** Health insurance is a mechanism by which a person protects himself from financial loss caused due to accident and/or disability. The Government of India is providing a Health Insurance Scheme for weavers for providing access to healthcare facilities for all diseases through ICICI Lombard General Insurance Company Limited. In the study area, out of the 629 sample weavers, only 31 per cent of the weavers have joined the health insurance schemes. The remaining respondents are unable to undergo any health insurance scheme due to lack of awareness and savings.

**Exposure of Life Insurance :** The study reveals that out of 629 sample weavers, 175 weavers have joined in Mahatma Gandhi Bunkar Bheema Yojana (MGBBY) scheme being implemented for providing life insurance coverage to the handloom weavers which worked out to only 27.8 per cent and the remaining (72.2 per cent)

**Table 5: Details of Health Conditions of the Sample Weavers**

Type of Disease		Category of Weavers			Total
		Independent Weavers	Weavers under MWs	Weavers under Cooperative Societies	
Anemia	Count	17	166	14	197
	Row %	8.6%	84.3%	7.1%	100.0%
	Column %	25.0%	36.6%	13.1%	31.3%
Damage of Lungs	Count	12	87	22	121
	Row %	9.9%	71.9%	18.2%	100.0%
	Column %	17.6%	19.2%	20.6%	19.2%
Filaria	Count	23	125	28	176
	Row %	13.1%	71.0%	15.9%	100.0%
	Column %	33.8%	27.5%	26.2%	28.0%
Blood Pressure / Heart Problem	Count	7	38	4	49
	Row %	14.3%	77.6%	8.2%	100.0%
	Column %	10.3%	8.4%	3.7%	7.8%
Eye Problem	Count	0	14	13	27
	Row %	.0%	51.9%	48.1%	100.0%
	Column %	.0%	3.1%	12.1%	4.3%
Arthritis	Count	9	24	26	59
	Row %	15.3%	40.7%	44.1%	100.0%
	Column %	13.2%	5.3%	24.3%	9.4%
Total	Count	68	454	107	629
	Row %	10.8%	72.2%	17.0%	100.0%
	Column %	100.0%	100.0%	100.0%	100.0%

Note: Pearson Chi-Square value: 74.820, df: 10, Level of Significance: 0.000\*\*

are not covered under this scheme. Among the three selected categories of the weavers, majority of the weavers working for societies have awareness about life insurance scheme and due to that 54 per cent of the society weavers joined in MGBBY scheme.

**Level of Poverty among the Weavers:** It is often believed that handloom work is mostly undertaken by economically weaker households, and they lack adequate financial resources. According to the Third National Handloom Census,\* 9.7 per cent of the handloom workers

\* The Third National Handloom Census was carried out by NCAER during 2010-11 and with a primary objective to assess the total number of units, looms and employment structure of both handlooms and non-handloom households engaged in handloom activities. The NCAER has been entrusted with the work of issuing of photo identity cards to all the eligible weavers and allied workers.

**Table 6: Distribution of Handloom Households by Type of Ration Cards**

Type of Ration Card		Category of Weavers			Total
		Independent Weavers	Weavers under MWs	Weavers under Cooperative Societies	
White card	Count	61	345	102	508
	Row %	12.0%	67.9%	20.1%	100.0%
	Column %	89.7%	76.0%	95.3%	80.8%
Pink card	Count	7	19	5	31
	Row %	22.6%	61.3%	16.1%	100.0%
	Column %	10.3%	4.2%	4.7%	4.9%
No Ration Card	Count	0	90	0	90
	Row %	.0%	100.0%	.0%	100.0%
	Column %	.0%	19.8%	.0%	14.3%
Total	Count	68	454	107	629
	Row %	10.8%	72.2%	17.0%	100.0%
	Column %	100.0%	100.0%	100.0%	100.0%

Note: Pearson Chi-Square value: 43.951, df: 4, Level of Significance: 0.000\*\*

belong to the poorest of the poor category due to holding of Antyodaya Anna Yojana (AAY) card and 36.9 per cent belong to the Below Poverty Line (BPL) category. About 34.5 per cent of the workers hold Above Poverty Line (APL) cards. It is likely that many households (18.9 per cent) belong to the 'no ration card' category. It is also noted that the majority of the BPL card holders are to be found in the States of Andhra Pradesh, Tamil Nadu and Karnataka.

Different colours are used for categorisation of the type of ration card. However, in the State of Andhra Pradesh, the colour of APL card is pink, for BPL card it is white and for AAY card it is blue. The study also revealed that about 80.8 per cent (see Table 6) of the respondents have white ration cards as they belong to the poor category and only 4.9 per cent of the weavers have pink ration cards.

About 14.3 per cent of the respondents do not have any card, since they are migrant weavers. From the chi-square results, it is clear that there is significant relationship between type of ration cards and weavers.

**Services/Amenities Enjoyed by the Weavers:** It is gratifying to note that a majority of the respondents (91 per cent) have electricity connections. It is unfortunate to note that 9 per cent of the households still do not enjoy the minimum facility, even in the Independent India. Though majority of the respondents have electricity connection, their consumption levels are very low at less than 100 units a month including the household and occupational consumption.

Another measure of indication of better living enjoyed by the respondents is provision towards sanitation. It was noticed that about 83

per cent of the respondents have closets with adequate sanitation. The other respondents are forced to utilise the services of group facility or use open defecation.

According to the Census of India (2011), two-thirds of households continue to use firewood, crop residue, and cow dung cakes for cooking – putting women to significant health hazards and hardship. At present, the proportion of handloom households using cleaner fuels such as LPG and electricity have significantly decreased indicating worsening of financial status of the surveyed weaver households. Eighty three per cent of the weaver households have been using firewood, crop residue and cow dung as the cooking fuel. The rest of the households (17 per cent) are using LPG as the cooking fuel.

The study examined changing living conditions of the weaver community with regard to their food security and quality of food intake. The survey results pertaining to the intake of food present disturbing picture prevalent among the handloom weavers. It is unfortunate that majority (67 per cent) of them are able to take only two meals a day. The quality of food is also a matter of concern, because majority of them are eating rice provided by the Government under ₹1 per kg. scheme. This reveals the pathetic condition of the handloom weaver households. The physical feature of the weavers is weak, that majority of them are very lean and appear to be 'live-skeletons'.

Safe drinking water is paramount for healthy living. Article 47 of Constitution of India confers on the State for providing clean drinking water and improving public health standards. Since Independence, the Governments have been undertaking various programmes to provide safe drinking water to the masses.

Availability of safe drinking water and its use by the weaver households have been analysed. Among the 629 households surveyed, nearly 11 per cent reported having their own

dug-well/handpump supplying them water for drinking and other domestic purposes. Majority of respondents (72 per cent) belonging to the areas of Mangalagiri, Repalle, Bhattiprolu, Tenali, Guntur and Ponnuru are collecting drinking water from public handpumps/dug-wells installed in their areas by local authorities like Panchayats/ Municipalities. The scarcity of drinking water is felt relatively more particularly in summer season. About 11 per cent of the respondents reported that there is scarcity of drinking water in the areas of Sattenapalli, Chilakaluripet, Phirangipuram, Tsundur, Nekarikallu, Piduguralla and Machavaram and they are getting drinking water from a source located more than 400 metres away.

***Occupational Preferences of Weavers' Children*** : Occupational preference of children of weavers is measured in terms of following aspects, viz., whether the sample weavers prefer their children to follow weaving, business, gold work, painting, carpentry and Government service.

The present study reveals that 38 per cent (see Table 7) of the respondents prefer gold work as an occupation for their children, 25.9 per cent of the weavers prefer Government service for their children and 19.2 per cent of the respondents would opt for business activity as an occupation for their children. Only 16.7 per cent of the respondents prefer to involve their children in the hereditary occupation of weaving. The weavers under cooperative societies are more conscious about higher education and they intend to put their children into Government service. But it is interesting to note that the independent weavers and the weavers under master weavers have less interest to put their children in their hereditary occupation and they have a strong feeling that the goldsmithy work will provide better livelihood to their children. From the chi-square results, it is clear that there is significant relationship between occupational preference of children and weavers.

**Table 7: Details of Occupational Preferences of Children of Handloom Weaver Households**

Occupational Preference of Children		Category of Weavers			Total
		Independent Weavers	Weavers under MWs	Weavers under Cooperative Societies	
Weaving	Count	7	79	19	105
	Row%	6.7%	75.2%	18.1%	100.0%
	Column %	10.3%	17.4%	17.8%	16.7%
Business	Count	32	62	27	121
	Row%	26.4%	51.2%	22.3%	100.0%
	Column %	47.1%	13.7%	25.2%	19.2%
Govt. Service	Count	6	118	39	163
	Row%	3.7%	72.4%	23.9%	100.0%
	Column %	8.8%	26.0%	36.4%	25.9%
Gold work	Count	23	195	22	240
	Row%	9.6%	81.3%	9.2%	100.0%
	Column %	33.8%	43.0%	20.6%	38.2%
Total	Count	68	454	107	629
	Row%	10.8%	72.2%	17.0%	100.0%
	Column %	100.0%	100.0%	100.0%	100.0%

Note: Pearson Chi-Square value: 62.589, df: 6, Level of Significance: 0.000\*\*

**Annual Income :** The income of the weaver families determines the standard of living and financial status. In the study area, all the weavers are dependent on weaving as their prime activity for their livelihood. According to the Third National Handloom Census, some of the States that reported higher than average annual handloom weaver household income are Arunachal Pradesh (₹ 58,761), Manipur (₹ 56,188) Nagaland (₹ 56,055), and Mizoram (₹ 44,079). Their handloom products are for domestic consumption for more than half of the households.

As per the Handloom Census, the average annual income of households in Andhra Pradesh is ₹ 30,054. It would be interesting to compare these averages with the position obtained from the sample weavers.

It is evident from the study that majority (76.3 per cent) of the weavers are earning below

₹ 50,000 per annum. In no case, the annual income has gone beyond ₹ 75,000. Category-wise, weavers working with cooperative societies appear to be having a slight edge over their counterparts.

The income has varied between the lowest of ₹ 25,000 and the highest of ₹ 1,00,000. Majority of the independent weavers (60.3 per cent), weavers working for master weavers (48.9 per cent) and weavers working for societies (66.4 per cent) are covered in the income group of ₹ 25,000 to ₹ 50,000. About 24.7 per cent (see Table 8) of respondents working under master weavers are in the income range between ₹ 50,000 and ₹ 75,000 and the same trend could also be noticed among the weavers under cooperative societies. A close look at the sample households shows that 53.7 per cent of the respondents fall under the income group of ₹ 25,000 to ₹ 50,000 per

**Table 8: Distribution of Handloom Weaver Households by Annual Income**

Range of Income	Category of Weavers				Total
		Independent Weavers	Weavers under MWs	Weavers under Cooperative Societies	
Below ₹ 25,000	Count	22	107	13	142
	Row %	15.5%	75.4%	9.2%	100.0%
	Column %	32.4%	23.6%	12.1%	22.6%
₹ 25,001 to 50,000	Count	41	226	71	338
	Row %	12.1%	66.9%	21.0%	100.0%
	Column %	60.3%	49.8%	66.4%	53.7%
₹ 50,001 to 75,000	Count	1	112	23	136
	Row %	.7%	82.4%	16.9%	100.0%
	Column %	1.5%	24.7%	21.5%	21.6%
₹ 75,001 to 1,00,000	Count	4	6	0	10
	Row %	40.0%	60.0%	.0%	100.0%
	Column %	5.9%	1.3%	.0%	1.6%
Above ₹ 1,00,000	Count	0	3	0	3
	Row %	.0%	100.0%	.0%	100.0%
	Column %	.0%	.7%	.0%	.5%
Total	Count	68	454	107	629
	Row %	10.8%	72.2%	17.0%	100.0%
	Column %	100.0%	100.0%	100.0%	100.0%

Note: Pearson Chi-Square value: 38.934, df: 8, Level of Significance: 0.000\*\*

annum. No weaver under cooperative societies is getting income above ₹ 75,000 per annum. From the chi-square results, it is clear that there is significant relationship between annual income and weavers.

**Number of Working Days :** The number of working days available to the weavers in a month has been examined in terms of their income. It is found that majority of the weavers (90 per cent) got work for 21-30 days in a month. The annual income of the respondents who are working for more than 20 days in a month ranged from ₹ 25,000 to ₹ 75,000. The independent weavers and weavers working for master weavers have more number of working days, since they are provided with raw materials

regularly and their income is also considerably high. It can be also stated that the wage rates under master weavers are higher than in cooperative societies. This indicates that the weavers under cooperatives have to work for more days/hours than weavers working for master weavers for getting the same level of income.

**Number of Looms Owned by the Weavers:** The economic status of the weavers is also measured with the help of number of looms possessed. According to the Third National Handloom Census (2010), nearly 33 per cent of the handloom weaver households do not possess any loom. Hence, these households are engaged as hired workers in weaving activities



and their members have to go to other locations in search of weaving activity. The finding of the Third Handloom Census is that comparatively a high proportion of the loom-less households live in urban areas of India. In the present study also, 32.8 per cent of the respondents do not own any loom. Those who own single loom constituted 57.4 per cent.

Most of the weavers (17.6 per cent) with two looms are the independent weavers. Among the 68 independent weavers, 82.4 per cent of the weavers have only one loom and 17.6 per cent of weavers possess two looms. Of the 454 respondents working for master weavers, 60.8 per cent of them possess only one loom, 9.3 per cent possess two looms and 30 per cent do not possess any loom; hence, they are usually provided with looms by the master weavers in their sheds. Of the 107 respondents who come under cooperative weaving, 27.1 per cent of the respondents possess only one loom and 7.5 per cent of the respondents have two looms and even among

them 65.4 per cent of the respondents do not own any loom. They are conducting weaving activity on the looms provided by their respective cooperative societies.

**Type of Looms Employed :** Loom is the basic equipment employed for carrying out weaving activity. The economic implication of the loom is that the earning capacity varies depending on the type of loom employed. Also that not all types of looms are suitable for specific varieties of cloth production. Various types of looms employed are : Pit looms, Frame looms, Pedal looms, Loin looms and Semi-automatic looms.

According to the Third National Handloom Census (2010), of the total number (23.77 lakh) of looms, 58 per cent are the frame looms, 26 per cent are the pit looms, 13 per cent are the loin looms and the pedal looms and other kinds of looms constituted 1 and 2 per cent, respectively. Further, the pit looms are classified as throw-shuttle pit looms and fly-shuttle pit looms. The semi-automatic pedal looms are mainly found in Tamil Nadu, while loin looms are

**Table 9 : Distribution of Handloom Weaver Households by Type of Looms**

Type of loom		Category of Weavers			Total
		Independent Weavers	Weavers under MWS	Weavers under Cooperative Societies	
Throw-shuttle pit looms	Count	68	451	74	593
	Row %	11.5%	76.1%	12.5%	100.0%
	Column %	100.0%	99.3%	69.2%	94.3%
Frame looms	Count	0	0	33	33
	Row %	.0%	.0%	100.0%	100.0%
	Column %	.0%	.0%	30.8%	5.2%
Semi-automatic looms	Count	0	3	0	3
	Row %	.0%	100.0%	.0%	100.0%
	Column %	.0%	.7%	.0%	.5%
Total	Count	68	454	107	629
	Row %	10.8%	72.2%	17.0%	100.0%
	Column %	100.0%	100.0%	100.0%	100.0%

Note: Pearson Chi-Square value: 170.778, df: 4, Level of Significance: 0.000\*\*

found only in the North-Eastern States. The handloom industry in Andhra Pradesh exhibits all the traditional characteristics. In terms of technology, 94 per cent of the looms in the State are pit looms and frame looms account for about 4 per cent. Pedal and other looms represent only 2 per cent.

Among the sample units, only one type of loom is found, i.e. fly-shuttle pit-loom. The number of fly-shuttle looms was found to be predominant. The independent weavers and weavers under master weavers are using fly-shuttle pit looms to weave polyester cloth, sarees and dress materials, whereas 30.8 per cent of the weavers working for cooperative societies are using frame looms to weave bed-sheets and towels (see Table 9). From the chi-square results, it is clear that there is significant relationship between type of looms and weavers.

It can be concluded that the independent weavers and weavers working under the control of either master weaver or the society were using only these fly-shuttle pit looms, though some weavers working under society were using frame looms; because weaving can be done more rapidly and convenient for producing wide variety of designed fabric and increase the rate of productivity.

**Type of Cloth Production:** According to the Third National Handloom Census (2010), the major fabrics produced on household looms are, the '*gamancha*' (thin cotton towel) (40.4 per cent) and the '*mekhla - chadari*' (38.5 per cent) which is a traditional Assamese dress. The State of Andhra Pradesh is also a saree producing State, where nearly 44.16 per cent of handloom households are engaged in saree production. Cotton is the yarn that is the basis of most handloom fabrics. Generally, a weaver can weave any item of cloth like sarees, dhotis, lungies, handkerchiefs and others. But most of the weavers have specialised and confined their activity to only one or two varieties depending upon consumer preferences and demand

existing in the market or due to instructions of master weavers and cooperative societies.

Of the 629 respondents, 63 per cent of them are engaged in the production of sarees followed by dress materials (26 per cent) and shirting (5 per cent). Sarees are mainly produced by the weavers working for master weavers followed by independent weavers. The weavers working for master weavers and cooperative societies are the main producers of fabrics of dress materials and shirting. Dhotis are mostly woven by the weavers working for cooperative societies.

The sample weavers produce different fabrics like sarees, dhotis, lungies, dress materials and shirting cloth by using different counts of cotton yarn, viz. 40s, 60s, 80s and 100s. The *sada* sarees with less zari and the *petu* sarees with zari borders and intricate designs are produced. In case of dress materials, there are two types of fabrics produced, with general boarder and Nizam boarder, using gold and silver coated zari. The handloom centres of Mangalagiri, Repalle, Peteru, Bhattiprolu and Ponnuru produce very distinctive fabrics like Nizam boarder dress materials and *petu* sarees, for which there has been a great demand at the all India level.

**Type of Dwelling Unit:** Housing is one of the basic needs of human beings, which constitutes the protective base for any individual and his family. The housing requirement will be more in case of weaving community. The weaving activity is usually carried out at their residence along with assistance of his/her family members. Further, tools needed for weaving also occupy a significant portion of the house. According to the Third National Handloom Census (2010), vast majority of the handloom households i.e. 85 per cent live in semi-pucca houses and only 15 per cent of the handloom households have pucca houses.

The present study presents a different picture altogether. As per the information collected through the survey, of the 629

respondents, 35.6 per cent are living in thatched houses, 21.6 per cent are living in tiled houses, 22.4 per cent are only living in pucca houses and the rest of 20.3 per cent of the respondents are living in RCC houses (see Table 10). In case of independent weavers, most of the respondents i.e. 55.9 per cent are living in pucca houses. 46.3 per cent of weavers under master

weavers live in thatched houses, whereas 44.5 per cent of the weavers under societies have RCC houses.

Independent weavers and weavers with cooperative societies are having better housing facilities than the weavers under master weavers. The Government of Andhra Pradesh is implementing various schemes for providing

**Table 10: Distribution of Handloom Weaver Households by Type of Dwelling Unit**

Type of Dwelling Unit		Category of Weavers			Total
		Independent Weavers	Weavers under MWs	Weavers under Cooperative Societies	
Thatched	Count	3	210	11	224
	Row %	1.3%	93.8%	4.9%	100.0%
	Column %	4.4%	46.3%	10.3%	35.6%
Tiled	Count	19	94	23	136
	Row %	14.0%	69.1%	16.9%	100.0%
	Column %	27.9%	20.7%	21.5%	21.6%
Pucca	Count	38	78	25	141
	Row %	27.0%	55.3%	17.7%	100.0%
	Column %	55.9%	17.2%	23.4%	22.4%
RCC	Count	8	72	48	128
	Row %	6.3%	56.3%	37.5%	100.0%
	Column %	11.8%	15.9%	44.9%	20.3%
Total	Count	68	454	107	629
	Row %	10.8%	72.2%	17.0%	100.0%
	Column %	100.0%	100.0%	100.0%	100.0%

Note: Pearson Chi-Square value: 131.862, df: 6, Level of Significance: 0.000\*\*

housing facilities to the persons below poverty line. The Government with the assistance of the Government of India and also upon its own initiative is constructing small RCC houses with one/two rooms in a plinth area of about 60 to 80 yards and allotting them to the weavers. An attempt is also made to find out the ownership of the dwelling unit. From the chi-square results,

it is clear that there is significant relationship between type of dwelling unit and weavers.

As per the Third National Handloom Census, about 91 per cent of the dwelling units are owned by the handloom households and only 5 per cent of the units are rented. Of the 629 sample respondents, 56 per cent of them have their own houses and remaining 44 per

cent of do not have own houses, hence they are living in rented houses.

The rent paid by the respondents ranged from ₹ 250 to ₹ 500 per month and it is mainly based on the type of dwelling unit. In terms of their earnings, almost 20 per cent of respondent's income is paid for accommodation and the remaining is being spent on food and other items. One thing to be noted here is that the Government of Andhra Pradesh in association with the Government of India has taken up in a big scale the provision of housing facility to weaker sections. Under these schemes, dwelling units are being provided to a majority. Depending upon their income level, the percentage of contribution which the beneficiary has to pay varies. Of the 629 respondents, 99 (15 per cent) have secured houses under House-cum-Workshed scheme.

Thus, owning a house cannot be considered an indicator of sound economic status of the weavers. An attempt has been made to review the housing and environmental

situation prevailing among the respondents in the study area.

About 48.8 per cent of the weaver households reported that they have only two rooms in their houses. Nearly 10.2 per cent of the households surveyed possess houses having three rooms. Single room house is owned by nearly 37.2 per cent of the families. Among the different categories of weavers, the weavers under cooperatives have better housing conditions in terms of number of rooms.

**Category of Assets Owned by the Sample Weavers:** Type of assets owned by the sample weavers is regarded as an indicator of the economic status. The respondents were requested to declare different categories of assets owned by them such as dwelling units, number of looms, consumer durables and other appliances. Responses pertaining to dwelling units and number of looms were discussed separately.

All the weavers possessed both radios and bicycles. Fifty six per cent of the respondents

**Table 11: Details of Average Expenditure Pattern of Selected Handloom Weaver Households**

Item of Expenditure	Category of Weavers			
	Independent Weavers	Weavers under MWs	Weavers under Cooperative Societies	Total
1. Food	983 (54)	854 (52)	996 (57)	944 (55)
2. Clothing	182 (10)	148 (9)	163 (9)	164 (9)
3. Children's Education	201 (11)	129 (8)	185 (10)	172 (10)
4. Health	146 (8)	105 (7)	129 (7)	127 (7)
5. Rent	55 (3)	135 (8)	68 (4)	86 (5)
6. Interest	92 (5)	83 (5)	75 (5)	83 (5)
7. Electricity and Telephone	73 (4)	66 (4)	54 (3)	64 (3)
8. Other Expenses (incl. personal expenses)	87 (5)	111 (7)	77 (5)	92 (6)
9. Total Monthly Expenditure	1819(100)	1631(100)	1747 (100)	1732(100)
10. Average Monthly Income	2065	1752	1934	1917
11. Surplus(+)/Deficit (-)	+ 246	+121	+187	+185

Note: Figures in parentheses are percentage to total.

owned television sets and 20 per cent of the weavers have refrigerators, whereas the possession of other home appliances like air cooler or fan and mixi or grinder constituted 25 and 34 per cent, respectively. About 44 per cent of the respondents have motor cycle. It is evident from the data that the sample weavers possessed very few assets that are worth mentioning.

**Expenditure Pattern:** With a view to finding out the standard of living, information pertaining to the monthly household expenditure on important items was obtained. The expenditure pattern of the respondents on food, clothing, children's education, health, rent, interest paid on borrowings, electricity and telephone facilities and other expenses per month are presented in Table 11.

Of the total income, each household is spending about 55 per cent on food, 10 per cent on children's education, 9 per cent on clothing, 7 per cent on health care, 6 per cent on other expenses, and 5 per cent of expenditure on rent and as well as towards interest on borrowings. Regardless of the type of households, half of their income is spent on food. It is very interesting to note that the cloth producer (weaver) himself buys cloth from others for his domestic needs. This is mainly due to the fact that certain varieties required for self and family members are not produced by them.

A deeper look into the Table 11 reveals that the independent weavers have an aspiration to employ their children in public or private sector establishments. Therefore, the expenditure incurred on children's education by the independent weavers is more than that of other categories of weavers. Unlike the general public, the expenditure of weavers on health care is a regular phenomenon due to the strain caused by constant sitting into pit at the time of work and their poor economic conditions do not allow them to take proper health care facilities. As a result, about 90 per cent of the selected weavers are suffering from professional health problems like asthma, TB, poor eye sight, hernia and anemia.

The expenditure on rent and other expenses incurred by the weavers working for master weavers is more than that of other categories of weavers as most of the weaver households (44 per cent) are living in rented houses and the weavers generally are habituated to drinking liquor and smoking.

A comparison between income and expenditure of different types of weaver households shows that the independent weavers and weavers working for cooperatives are able to save some income than the weavers working for master weavers. Chit Funds and Post Office were the only institutions with which the respondents made their savings. All categories of weaver households are spending equal percentage of amounts on interest and electricity and telephone expenses.

#### **Indebtedness and Purpose for Taking Loans :**

Indebtedness is one of the biggest and most serious problems of Indian economy. It means an obligation to pay money to another party. In India, poor farmers, agricultural labour, construction labour, weavers, allied workers, etc., are unable to repay a loan and it leads to the problem of indebtedness.

Turning our attention to the sample weavers, 84 per cent of them have some borrowings and it is only in case of 16 per cent that there are no borrowings. The amount of borrowings varied from ₹ 5,000 to ₹ 10,000. About 57.6 per cent of the respondents have borrowed very small amounts of less than ₹ 5,000. Still the repayment of even this small amount is becoming very difficult for the select weavers.

An attempt has been made to analyse the various sources of credit available to the weavers in the study. It is very interesting that the independent weavers, apart from their own funds, are mainly borrowing funds for productive purposes such as acquisition of loom, construction and maintenance of loom and sheds for weaving and other allied activities. The

weavers working for master weavers and cooperatives are taking loans for the purposes of household expenses, viz. children's education, children's marriage/ family expenses, repayment of old debts, acquiring of assets etc.

It is evident that among the weaver households, 322 of the respondents (51.2 per

cent) have availed of credit from master weavers, since they have been working under master weavers and the finance provided by the master weavers is both cheaper and easier (see Table 12). The borrowings from the moneylenders accounted for 24.3 per cent and 5.1 per cent of the respondents received credit from their friends or relatives.

**Table 12: Details of Sources of Credit of the Handloom Weaver Households**

Sources of Debt		Category of Weavers			Total
		Independent Weavers	Weavers under MWs	Weavers under Cooperative Societies	
Master Weavers	Count	0	322	0	322
	Row %	.0%	100.0%	.0%	100.0%
	Column %	.0%	70.9%	.0%	51.2%
Moneylenders	Count	46	62	45	153
	Row %	30.1%	40.5%	29.4%	100.0%
	Column %	67.6%	13.7%	42.1%	24.3%
Friends / Relatives	Count	18	6	8	32
	Row %	56.3%	18.8%	25.0%	100.0%
	Column %	26.5%	1.3%	7.5%	5.1%
Institutions (Cooperative Society)	Count	0	0	11	11
	Row %	.0%	.0%	100.0%	100.0%
	Column %	.0%	.0%	10.3%	1.7%
Banks, etc.	Count	4	0	20	24
	Row %	16.7%	.0%	83.3%	100.0%
	Column %	5.9%	.0%	18.7%	3.8%
Non-borrowing Members	Count	0	64	23	87
	Row %	.0%	73.6%	26.4%	100.0%
	Column %	.0%	14.1%	21.5%	13.8%
Total	Count	68	454	107	629
	Row %	10.8%	72.2%	17.0%	100.0%
	Column %	100.0%	100.0%	100.0%	100.0%

Note: Pearson Chi-Square value: 434.409, df: 10, Level of Significance: 0.000\*\*



Institutional finance received by weavers constitutes only 5.9 per cent. Because of that, the independent weavers and weavers under cooperatives mainly depended on moneylenders for financial assistance. From the chi-square results, it is clear that there is significant relationship between sources of debt and weavers.

The commercial or cooperative banks and other institutions are mainly extending their financial support to the weavers who are working for cooperative societies under various Government schemes like Self-Help Groups, Development of Clusters, *Pavala Vaddi*, etc. Majority of the handloom weavers opined that the institutional finance is the best source of credit. Still some of the weavers are under the opinion that the master weavers' credit is the best. This shows that they are not in a position to recognise the exploitative character of credit given by master weavers and dynamic nature of institutional finance.

Rates of interest in the informal credit market tend to be very high compared to the formal market. It has been the experience that the moneylenders charge high interest rates ranging from 24 to 48 per cent, because they can take advantage of their monopoly position in the informal market segment. In respect of financial support offered by the formal institutions like commercial banks or cooperative banks, the interest rates only vary between 3 and 12 per cent.

### Conclusions

Weaving has proved to be a non-starter. The preference level for the profession has turned out to be zero among youth. The presence of women population in weaving is also significant. As a matter of fact, the nature of the profession is such that it engages every member of the family, right from the childhood. Like many other occupations, weaving appeared to be a legacy among Backward Classes, dominated by few communities, viz. Padmasali, Devanga, Puttusali, etc.

Literacy is one of the important social variables having influence on the socio – economic development of individuals. Among those having education, majority of them have reached up to primary level only. It is unfortunate to note that of the 629 respondents, the children of 444 respondents are not going to any school. The percentage of children who completed at least school final stood at only 8.9 and those that entered the portals of University are about 5.7 per cent.

Migration is a common phenomenon in handloom sector. A majority of sample respondents are also those who migrated from various other places. It is present across all the types of weavers. Handloom is also considered as one of the activities having potential danger leading to certain occupational diseases. There is widespread prevalence of many such diseases among respondents. It is also unfortunate to note that the children of 68 per cent respondents are suffering from the problems of malnourishment and stunting.

About 83 per cent of the respondents have closets with adequate sanitation. The other respondents are forced to utilise the services of group facility or use open defecation. Eighty three per cent of the surveyed weaver households have been using firewood, crop residue and cow dung as the cooking fuel. The rest of the households are using LPG for cooking. It is unfortunate that majority (67 per cent) of them are only able to take meal twice a day. The quality of food also is an issue of concern, because many of them are eating rice provided by the Government under kg. for ₹ 1 scheme.

The present study reveals the fact that majority of the respondents prefer gold work and Government service as an occupation for their children. The income of the weaver households determines the standard of living and financial status. In the study area, all the weavers are dependent on weaving as their lone activity for their livelihood. Majority (77 per cent)



of the respondents are earning wages below ₹ 50,000 per annum.

Housing is one of the basic needs of human beings and it constitutes the protective base for any individual and his family. As per the information collected through the survey, of the 629 respondents, 35.6 per cent of the respondents are living in thatched houses, 21.6 per cent are living in tiled houses, 22.4 per cent are living in pucca houses and the rest of 20.3 per cent are living in RCC houses. The category of assets owned by the sample weavers can be said to be an indicator of the economic status. The data regarding the assets, like T.V., radio, bicycle, moped, refrigerator, mixi, grinder and fan show that all the sample weavers possessed both radios and bicycles. Regardless of the type of

households, half of their income is spent on food. The independent weavers are mainly spending their income on children's education after food, because they have an aspiration to place their children in public/private sector for employment. Among the different types of weaver households, the independent weavers and weavers working for cooperatives are able to save some income than the weavers working for master weavers. Chit Funds and Post Office were the only institutions with which the respondents made their savings. It is found that 51.2 per cent of the respondents have availed of loan from master weavers, since they have been working for master weavers, and the moneylenders accounted for 24.3 per cent and 5.1 per cent of the respondents are borrowing from their friends or relatives.

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## TRIBAL AND LAND ALIENATION IN ANDHRA PRADESH

Palla Trinadha Rao\*

### ABSTRACT

*This paper presents the problem of tribal land alienation in the Scheduled Areas of Andhra Pradesh. The paper examines the causative factors for tribal land alienation and its varied dimensions. Historically, tribals have had a rich cultural linkage with the natural resources. The cultural landed relationship, however, was altered or even eroded on the arrival of the non-tribal settlers from plain areas. Their entire life process was centered and built upon two major means of production, i.e., the forest and the land, both land and forest lands slipping from their control due to multiple interventions. Historical evidences reveal the uneven structural changes that have taken place from time to time due to the commoditisation of the tribal economy in which land plays a critical and predominant role. This paper argues that the laws which have been promulgated to protect the tribal land interests are not effectively implemented resulting in external appropriation of tribal lands in the Scheduled Areas.*

### Introduction

Scheduled Tribes (STs) account for 8.6 per cent of India's population. Thirty five tribal communities are notified in Andhra Pradesh as STs and their population is about 59.18 lakhs as per the 2011 Census reports. They constitute 7 per cent of the total population of the State. The Tribal Sub-plan area extends over 31,485.34 sq. kms. in the districts of Srikakulam, Vizianagaram, Warangal, Visakhapatnam, East and West Godavari, Khammam, Adilabad and Mahaboobnagar districts constituting the traditional habitat of nearly 30 tribal groups. The tribal groups of Yerukula, Yanadi and Sugali or Lambada live mainly in the plain areas outside the Scheduled Areas.

The question of land tenure has been a pivotal and sensitive political issue in the context of Scheduled Areas<sup>1</sup> of Andhra Pradesh.

Agriculture continues to be the main source of livelihood for majority of the tribals. However, large tracts of tribal land are concentrated in the hands of predominantly elite non-tribal sections of society. Consequently, tribals are marginalised and deprived of their traditional land rights. The alien systems of land tenure introduced during colonial times have had far reaching adverse effects depriving tribals of their dignity and their access to land. Thus, the alienation and restoration of adivasi land and land rights has been one of the most complex and sensitive issues in Andhra Pradesh.

Over the years, the adivasis have witnessed continued dispossession of both individual and community control over their resources. The continued alienation has not only intensified their poverty but also seriously threatened their identity in their own homeland.

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Issue of tribal land rights has not yet received adequate attention due to multi-dimensional nature. It seeks to understand the political, administrative and legal dimensions of the land alienation problem in different land tenure systems.

### Methodology

This research study paper is to understand historically the causative factors for tribal land alienation, and analyse the administrative, politico and legal dimensions of tribal land deprivation and rights issue. The paper seeks to find out ways to minimise land conflicts between tribal and non-tribals and tribals and the State in the tribal areas.

Denial of the land rights to tribals is essentially due to the introduction of an alien legal system which marginalised tribes and led to the uneasy relations among the various social groups living in the Scheduled Areas. And present policy, legal and administrative measures perpetuate land alienation and denial of land rights among the tribal people.

The method of the study was based mainly on both primary and secondary sources. Primary sources included examination of court judgments and land records while secondary sources included Governor Administration reports from Commissioner of Tribal Welfare, and Tribal Culture and Training Research Institute (TCRTI), Hyderabad, libraries of Centre for Economic and Social Studies (CESS), University libraries etc.

### Approach to Understand "Alienation"

The 'alienation' of humankind in a fundamental sense refers to the loss of control. When Marx analysed 'alienation' in his *Economic and Philosophic Manuscripts of 1844*, he indicated four principal aspects - the alienation of human beings from nature, their own productive space, as a member of the human species and from each other<sup>2</sup>. Alienation, in the Marxist conception of man in the capitalist

society, is the process that facilitates the exploitation of many by a few<sup>3</sup>.

Seen from the tribal point of view, tribals may be thought of as an alienated group. They suffer from several forms of alienation, since, 'in a system of cumulative inequalities, privileges, property and power are combined in certain individuals while the socially underprivileged are economically and politically deprived'.<sup>4</sup> Alienation of land itself, however, constitutes just a small component of this entire process of alienation, albeit an essential one. It is therefore, imperative to view this single phenomenon, within the holistic context of tribal existence and tribal cultural ethos<sup>5</sup>.

The 'alienation' of tribals from their traditional habitat is caused due to the policies of the State. The process of induction of non-tribal population into these Scheduled Areas was expected to bring progressive assimilation of the local tribals into the new socio-economic order of the immigrants, while raising their income, productivity and standard of living. 'However, often the outcome has been contrary to the above expectations, reducing the share of tribals in the gross regional product, substituting one institutional exploitation by another, uprooting them from their native land and reducing them to the status of aliens on their own soil.'<sup>6</sup>

In the early years of the 20<sup>th</sup> century, many tribal communities lived, by and large, freely, in pre-capitalistic socio-economic formations<sup>7</sup>. This is because the community ownership of land in India was not commoditised prior to the British rule. Tribals in their pre-capitalistic socio-economic formations had not regarded land as a commodity as it was freely available to them for cultivation. Thus, the concept of alienation with regard to the problem of land alienation in tribal areas can be understood in relation to the concept of private property relations, commoditisation of the

means of production as land, labour and capital and the very process of penetration of the private sphere by the State capital. Hence, the historical and theoretical connotations of the concept of alienation as propounded by Marx hold relevance in the case of India as far as the tribal communities and their land problems are concerned.<sup>8</sup>

### **Tribal Identity and Land Rights**

Tribals share a symbiotic relationship with natural resources. Agronomic practices and their relationship with land are based on the nature-man-spirit complex and sustenance of the economy which is unique to tribal cultures in many parts of the country.<sup>9</sup> Traditional communal land tenure systems continue to exist even where formal land tenure systems emphasise on individual property rights.<sup>10</sup> In the predominantly agricultural societies, the importance of land cannot be over-emphasised. It is a symbol of security, the main source of income and wealth, as well as of social, political and economic power. 'The land tenure system reflects social class structure and class relations, as they represent an array of legal, contractual or customary arrangements whereby people engaged in cultivation gain access to productive opportunities linked with land and thereby income.'<sup>11</sup>

The British legal concept of individual private property destroyed the tradition of collective ownership and sharpened tensions within the Adivasi society while eroding their relationship with nature. These same tendencies are visible today in various developmental policies that are being implemented in the country in the post-Independence era. It is the primary cause of conflicts between the tribals and the larger non-tribal society. The entire worldview of Adivasis is situated around their land. They cannot imagine their physical existence apart from it<sup>12</sup> and therefore, eviction from their land or encroachments by outsiders has resulted in resistance and even armed

struggles in Andhra Pradesh ever since the British era. There have been and continue to be, several rebellions across the country. Prominent among them in Andhra Pradesh are Alluri Seetarama Raju's armed resistance in Visakhapatnam Agency and the Gond Rebellion<sup>13</sup> led by Komram Bheem in Adilabad Agency in Nizam State. The Rampa Rebellion (1922-23) from East Godavari to Vizianagaram under Alluri Seetarama Raju was in protest of the Madras Forest Act of 1882 which placed restrictions on the free movement of tribals in the forest areas and prevented them from engaging in their traditional practice of Podu or slash and burn cultivation.

Post-Independence, tribal unrest has been primarily on issues relating to restrictions on *Podu* cultivation and encroachment of non-tribals in large numbers into Agency areas (tribal areas), posing threat to the existence and identity of tribal society.

### **Non-tribals and the State in Scheduled Areas**

Land of the tribal communities in this region has been taken away by the non-tribals who have penetrated the region for economic gains. The penetration of non-tribals was aimed at gaining access to forest and land to exploit them as economic resources, mainly for the market, thereby undermining the traditional subsistence economy and society of the tribals.<sup>14</sup> This penetration was engineered by the British to serve their own colonial interest. Otherwise, there was no reason as to why a mass of non-tribal people should suddenly begin encroaching upon tribal land, something they had not done in the past. The newly imposed British land system was radically different from that prevalent among many tribal groups.<sup>15</sup>

The colonial period witnessed a progressive and aggressive monetisation of the economy of the tribal region for revenue generation, making dependence on the forest ever more precarious and thus destroying tribal

self-reliance. Moreover, as the forests were taken over by government agencies and commercial interests, the tribals were forced more and more to live by farming the land, where they were progressively pushed into bonded labour by exploitative landlords, moneylenders, government officials and other outsiders. The creation of private property rights over land was an equally disastrous break with tribal tradition in which land was always held by the community even when it was assigned to private use.<sup>16</sup>

The first phase of migration of non-tribal peasants from the plains occurred around 1820 when a number of *zamindaris*, either whole or in part, came into the auction market and the highest bidder got the rights of ownership. This auction process was initiated to raise revenue. But it paved way for the non-tribals to infiltrate tribal areas. The administration made further steady inroads for the control of the productive resources of the tribals by passing forest laws in 1882 and *abkari* laws in 1864. These laws were meant to regulate the forest usage and consumption of toddy or alcohol.<sup>17</sup> The Godavari River facilitated the movement of non-tribals from the widely populated plain areas of East and West Godavari to the sparsely populated tribal areas, by country craft, mechanised boats and launches.<sup>18</sup> Towards the end of the nineteenth century, the British began leasing out the rights to extract bamboo and timber from the forests on both sides of the river to the non-tribal merchants of Rajahmundry. When motor boats were introduced in the second decade of this century, a larger number of merchants and their agents moved into these settlements.<sup>19</sup>

The huge influx facilitated further opening up of tribal areas intensifying the demand for land for diverse purposes—housing, infrastructure, business and social utilities which further led to the dispossession of the tribals. For instance, if one travels by road through the long stretch from Bhadrachalam in the Khammam district of Andhra Pradesh to Raipur in

Chhattisgarh, a distance of about 550 kms and almost entirely a Fifth Schedule region where tribal land may not be sold or passed on to the non-tribal people, yet, one can see that most of the shops and land along the roadside are owned or occupied by non-tribals. This blatant encroachment upon tribal land is overlooked by a largely non-tribal government that accepts tribal people's displacement as a precondition for development.<sup>20</sup>

Yet, another form of land alienation is when the States promote development projects as hydroelectric power stations and mining and industries. These developmental activities do not confer any benefit on the tribals directly and render them landless.<sup>21</sup> The construction of irrigation dams and industrialisation are the major reasons for massive and irreversible deforestation and subsequent land loss of the tribal communities. In the last sixty years, in the new era of development, tribal communities have been displaced on a large scale. Displacement has taken place as an offshoot of the economic development by the State itself, and, in particular, its industrialisation and irrigation policy.<sup>22</sup> For instance, there are 18 major dams in Andhra Pradesh and six of the large ones alone have been responsible in displacing about half a million people. The proposed Indira Sagar Project (Polavaram) threatens involuntary displacement of 2.37 lakh people from 276 villages in the Scheduled Areas of Andhra Pradesh, 55 per cent of them being tribals. It will result in the submergence of 94,357 acres of land situated in the Scheduled Areas, of which 29,852 acres are *poramboke*. In addition to this, the Polavaram Project will submerge 3,223 hectares of forest.<sup>23</sup>

Tribals suffer from physical displacement in several parts of the country due to development projects initiated by the



government.<sup>24</sup> Displacement among the tribals is on a massive scale and often with adverse implications on the communities, mainly due to laws that do not recognise the communal and customary rights of tribal people over their territories. Resettlement literature is replete with case studies on development projects that ignore the customary rights of the tribal people and treat them as illegal occupants of government land. Such an approach invariably leads to the impoverishment of once well settled communities; precisely the opposite of what development promises.<sup>25</sup>

### Loss of Tribal Land During Land Survey Operations

The process of land alienation traces back from the management of land administration by the proprietors of different land tenures in the Agency Tracts. The process of decision making at the land tenure institutions for the fiscal revenue purpose during pre and post-Independent era has become a death note on the survival of tribals, as the policy invited non-tribals to gain access to land, affecting the local tribals' land use and tenurial relationships. The policy adopted by the rulers encouraged the non-tribals to immigrate in large numbers and settle down in the Scheduled Areas. The British Government permitted *Zamindars* and the *Mukasadors* to take hold of the land administration which led to the slipping of land from the hold of the tribes to the non-tribals. The tribal chieftains of muttas adopted diverse methods to transfer land to non-tribals after which the tribals were deprived of their land.

After abolition of intermediary land tenure systems like *Mutta*, *Mukasa* and *Zamindari* Systems, survey and settlement operations work was undertaken in the Scheduled Areas of Srikakulam, Vizianagaram, Visakhapatnam, East Godavari, West Godavari, Nugur and Bhadrachalam taluks of Khammam district of the Andhra region.

The survey and settlement operations are covered by Andhra Pradesh Regulations 1/69, 2/69 and 2/70, to settle the land occupations of both the tribals and non-tribals. Three tenures, viz., *Malguzari*, *Muttadari* and estates prevailing in these areas were converted into *ryotwari*. The intermediaries *Mahaldar*, *Muttadar* and *Zamindar* between the government and ryots were abolished.

All the Settlement Regulations referred above in fact dilute the letter and spirit of Land Transfer Regulations 1 of 70 by enabling non-tribals to claim *patta* over land situated in the Scheduled Areas, in effect negating the presumption that unless and until proved contrary, the land in occupation by non-tribals would be deemed to have come from the tribals through a transfer.

The Expert Group on Prevention of Alienation of Tribal Land and its Restoration, Ministry of Rural Development, Government of India, headed by the Planning Commission Member, B.N. Yugandhar has also cast a serious doubt on the settlement *patta* throughout Schedule Five areas. Similarly, the denial of *pattas* to the tribals is the other side of the coin of Settlement *pattas*, which calls for a scrutiny of the rejection orders.<sup>26</sup>

As per the 1990 Report of Neerabh K Prasad, an IAS Officer, entitled 'Protection of Tribal Land' in the Settlement Regulations 2/69 and 2/70, it has been stipulated that the non-tribals had to prove eight years of continuous possession of land prior to 1969 and 1970 and an absence of any prohibited transfer as per Land Transfer Regulations, to be eligible for a grant of a *patta*. Further, it states that norms were openly flouted by the non-tribals. False receipts were created by the *mutta* clerks or estates clerks showing payment of taxes. The tribals were driven out by creating terror through organising police raids, thus making it convenient for the non-tribals to get the tribal land measured in their names. In a specific case at Nelakota village

of East Godavari district, the village abuts a huge inland tank by the name of Ramavarapu Ava and gets irrigation from the same. The non-tribal residents of the adjacent villages, especially Ramachandrapuram, dubbed the tribals as naxalites (post-1969 Srikakulam Naxalite Movement period) and organised police raids. The tribals had to flee from the hill tops and stayed there for more than a month. This period was used by the non-tribals to get the land surveyed and settled in their favour. Land with rich forest growth was taken as *patta* even though tribals were never in occupation of the land; obviously with an eye on the rich timber. The cases of Jangalthota and Chintalpudi of Y. Ramavaram Mandals of East Godavari are glaring examples of these. The tribal claims were never properly examined and were largely unaware of the settlement operations. By the time the tribals realised that their land was being granted as *pattas* to the non-tribals, it was too late for an appeal. As a result of these dubious measures, the landholdings of the non-tribals jumped from 9,805 hectares before 1969 to 16,789 hectares by 1976 in the Scheduled Area of East Godavari district.<sup>27</sup> The non-tribals in three Agency mandals of West Godavari district hold *pattas* for over 53,719 acres, while tribals have *pattas* for over 37,042 acres only in the Scheduled Area as per the Minutes of the Cabinet Sub-Committee circulated on 24 July 1997:

Just before the abolition of the Estates, the land holders accelerated issuance of *pattas* in several cases even with regard to the wasteland in the estates by receiving paltry sums. So the Settlement Officer is directed to reopen all the *pattas* that were granted till now under the provisions of Ryotwari Settlement Regulations 2 of 1970, observed by Justice B.S.A. Swamy while dealing with a case in relation to land disputes in West Godavari District Agency Areas.<sup>28</sup>

In Bhadrachalam division in Khammam district, 8,297 non-tribals were granted *pattas*

for 29,554.16 hectares according to the Report of Secretary to Government (1992). Expressing concern over the grant of *ryotwari* settlement *pattas* to non-tribals in the Scheduled Areas during the survey period, the Secretary to Government, Govindarajan (1992) reports:

Two cases have come to the attention of the Government during the course of verification by special officer for survey of tribal land and assignment to tribals in Khammam district in the month of July 1990. In one case five non-tribals were granted *ryotwari patta* in respect of an extent of 30 acres of land while the tribals are in possession and enjoyment of the said land. In another case, non-tribals have obtained *ryotwari pattas* in respect of an extent of 101 acres whereas the tribals are in continuous occupation and enjoyment of the said land.

During 1996-1997 when land disputes erupted in tribal areas of West Godavari district, one of the major contentions of the tribals was that they should be given possession of land as per the 1902 Resettlement Register (RSR) and the non-tribals who were occupying land classified as tribal or government in the 1902 Resettlement Register should prove that they had got hold of the land in a legal manner. The Resettlement Register of 1902 is currently not even available with the offices of the Commissioner, Tribal Welfare or the district.<sup>29</sup> Thus, large scale manipulations during the Survey and Settlement period of 1970-76 led to grant of land entitlements of tribal land as settlement *pattas* in the name of non-tribals.

### Historical and Legal Perspective of Tribal Land Laws

The historical and legal perspective is that land in the Scheduled Areas once belonged to tribals. Until and unless the contrary is proved, the land in occupation by non-tribals shall be deemed to have come through a transfer from tribals. So the burden of proof lies on the non-tribals to legally prove that the land in their



possession had been with them even prior to the Andhra Pradesh Agency Tracts Land Transfer Act of 1917, which restricts land transfer between the tribals and the non-tribals. The tribals have customary boundaries to the village and land is a community asset rather than an individualised economic asset. The object of the Fifth Schedule and the Land Transfer Regulations is to preserve tribal autonomy and their culture, to help in their economic empowerment, to ensure social, economic and political justice for preservation of peace and good governance in the Scheduled Areas. The word 'regulate' in the allotment of land to members of STs in the Scheduled Area must be read as an endeavour to ensure regulation of the land only for and among the members of the STs in the Scheduled Area.<sup>30</sup>

In 1917, soon after a two-year long hit-and-run tribal insurgency in the Godavari Agency, the British enacted the first Agency Tract Interest and Land Transfer Act, to prohibit land transfers between hill tribes and non-tribals without prior permission from the District Collector. Subsequently, Land Transfer Regulations 1 of 59, as amended by 1 of 70, were made. Despite these being in force for long, 56 per cent of the cultivable land in the Scheduled Areas (about 8.7 lakh acres) is owned by the non-tribals<sup>31</sup>, while the extent of land restored to tribals under these enactments is only 9 per cent of this area (about 80,000 acres). And, if anybody can ever manage to estimate the extent of agricultural land that is supposedly owned by tribals but in reality is being held and cultivated by the non-tribals, then these statistics would reveal an even more unequal state of affairs.<sup>32</sup>

There is another important legislation in respect of lands in the Telangana area of the State. The Andhra Pradesh (Telangana Area) Tenancy and Agricultural Land Act of 1950 classifies all tenants into ordinary and protected tenants. The Act further stipulates that if the tenant personally cultivated the land continuously for a period of six years during a

stipulated period, he shall be deemed to be a protected tenant. As a protected tenant he reserves the right to purchase the land from the owner. This Act was also in force in the tribal areas of Telangana region. The non-tribals who gained access to land from tribals through clandestine and dubious methods were protected by the legislation. There was no law strictly prohibiting the transfer of land between tribals and non-tribals till 1963 in the Telangana region barring a revenue division Bhadrachalam in the Khammam district. The land reforms which were introduced by the State of Andhra Pradesh protecting the tenancy was made applicable to tribal areas without taking into cognizance the tribal interest.

The greater part of land alienation occurred after the 1940s. There are several loopholes in the existing Land Transfer Regulations 1 of 70. For instance, the law does not act retrospectively and thus cannot be applied to land transfer deals between the tribals and the non-tribals prior to the enforcement of the Act. Therefore, the exploitative relations in Agency areas still dominate the social structure. Hence, the problem of land alienation becomes part of the bigger problem of the existence of unequal class relations between the tribals and the non-tribals in the present day society.<sup>33</sup>

The *suo motu* power given to the government to proceed against non-tribals without waiting for a complaint from a tribal seems to be an ideal arrangement, but in the given administrative culture, it has perhaps been more of a boon to the non-tribals than to the tribals. In proceedings taken up *suo motu* by the government, the non-tribal faces only the government. The government does not take the trouble of finding out who among the local tribals may have a claim to the land. It does not publicise the enquiry in the village. The officer hearing the cases, designated as Special Deputy Collector, merely looks into the documents provided by the non-tribal, and if they appear reliable, he approves the right of the non-tribal over the land.<sup>34</sup>

Of 76,762 cases covering an extent of 3,39,699 acres of land, 74,973 cases covering an extent of 3,32,852 acres were disposed off by the SDC Courts in the State of Andhra Pradesh by the end of January 2010. The courts decided 36,512 cases covering an extent of 1,43,683 acres of land in favour of the tribals. However, the enforcement machinery set up under the Regulations could only restore 1,22,011 acres of land pertaining to 30,905 cases out of a total of 36,512. On the contrary, the non-tribals were able to secure orders in their favour in 38,461 cases and retained 1,89,169 acres of land in their possession.

Table shows that the success rate for land acquisition is 49 per cent in the case of tribals, and 51 per cent in the case of non-tribals. Tribals were able to regain land possession from non-tribals only to the extent of 43 per cent of the total extent of land, covered by cases disposed off, while the non-tribal could retain 57 per cent of the disputed land. Due to the failure of the implementing machinery in implementing the orders passed by the SDC Court in favour of the tribals, only 85 per cent of the total cases were disposed off in favour of the tribals, and only 85 per cent of land extent was physically handed over to them. This shows the failure of the administrative machinery in executing orders passed by the court in favour of tribals. The non-tribals continued to possess land even when the eviction orders were passed against them.

According to the Koneru Ranga Rao Land Committee Report, 'Every year more and more land is passing into the hands of non-tribals and if not checked with a very strong executive force, very soon the tribals may not have any land at all.'<sup>35</sup>

The Scheduled Areas is to ensure justice to tribals, their survival and livelihood. But as K. Balagopal pointed out:

'It is not enough if a disadvantaged class of people are endowed with legal rights. Legal instruments created for the benefit of the socially

privileged can be expected to find their way to implementation without anything else. This is not the case with legal rights enacted for the benefit of the disadvantaged.'<sup>36</sup>

Thus, the loss of private holdings by tribals, despite a number of laws being passed by both the pre-colonial as well as post-colonial state to check land alienation, has been a cause of concern. These laws had many shortcomings and were unable to check the transfer of land from tribals to non-tribals.<sup>37</sup> Even where legislation is designed to protect tribal land interests, such as restricting alienation of tribal land or ensuring that tribals receive the benefit of land tenure reforms, the results have been disappointing.<sup>38</sup>

### Extent of Tribal Land Dispossession

Dispossession of land for a variety of reasons is evident, including for mines, industries, hydro power, and irrigation projects resulting in both direct and indirect eviction of the tribal communities.<sup>39</sup> The decline in the percentage of cultivators among the ST households from 45 to 35.4 per cent during the period 1994-2005 indicates the loss of land and their increasing dependency on agricultural labour which increased from 37 to 43.7 per cent during the period 1994-2005. The percentage of population depending on agricultural labour increased only in the case of STs, while it has declined for the Scheduled Castes.<sup>40</sup> Even the existing landholdings of the marginalised have been alienated, in spite of score of laws in force for ensuring protection of the land rights of the marginalised, especially the Adivasis.<sup>41</sup>

Had history been otherwise, nearly 5 lakh tribal families living in the Scheduled villages of Andhra Pradesh would have presently together been the proud owners of 18,48,209.30 acres of land with an average household landholding of 3.69 acres. But instead, presently more than 48 per cent of this land is cultivated by the non-tribals. In some districts as Warangal, Khammam and Adilabad, more than 50 per cent of the land

Table 5: Outcome of Cases under LTR at SDC Courts as on 31 January 2010

S. District No.	Cases detected		Cases disposed		Cases decided in favour of STs		Cases decided in favour of non-STs		Land restored to tribals		Balance cases at the end of the month (col. 3-5 & 4-6)	
	No.	Extent (Acres)	No.	Extent (Acres)	No.	Extent (Acres)	No.	Extent (Acres)	No.	Extent (Acres)	No.	Extent (Acres)
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1. Srikakulam	462	1100	453	1024	296	538	157	486	250	522	9	76
2. Vizianagaram	1364	7544	1343	7501	955	5631	388	1870	850	5498	21	43
3. Visakhapatnam	5708	22731	5480	22087	4359	17721	1121	4366	3029	13944	228	644
4. East Godavari	8485	49637	8264	48768	3751	19667	4513	29101	3392	17685	221	869
5. West Godavari	11611	62121	11477	60820	2584	11082	8893	49738	2451	10081	134	1301
6. Khammam	33582	126713	33325	125834	15514	52192	17811	73642	12750	41662	257	879
7. Warangal	7289	15784	7052	15218	4865	8964	2187	6254	4865	8964	237	566
8. Adilabad	8245	54008	7564	51543	4175	27839	3389	23704	3305	23606	681	2465
9. Mahabubnagar	16	61	15	57	13	49	2	8	13	49	1	4
Total	76762	339699	74973	332852	36512	143683	38461	189169	30905	122011	1789	6847

Source: Office of the Commissioner of Tribal Welfare, Hyderabad, Admin. Report, Jan. 2010.

in the Scheduled villages is held by the non-tribals. The pernicious poverty of the tribals has led them to become victims of schemes of non-tribal moneylenders, thus resulting in indebtedness and consequent alienation of land. To check the land alienation, several Land Transfer Regulations, including 1 of 59 as amended by 1 of 70, were created prohibiting the transfer of land between tribals and non-tribals, and among the non-tribals since 1917. In spite of these restrictions, land alienation is still prevalent<sup>42</sup> amongst the Adivasis.

Thus, see the issue from any angle one thing is clear as stated that "several legislations have been passed since Independence but 'despite the legislation in force against alienation of land from tribals to non-tribals, a fair proportion of them have either been dispossessed of their land or have parted with their land due to some other reason.'<sup>43</sup>

### Analysis and Conclusion

To answer one of the major questions posed in the beginning, this study paper provides strong evidence to support the hypothesis that denial of the land rights of the tribals is essentially due to the introduction of an alien land administration which marginalised tribes in subsequent legal proceedings. At the root of the problem in the Schedule V areas lies the fact that there is an inherent lacuna in the state policy that tends to be biased against tribals and which in turn perpetuates land alienation.

It is evident from the study that the extent of land alienation prevalent in the Scheduled Areas of Andhra Pradesh is a cause for public concern. The process of land alienation has not stopped even after the promulgation of tribal protective land laws. The reports of Tribal Welfare Department corroborates a fact that more than 48 per cent of land is held by non-tribals in the Scheduled Areas. The outcome of legal process shows that non-tribals could succeed 51 per cent of the cases and retain the land covering an

extent of 57 per cent of the total disputed land. Thus, the legal remedies available to tribals are not adequately put in place to address the tribal land alienation issue. The special protection extended for tribal rights through various legislations since 1917 form part of the welfare measures of the State, with the support of main opposition parties without converting it into a reality. The study also discloses the enormity of the yawning gap between formulating the laws and their proper enforcement.

Secondly, the tribal land alienation was noticed during the survey and settlement operations. The enactment of Land Transfer Regulations 1 of 70 has been paralleled by the introduction of Survey and Settlement Regulations 1 of 69, 2 of 69 and 2 of 70 after abolition of intermediary land tenure proprietorship, to scuttle the tribal protective laws in a systematic attempt by the State. As described by Gunnar Myrdal in famous Asian Drama, (Asian Drama, 1969 pp, 66 and 277), the role of the state in the case of the land alienation problem, was that of a 'soft state', which is dominated by powerful non-tribal interests that exploit the power of the State or administrative mechanisms to serve their own interests, rather than the interests of the tribals. Policies decided on are often not enforced, if they are enacted at all, and in that the authorities even while framing the policies, are reluctant to place obligations on people on the forefront.

In fact, the abolition of intermediary proprietors of land tenures is proclaimed to end the feudalistic and capitalistic mode of control over the resources. However, the state intervention further reproduced a legitimate non-tribal landholding class in tribal areas. The provision of settlement of land to the non-tribal ryots, if they have been in their occupation for a period of 8 years prior to the notified date under various Settlement Regulations is a "proactive" provision. Even the ineligible non-tribal encroachers secured regularisation of land

occupation under these Settlement Regulations, which are otherwise illegal under the Land Transfer Regulations 1 of 70. The administrative report of IAS officer Neerabh Kumar Prasad proves a fact that non-tribals fraudulently obtained settlement pattas over the lands situated in the Scheduled Areas.

The weak enforcing machinery, non-transparency and lack of accountability in the process of administration in land justice through Special Courts, stand as evidence for the continual infringement of tribal protective land laws by the powerful sections of the non-tribal population, in collusion with the state institutions. Thus, the plural land tenure administration and alien legal framework to determine land ownership has excluded the customary rights of tribal communities and impinged upon their capabilities and entitlements. This has resulted in the marginalisation of tribals with regard to their land and natural resources.

The Supreme Court had occasion to explain the rationale and legislative purpose of the Land Transfer Regulations in *P. Rami Reddy Vs State of Andhra Pradesh* (AIR 1988 SC 1626). It was held that as land in tribal areas passed into the hands of the non-tribals from the tribals, the law cannot remain content with merely freezing such transfers but should aim at restoring as much as possible land to the tribals.

The legal framework and machinery confronted with perpetuation of non-tribal exodus and growing land alienation has failed to inspire confidence among the tribal communities that they can get back their alienated land through the legal process. The legal system in place is inappropriate for fair play of justice.

The competition between tribals and non-tribals in accessing land justice in the context of Land Transfer Regulations 1 of 70 is characterised as "a race between a handicapped one-legged person and an able bodied two legged person" by the Supreme Court of India<sup>44</sup>.

The tribal land alienation issue is further complicated by the State taking up of projects like Polavaram and displacing tribal communities from their living space. As a result of land alienation, the tribals have lost livelihood opportunities and their cultural linkage with the natural resources. Perhaps, the tribal belt has to experience more and more incursions of the non-tribals, industrial interests in future and lose its character specified under Fifth Schedule of the Constitution if there is no restriction to such ingressions.

In the light of the above, a land information infrastructure needs to support informed decision-making, not only within the government, but also in the community and for individuals. The task for planners can be particularly challenging as the existing legal framework does not support the tribals in getting back alienated land in the Scheduled Areas. Tribal land rights protection requires a rethinking on the part of the government about governance structures to bring about an equitable balance of rights and responsibilities between non-tribals and the tribal community as well as the State, in usage of land and their relationship with land. The inclusiveness of tribals in the decision-making process in land disputes should be an essential element to inspire confidence in the administration of justice in land matters.

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## FARMERS' PERCEPTION ON WATER MANAGEMENT AND LAND DEGRADATION IN THE TAIL REACH OF WESTERN YAMUNA CANAL COMMAND

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### ABSTRACT

*A study was undertaken in the tail end command of Western Yamuna Canal Command (WYCC) in Jhajjar district, Haryana, to assess the socio-economic status and coping strategies adopted by farmers under waterlogging and saline environments. Perception on water management and control of problem of waterlogging and salinity of 100 selected farmers is reported in this study. About 85 to 100 per cent of the respondents strongly endorsed that the poor maintenance of irrigation channels, canal siltation and weed growth, seepage from the distributaries and minors and irregular supply of canal water were the major factors responsible for waterlogging and subsequent land degradation in the command area. In all, 85 per cent of the respondents opined about non-existence of any scheme by the government agencies for maintenance of field channels. As coping strategies, farmers manage the problem by cleaning field irrigation channels, creation of open ditch drains, controlled irrigation methods and increasing the seed rate besides green manuring with varying degrees of success. Farmers of the study area also expressed the need for knowledge dissemination mechanism with technology details, funding opportunities and effective and efficient functioning of water user associations besides involvement of all farmers to enhance productivity from irrigated saline environment.*

### Introduction

In spite of the strides made in irrigated agriculture, land and water productivity at farmers' field have remained low in the country as compared to the frontline demonstrations. The reasons attributed to low productivity and decline in crop yield are inadequate and

uncertain canal water supplies, waterlogging, secondary soil salinisation and alkalinisation, deterioration in groundwater quality, use of poor quality groundwater for irrigation, livelihood constraints and poor socio-economic conditions of farmers (Tyagi *et al.*, 2003). Singh *et al.* (2004) reported that for enhancing water use efficiency

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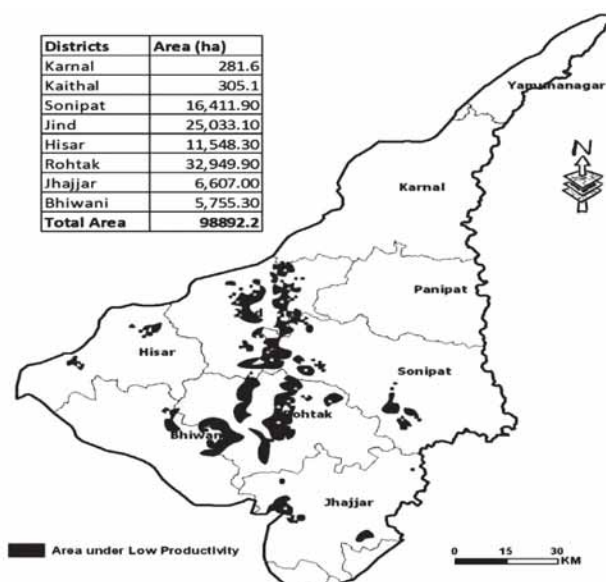
and crop productivity through technological interventions in any canal command area, a clear understanding of the socio-economic condition of the farmers, present cropping system and the constraints from the point of view of the farmers is required. Ghosh *et al.* (2002) reported that farmers being the most important stakeholders, it becomes imperative to consider the issues of irrigation as a service provided to farmers. They suggested that the criterion for assessing the constraints and evaluation of the performance of irrigation systems should be undertaken from farmers' point of view.

An investigation was carried out in two minors, namely Batta and Rohera in the Kaithal Circle of Bhakra Canal System during the year 2001 and 2002 to study the effect of unequal canal water supply in the decision making of the farmers (Anonymous, 2003). In this study, three water courses, one each at the head, middle and tail of both the minors were selected. It was observed that the water supply situation in the tail reaches was worse with very high deficiency levels as it was only 20 per cent of water supply in the head during kharif and between 30 to 50

per cent during rabi season. Therefore, such low supplies hardly left any scope for meaningful decision making and the farmers were forced to use whenever and whatever water was available in the water course.

It was observed from published literature that farmers' socio-economic status, their preferences and perception regarding irrigated saline environment in conjunction were never assessed at different reaches of the WYCC canal command. Generally, irrigation and drainage programmes are based on technical and economic considerations without substantial involvement of the stakeholders. Therefore, present study was undertaken to investigate farmers' socio-economic status, their agricultural practices and perceptions under irrigated saline environment and suggest alternative measures to overcome the problems to enhance crop productivity. Major objectives of the study were to assess the socio-economic characteristics of farmers of salinity prone areas of Jhajjar district of Haryana State and obtain their perception on management of saline and waterlogging problems in the tail reach of the canal command.

**Fig 1 : Delineated Low Productivity Areas of the Jhajjar District in WYCC**



## Methodology

Methodology adopted to accomplish the objectives was a judicious mix of qualitative and quantitative techniques. It was felt that this combination would enable a cross verification of information at various stages of data acquisition and subsequent analysis.

**Study Area :** The Western Yamuna Canal (WYC) has a geographical area of about 13,543 km<sup>2</sup> and is located between 75° 48' to 77° 35' E longitude and 28° 20' to 30° 29' N latitude. The command area is spread over eastern, central and southern part of the Haryana State covering Karnal, Panipat, Sonapat, Rohtak and Jhajjar districts. Out of five districts, Jhajjar district was selected for data acquisition and subsequent implementation of technologies to enhance productivity under irrigated saline environment under the National Agricultural Innovation Project (NAIP) funded sub-project entitled "Decision support system for enhancing productivity in irrigated saline environment using remote sensing, modeling and GIS". The study area was selected as part of the project objective to study the productivity of crops grown in the area commanded by the Jhajjar distributary which is under WYC. The Jhajjar distributary is at the tail reach of WYC. Generally, the head reaches of any command area are more prone to waterlogging and salinity problem, but it was observed that some parts in the tail reach of the WYC commanded by the Jhajjar distributary faced the problems of waterlogging and salinity (Fig.1). Therefore, interventions through use of the judicious water management technologies for the rice and wheat crops grown in the canal command to enhance the productivity under waterlogging and salinity situations prevalent in the study area were investigated. This necessitated conduction of surveys to identify the farmers' perception to waterlogging and soil salinity problems in this region. Preliminary survey indicated existence of some patches of waterlogged and saline areas.

Further, geospatial tools and techniques were used to delineate the low productivity zones in the Jhajjar district and the generated map is shown in Fig.1. The delineated low productivity area in the Jhajjar canal command was observed to be about 6607 ha. The delineated region of low productivity was the result of indiscriminate use of canal water, rising of groundwater table and existence of saline soil. It was also observed from geospatial analysis that the low productivity zones due to waterlogging and salinity were predominant in two villages (i.e. Baghpur and Silani) of Jhajjar district (Fig.1.). Therefore, these two villages were selected for the study. In order to study the farmers' perception on waterlogging and salinity problem of the command area, about 100 farmers were randomly selected from these two villages out of whom 60 and 40 farmers reported the problem of waterlogging and salinity, respectively.

**Data Collection and Analysis :** Geospatial data analysis using the remote sensing images and field survey was undertaken to delineate the area of low productivity in the canal command area of the Jhajjar district. Reconnaissance survey of the area was undertaken with the help of identified local officials and key informants to formulate the comprehensive interview schedule covering all aspects of the problem pertaining to land degradation and low productivity in the region. Further, the acquired information obtained from the farmers was analysed to accomplish objectives of the study. Thus, primary data were collected from the respondent farmers using the above procedure. Data acquisition was for the rabi 2009 and kharif 2010 cropping seasons. Primary data acquired through field surveys and discussion with farmers included general and socio-economic information of farmers, their perceptions on problem of soil salinity and waterlogging, and coping-up strategies adopted by farmers. The Participatory Rural Appraisal (PRA) tools like transect walk and focused group discussions were held with the farmers of the selected

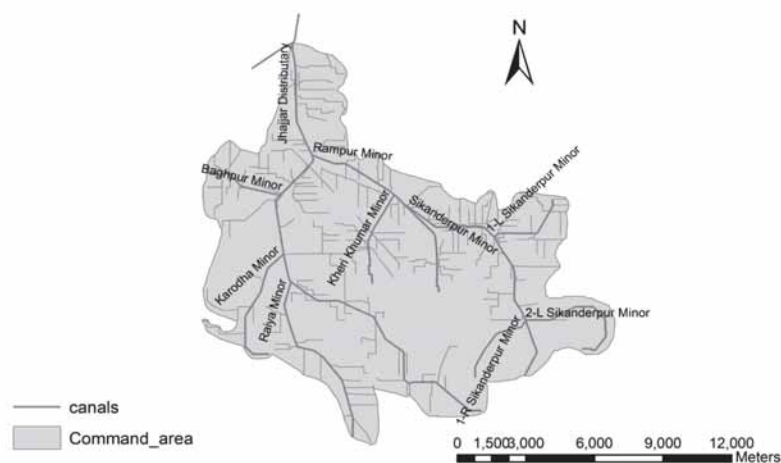
villages. Moreover, cross checking and ground truthing information of the secondary data with regard to envisaged cropping pattern were carried out using the Global Positioning System (GPS). Besides this, the extent of problematic areas, characteristics of reservoirs and canal systems and groundwater level data were obtained from the irrigation and agriculture departments of Jhajjar district, Haryana. The data acquired from farmers through personal

interview using the developed questionnaire were analysed. The geospatial database of Jhajjar distributary with the minors with attribute table on water release to different minors under warabandi based irrigation rostering was prepared using GIS tool and presented in Fig. 2.

## Results and Discussion

**Socio-economic Status of Farmers:** The socio-economic status of farmers acquired from

**Fig 2 : Geospatial Map of Jhajjar Distributary with Minor Canals**



field survey through the questionnaire was analysed. It was observed that 48 per cent of the respondents were in the age group ranging from 35 to 53 years followed by 37 and 15 per cent in young (*i.e.* 18 to 34 years) and old age (*i.e.* above 53 years of age) category, respectively. Educational status of the farmers revealed that maximum percentage (*i.e.* 42) of the respondents had high school education while 34 per cent respondents were educated up to intermediate level. It was observed that only 6 per cent of the respondents were educated up to graduation. However, 18 per cent of the respondents were illiterate and have not attended any primary schooling. In general, the educational status of the farmers was observed to be of moderate nature.

Most of the respondents (*i.e.* 57 per cent) belonged to nuclear family category followed by joint family category (*i.e.* 43 per cent). Majority of the respondents (*i.e.* 88 per cent) had agriculture as their main occupation. Moreover, 10 per cent respondents were engaged in animal husbandry business besides agriculture. The other occupation as their primary occupation was reported by only 2 per cent respondents. Regarding landholding size, 38 per cent farmers belonged to large farmers category followed by 33 and 29 per cent belonging to small and marginal farmers' categories, respectively. The income from different sources by the farmer was included in the study. Majority of the respondents (*i.e.* 67 per cent) had middle category of annual income (*i.e.* ₹ 20264 to

₹ 75977) followed by high with 20 per cent (*i.e.* greater than or equal to ₹ 75977) and low with 17 per cent (less than or equal to ₹ 20264) category of annual income. Majority of the respondents (*i.e.* 92 per cent) were not having any membership in any social organisation followed by membership in one organisation (*i.e.* 5 per cent) and more than one organisation (*i.e.* 3 per cent). About 69 per cent of the respondents belonged to high level of agricultural mechanisation followed by 18 per cent under medium and 13 per cent under low degree of agricultural mechanisation.

### Perceptions on Irrigation and Drainage Conditions and Their Externalities

**Transect Walk:** Transect walk of village area was conducted along with the farmers of villages. It was observed that certain areas of villages faced the problems of waterlogging and salinity. Moreover, good quality groundwater is available alongside the canal but groundwater quality was observed to deteriorate while moving away from the canal. Generally, there was a tendency in the area to buy farm land alongside the canal for sinking own tubewell for getting good quality groundwater for irrigation and transporting it to other fields in saline groundwater zones. Generally, farmers of the canal command followed the rice-wheat cropping system and the vegetable and fruits production were negligible in this area. Therefore, the farmers were advised to take up vegetables and horticultural crops in the region during interaction with the farmers.

**Irrigation and Drainage Conditions Promoting Soil Degradation:** Farmers of the study region also recognised various irrigation and drainage related factors responsible for soil degradation process. The farmers' perceptions on such irrigation and drainage factors were analysed. All respondents agreed that the drainage system is laid in their farm areas but 90 per cent of them consented that the drainage system was not working up to its full capacity due to heavy

siltation and weed infestation. About 90 per cent of the respondents emphasised on the maintenance of lateral drainage system laid in their farm to carry excess drain water to the main drainage system constructed in the region. About 88 per cent of farmers also showed apprehensions about the role of canals in aggravating the conditions for waterlogging and soil degradation. Poor maintenance of minor canals and field channels without crop water demand based irrigation scheduling in the canal system were also considered important factors contributing to waterlogging and degradation by 85 and 87 per cent of the respondent farmers, respectively. Other notable perceptions shared by the farmers were the adverse impact of the existence of canal system near the village and use of canal water for non-agricultural purposes. These views were shared by 65 and 75 per cent respondents, respectively. Some farmers believed that flood irrigation method was the best practice for water management and crops grown during kharif season was the most affected due to waterlogging problem. Moreover, contrary to the understanding of the farmers regarding flood irrigation, they were disseminated that the soil moisture deficit and controlled surface irrigation methods are better than the flood irrigation which generally saves water without deterioration of the grain yield in rice and wheat crops. Also the benefits of drip and sprinkler irrigation systems were also disseminated to the farmers during this study to appraise them about water use efficiency of different irrigation methods and for different crops. However, farmers were neutral to the opinion that government facilitates to remove the surplus water from field were poor and timely access of water supply from the canals were contributing factors leading to the problem of land degradation. Moreover, majority of the farmers recognised that waterlogging problem was noticed with the advent of canal irrigation systems in the area and this was further aggravated by the secondary salinisation problem. However, the farmers were



disseminated about the judicious agricultural water management practices which would prevent the waterlogging and salinity problems in the canal command areas. Regarding the spread of soils degradation problems in the Jhajjar command area, 60 per cent respondents felt that the problem was more severe during kharif season and problems of salinity were more severely felt in rabi and during summer season, which discourages them for taking up crops during summer season.

**Coping Strategies Adopted by the Farmers of WYC Command:** Different coping up strategies adopted by the farmers of the Western Yamuna Canal (WYC) to combat the soil degradation problems due to waterlogging and soil salinity are presented in Table 1. These strategies were

classified under mechanical, irrigation and cultivation practices. Among mechanical measures, cleaning of field irrigation channels and creation of open field drains were resorted to by 85 and 67 per cent of the respondent farmers, respectively. Controlled irrigation was also practised by majority of the farmers (85 per cent). However, under cultivation practices measures, increase in seed rate was the most common strategy adopted by 96 per cent of the farmers to mitigate the adverse impact of the land degradation, both in waterlogged and saline areas. Deep and frequent plowings were adopted by 94 per cent farmers. Application of more irrigation water to leach down the salts from the crop root zone were also practised by some of the farmers in the tail end region of the command during canal water supply periods.

**Table 1: Coping up Measures Followed by the Farmers (N=100)**

S. No.	Measures	Number of farmers		
		Waterlogged (n1=60)	Salinity (n2=40)	Total (N =100)
1	Frequent cleaning of field irrigation channels	55(91.67)	30(75)	85(85)
2	Construction of open ditch drains to remove surplus water	42(70)	25(62.5)	67(67)
3	Use of controlled irrigation methods	50(83.33)	35(87.5)	85(85)
4	Growing of green manure crop to upgrade fertility status	48(80)	35(87.5)	83(83)
5	Increased seed rate during sowing	56(93.33)	40(100)	96(96)
6	Increased use of organic manure	30(50)	23(57.50)	53(53)
7	Increased use of nitrogenous fertilisers	32(53.33)	35(87.50)	67(67)
8	Soil amendments and plant management practices for reducing salinity and waterlogging	10(16.67)	12(0.30)	22(22)
9	Deep and frequent ploughing of the field	60(100)	34(85)	94(94)
10	Land leveling and bunding	10(16.67)	08(20)	18(18)

Note : Figures in parentheses indicate percentage of the total; "n1" is the sample size of respondents for waterlogging problem; "n2" is the sample size of respondents for salinity problem and "N" is the total sample size of the respondents in this study.



Growing green manure crops, increased use of organic manure, increase in the use of nitrogenous fertilisers and land leveling and bunding were some of the other measures practised by the respondent farmers in the study area.

#### ***Outcome of Farmers' Group Discussions :***

Different dimensions pertaining to issues discussed with the farmers in this study and the ameliorative measures can be summarised as follows:

- Farmers of selected villages of the canal command followed the paddy-wheat cropping system besides taking up green manuring crops for maintaining or upgrading fertility status of soil. In this context, the farmers were encouraged to take vegetable and horticultural crops to enhance farm income.
- Crop related information is being acquired by farmers from input suppliers, progressive farmers from the village, farmers from neighbouring villages and their friends. Moreover, farmers were advised to acquire the crop related information from the agriculture departments of the district and also contact the KVKs' for getting assistance on package and practices for raising crops in the area. Farmers were also suggested to adopt water saving irrigation methods and avoid over-irrigating the fields. Use of drip and sprinkler methods of irrigation for vegetable and horticultural crops and use of salt tolerant rice and wheat varieties developed for the region by CSSRI, Karnal to enhance both farm income and water productivity was also discussed. Farmers were observed to be highly receptive to the ideas but expressed their concerns in implementing the same due to financial and constraints in availability of seeds.
- Problems of waterlogging and consequent land degradation were dealt by farmers

through preventive and coping up measures to get rid of these detrimental factors on crop productivity. But majority farmers expressed that the extent of problem and lack of resources were the prime reason for their inability for not adopting any measure. Lack of incentives and technical know-how were the other reasons expressed by the farmers. The farmers also felt the need for community approaches to combat the soil degradation problems as individual actions were not sufficient to reclaim the degraded lands. It was suggested that farmers may seek advice of agricultural officers and extension workers and formulate water users associations and conduct regular meeting on use of the modern technologies and water saving methods to combat the problems of waterlogging and salinity in the command area.

#### **Conclusions**

Farmers perceived that inadequate natural drains, siltation and weed infestation of existing drains, irrigation water return flow and seepage losses and flooding methods of irrigation were some of the prime factors which have aggravated the problems of waterlogging and soil salinisation in the canal command. The coping-up strategies adopted to mitigate soil degradation problems by the farmers were meant to achieve only the short-term objectives to delay the degradation process. The inability of the farmers to undertake long-term measures was constrained by resource availability, poor technical knowledge and lack of funds for maintenance of both irrigation and drainage systems. Farmers emphasised the need of timely availability of canal water in the tail end and also consented that the crop water demand based irrigation scheduling would ameliorate the problem of waterlogging and secondary soil salinisation in the region. During discussion and group meetings pertaining to dissemination of agricultural water management practices, the farmers expressed that they were not aware of

many of these technologies and opined that proper demonstration of these technologies will definitely assist them in managing their farm lands in general and combating the soil degradation in particular. Therefore, there is a need to provide extension services to create awareness of different technologies to enhance farm income and their livelihood. Moreover, to expedite the dissemination of technologies, periodic trainings and on-farm demonstrations of surface and sub-surface field drainage technologies, land leveling, leaching methods of surface salts, micro-irrigation technologies,

growing salt-tolerant crop varieties and use of soil moisture deficit based irrigation scheduling besides green manuring, organic amendments and package and practices for growing seasonal vegetables and horticultural crops should be organised. Further, the farmers were encouraged to seek advice from the agriculture departments, nearby KVKs or use the toll free telephone *kissan* helpline services and organise active village level farmers' group meetings to enhance the productivity of farm land for sustainable agriculture in the Western Yamuna Canal (WYC) Command area.

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## BEHAVIOUR OF MARKET ARRIVALS AND PRICES OF PEARL MILLET IN RAJASTHAN

Shirish Sharma and I.P. Singh\*

*The present study was devoted to an analysis of behaviour of market arrivals and prices of pearl millet in Rajasthan. In Nagaur market, the arrivals in the peak period were maximum during last 10 years (2000-01 to 2009-10). These were in the range of about 55.91 (2003-04) to 79.92 percent (2008-09) of the total arrivals. In Jodhpur market, the arrivals of pearl millet followed more or less the same pattern as in Nagaur. In Jaipur market, the arrivals in peak period were maximum. The maximum arrivals were in the peak period followed by mid-period and lean period. The seasonal indices analysis of arrivals and prices revealed that when major portion of the produce was received in the market, the prices were at the lowest. The correlation between arrivals and price in Jodhpur market was positive and statistically significant. This positive and significant correlation coefficient could be attributed to the off-season supplies of pearl millet which fetch higher prices. Trend analysis of arrivals of pearl millet in the selected markets of the State shows that the trend values of arrivals in Jaipur, Jodhpur and Nagaur showed an increasing trend over the years.*

### Introduction

Pearl millet is one of the most extensively cultivated cereals in the world after rice, wheat, and sorghum, particularly in arid and semi-arid regions. However, pearl millet accounts for almost half of global millet production. Nearly 60 per cent of world millet area is in Africa. Asian countries occupy 35 per cent of world millet area. The developing countries in Asia and Africa contribute around 93 per cent of total millet production in the world. Asia alone contributes 43 per cent of world millet production. In Asia, millet is restricted almost exclusively to two countries viz. China and India, although Myanmar, Pakistan, and Nepal also produce small quantities. India is the largest producer of pearl millet, both in terms of area (9.1 m ha) and production (7.3

m t), with an average productivity of 780 kg/ha during the last five years. Rajasthan is a major producer of millet in the country. Out of 9.43 million hectares of pearl millet area in India, about 4.38 million hectares are cultivated in Rajasthan with 80 per cent of it being in western Rajasthan. It is a well known fact that Indian agriculture is characterised by wide variations in output of major crops which subsequently lead to wider fluctuation in market arrivals. The extent of fluctuations in market arrivals largely contributed to the price instability of major crops. In order to devise the appropriate ways and means for not only reducing the degree of fluctuations in the prices of agricultural products but also increasing the quantity of market arrivals, there is need to have a perfect understanding about the behaviour of prices of

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different agricultural products over a period of time. Marketing plays an important role in the economic development as it stimulates production, avoids unnecessary fluctuation in output and prices. The experience of many countries suggests that in the absence of an efficient marketing system strategy for agricultural development cannot go very far to stimulate production (Khalon and George, 1985). The information about behaviour of the price in-terms of price level, trend and fluctuations is the most important factor in determining competitiveness of the commodity in the domestic and international level to draw influence for future prices and to formulate the long-term strategy on trade (Chand Ramesh, 2002). The past trends in market arrivals of commodities are also useful in understanding the present and to forecast the future. Prices play a vital role in predominantly agricultural economies like India. Prices of farm products fluctuate more than that of industrial goods due to heavy dependence on natural factor. Hence, they have enormous human and political implications, especially in developing countries. Prices of farm goods affect income and living standards of farmers, rural labourers and the non-farming population. They also affect the prices of non-farm goods and foreign trade.

### Methodology

For the present study, Jaipur, Jodhpur and Nagaur districts of Rajasthan were selected. These districts accounted for about 1.323 lakh hector of the total area and contribute about 0.539 lakh qtl to the pearl millet production in Rajasthan annually. Secondary data in respect of arrivals in different markets and wholesale prices of pearl millet prevailing in these markets were obtained from Directorate of Economics and Statistics, Government of Rajasthan, Jaipur. To study the relationship between market arrivals and wholesale prices of pearl millet in the selected districts, simple correlation coefficient was worked out using the following formula:

$$r = \frac{\sum (X_i - \bar{X}) \cdot (Y_i - \bar{Y})}{\sqrt{\sum (X_i - \bar{X})^2 \cdot \sum (Y_i - \bar{Y})^2}}$$

Where,

$r$  = Simple correlation coefficient between arrivals and prices of pearl millet.

$X_i$  = Quantity of arrivals of pearl millet in  $i^{\text{th}}$  month/year (quintals).

$\bar{X}$  = Mean quantity of arrivals of pearl millet (quintals).

$Y_i$  = Price of pearl millet (₹/qtl) in  $i^{\text{th}}$  month / year.

$\bar{Y}$  = Mean value of prices of pearl millet (₹/qtl).

$n$  = Number of observations.

The correlation between prices of pearl millet in different markets was worked out to study market integration.

### Results

The seasonal production of pearl millet renders its arrivals in the market a seasonal phenomenon. After harvest, the market arrivals of pearl millet were invariably the highest in November in a single month although some stocks start arriving in late October. With a view to examining the marketing pattern of pearl millet, the crop year was split up into three periods viz., (i) Peak marketing period (September to December), (ii) Mid-marketing period (January to April) and (iii) Lean marketing period (May to August). Table 1 indicates that in Nagaur market, the arrivals in the peak period were the maximum during last 10 years (2000-01 to 2009-10). These were in the range of about 55.91 (2003-04) to 79.92 per cent (2008-09) of the total arrivals. In the lean period, arrivals ranged between 6.35 to 19.19 per cent.

**Table 1: Per cent Arrivals and Prices (₹/Qtl) of Pearl Millet in Nagaur Market**

Year	Arrivals in Peak Period (September- December)	Price (₹/Qtl.)	Arrivals in Mid-Period (January- April)	Price (₹/Qtl.)	Arrivals in Lean Period (May- August)	Price (₹/Qtl.)
2000-01	60.89	317.92	23.11	349.70	15.99	416.70
2001-02	54.10	480.00	37.59	500.00	8.31	565.00
2002-03	75.06	450.00	18.58	480.00	6.35	510.00
2003-04	55.91	490.00	24.90	500.00	19.19	520.00
2004-05	56.98	510.00	25.86	520.00	17.16	550.00
2005-06	64.11	680.00	26.26	710.00	9.64	750.00
2007-08	73.12	600.00	19.74	650.00	7.14	740.00
2008-09	79.92	710.00	11.50	725.00	8.58	750.00
2009-10	73.88	890.00	13.80	900.00	12.32	950.00

In Jodhpur market (Table 2), the arrivals of pearl millet followed more or less the same pattern as in Nagaur. The peak period arrivals ranged between 36.53 to 84.61 per cent. In the

mid-period, it ranged from 10.26 to 37.97 per cent and in the lean period, the arrivals were in the range of 2.95 to 31.38 per cent.

**Table 2: Per cent Arrivals and Prices (₹/Qtl) of Pearl Millet in Jodhpur Market**

Year	Arrivals in Peak Period (September- December)	Price (₹/Qtl.)	Arrivals in Mid-Period (January- April)	Price (₹/Qtl.)	Arrivals in Lean Period (May- August)	Price (₹/Qtl.)
2000-01	84.61	400.00	10.26	544.00	5.13	600.00
2001-02	68.52	520.00	20.72	540.00	10.77	570.00
2002-03	68.27	499.98	28.78	594.04	2.95	600.00
2003-04	66.23	500.45	25.34	587.50	8.43	643.71
2004-05	40.70	418.75	34.72	555.35	24.58	668.47
2005-06	36.53	456.24	32.95	568.76	30.51	601.81
2007-08	43.80	483.74	37.97	543.74	18.23	660.26
2008-09	36.38	562.19	32.24	633.33	31.38	768.76
2009-10	51.09	575.00	26.15	642.32	22.74	783.33

Table 3 indicates that in Jaipur market the arrivals in peak period were maximum. These were in the range of 45.19 to 85.05 per cent of the total arrivals. The lean period arrivals varied between 3.69 to 11.89 per cent of the total arrivals in different years. The pattern of arrivals

was almost the same in all the markets. The maximum arrivals were in the peak period followed by mid-period and lean period. In most of the years, the prices were higher in the mid-period and lean periods than that of peak period barring few exceptions.

**Table 3: Per cent Arrivals and Prices (₹/Qtl) of Pearl Millet in Jaipur Market**

Year	Arrivals in Peak Period (September-December)	Price (₹/Qtl.)	Arrivals in Mid-Period (January-April)	Price (₹/Qtl.)	Arrivals in Lean Period (May-August)	Price (₹/Qtl.)
2000-01	82.08	299.75	10.83	310.00	7.09	350.00
2001-02	45.19	450.00	44.39	480.00	10.42	510.00
2002-03	81.93	420.00	13.42	565.58	4.65	638.78
2003-04	64.37	470.85	26.12	569.27	9.51	635.40
2004-05	70.33	460.30	24.32	556.73	5.36	620.10
2005-06	85.05	446.52	11.26	560.44	3.69	638.04
2007-08	72.11	478.69	22.16	517.64	5.73	636.75
2008-09	73.42	476.00	14.69	610.94	11.89	728.55
2009-10	75.52	620.00	20.57	670.00	3.91	842.09

#### Seasonal Variations in Arrivals of Pearl Millet in Selected Markets

In order to ascertain the long run seasonal variation in the arrivals of pearl millet in the selected markets, seasonal indices for arrivals were calculated, by taking 12 months moving averages. The seasonal indices of monthly arrivals of pearl millet in the selected markets are presented in Table 4. The result clearly indicates the existence of seasonality in arrivals of pearl

millet in all the markets. Highest arrival of pearl millet in Jaipur market was observed during the month of October (385). The range of arrivals was 19 to 256 during other months of the year. The higher market arrival indices (more than 100) in Jodhpur market was observed during the months of October, November, December and January and highest was observed in November (181). Arrivals reached the peak during November (221) in Nagaur market and decreased to 38 in August.

**Table 4: Seasonal Indices of Arrivals of Pearl Millet in Different Markets**

(Per cent)

Month	Jaipur	Markets	
		Jodhpur	Nagaur
January	98	144	84
February	36	64	56
March	66	75	86
April	33	53	75
May	26	85	54
June	20	98	70
July	21	81	40
August	19	62	38
September	104	82	93
October	385	109	188
November	256	181	221
December	135	164	193

#### Seasonal Variations in Prices of Pearl Millet in Selected Markets

In order to analyse the long run seasonal variation in the prices of pearl millet in the selected markets, season indices for prices was computed by adopting 12 month moving average method. The seasonal indices of monthly prices of pearl millet in the selected markets are presented in Table 5. In all markets, the price was found to be high during the months when the arrivals were low and was low during the months of high arrivals. The higher seasonal price indices observed in Jaipur market were in the months of May, September and July and August with values of 132, 111, 104 and 104, respectively. Lower seasonal price indices were observed during the months of November. Jodhpur market witnessed the peak in seasonal price index during April. Nagaur market witnessed the highest seasonal price index in February (152). Large the seasonal index showed the stability during the remaining months of the year during the study period.

The variation in the price of pearl millet in the peak season and lean season in the selected markets does not appear to be significantly large because pearl millet is grown in rainfed conditions and it is staple food of the people in the study area. The farmers are not sure of next harvest because of climatic reasons. Therefore, they retain pearl millet for food security till they get the next harvest of pearl millet.

#### Relationship Between Market Arrivals and Prices

The degree of relationship between market arrivals and prices of pearl millet was studied by computing correlation coefficients. The results of correlation analysis, given in Table 11, reveal the negative correlation between prices and arrivals in Jaipur and Nagaur market. However, these correlation coefficients were statistically non-significant. However, in Jodhpur market, the correlation between arrivals and



**Table 5: Seasonal Indices of Prices of Pearl Millet in Different Markets**

(Per cent)

Month	Jaipur	Markets	
		Jodhpur	Nagaur
January	106	105	102
February	88	66	152
March	106	119	104
April	89	125	110
May	132	103	105
June	97	100	99
July	104	105	88
August	104	97	93
September	111	112	98
October	103	107	98
November	67	73	64
December	93	88	87

price was positive and statistically significant. This positive and significant correlation

coefficient could be attributed to the off-season supplies of pearl millet which fetch higher prices.

**Table 6: Prices and Arrivals Correlation of Pearl Millet in the Selected Markets**

Market	Correlation
Jaipur	-0.028 <sup>NS</sup>
Jodhpur	0.230*
Nagaur	-0.061 <sup>NS</sup>

\*significant at 5 per cent level of significance.

#### **Trends in Arrivals and Prices of Pearl Millet in the Selected Market**

Trend analysis of arrivals of pearl millet in Jaipur, Jodhpur and Nagaur markets is

presented in Table 7. The Table reveals that trend values of arrivals in Jaipur, Jodhpur and Nagaur showed an increasing trend over the year. However, the increasing trend in these markets was not statistically significant.

**Table 7: Trends in Pearl Millet Arrivals**

Name of the Market	Period	Form of Function	Equation Fitted
Jaipur	2001-2009	Linear	$Y = 50699.20 + 39917.90t$ (92575.30)
Jodhpur	2001-2009	Linear	$Y = 130896 + 1121.47t$ (81166.47)
Nagaur	2001-2009	Linear	$Y = 52030.10 + 10034.20t$ (55325.31)

\*Figures in parentheses are standard errors of regression coefficient.

The price trend equations were worked out for these markets and these equations are given in Table 8. For Jaipur, Jodhpur, Nagaur and

Merta City markets, the trend in prices was positive and non-significant.

**Table 8: Trends in Prices of Pearl Millet**

Name of the Market	Period	Form of Function	Equation Fitted
Jaipur	2001-2009	Linear	$Y = 316.60 + 49.76t$ (78.40)
Jodhpur	2001-2009	Linear	$Y = 409.30 + 52.51t$ (76.05)
Nagaur	2001-2009	Linear	$Y = 359.36 + 55.11t$ (80.40)

\*Figures in parentheses are standard errors of regression coefficient.

### Market Integration

Market integration implies the relationship among the spatially separated markets. Markets differ in the extent of integration and, therefore, there may be a variation in their degree of efficiency. The extent by which prices of a commodity move together over a period of time in different markets located at varied distances from each other is an indicator of market integration for the commodity. In integrated marketing system, price of a commodity in one market is responsive to price change in another market and as such,

price differences between the markets should not exceed the transportation and handling costs. The analysis of movement in prices of a commodity in different markets helps in ascertaining as to what extent the marketing system is efficient in respect of that commodity. The market integration was studied by making zero order correlation matrix. The correlation between prices of pearl millet in different markets was studied and is presented in Table 9. The Table reveals that prices of pearl millet in Jodhpur and Jaipur markets had high and significant correlation in prices (0.542).

**Table 9: Correlation Between Prices of Pearl Millet in Different Markets**

Market	Nagaur	Jodhpur	Jaipur
Nagaur	1	0.084	0.123
Jodhpur		1	0.542*
Jaipur			1

\*Significant at 5 per cent level of significance.

### Conclusion

The study reveals that during peak period, the prices of pearl millet are depressed. Therefore, government should enhance efforts in procurement of pearl millet at MSP in the peak period. Due to passage of Food Security Bill in Parliament, the government agency needs to

procure pearl millet for its supply through PDS. Farmers should also avail of marketing loans to withhold their produce for sometime so that they can get remunerative price during mid-period and lean period. Credit facilities should also be given to farmers under Gramin Bhandaran Yojana to have scientific storage facilities at village level.

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## BOOK REVIEWS

**Bridging the Social Gap Perspectives on Dalit Empowerment**, Edited by Sukhadeo Thorat / Nidhi Sadana Sabharwal, Published by SAGE Publication, New Delhi, 2014, pages 279, Price ₹ 995.

The Human Development and Social Inequality Report has brought a significant shift in the notion of human development, particularly of *dalits*. The focus is therefore, centered around the quality of people living in rural as well as in urban areas. This book narrates and conceptualises exclusion – linked deprivation of excluded and indigenous groups in Indian society. The basic objective of this book is to analyse the present status of *dalits* and *adivasis* and capture the inter-social group inequalities in the attainment of human development. This book appears to be one of the reference books on (a) conceptual framework on *dalits* and *adivasis* which can be seen from the indicators of Human Development and Human Poverty indices; (b) Human Development Index and Human Poverty Index at aggregate level and disaggregated by groups; and (c) the situation of Scheduled Castes and Scheduled Tribes vis-a-vis other community groups, with reference to certain individual indicators.

The book contains fourteen chapters, which discuss divergent issues relating to *dalits* and *adivasis* and their poverty and human indices and provides a list of contributors, abbreviations, appendices, bibliography and index. The first chapter is an introductory one describing issues of inter-social group inequalities in human development and exclusion – linked human development in Indian Society. Prof. Amartya Sen draws attention to various definitions and dimensions of the Concept of Social exclusion (Sen, 2000). He described the situation as 'unfavourable exclusion' and 'unfavourable inclusion,' respectively.

Chapter two has dealt with the strategies and policies for empowering the *dalits* and *adivasis*. The author rightly suggested measures towards empowering mechanism, administrative mechanism and monitoring through implementation of Sub-component plan and Tribal Sub-plan. Chapters three and four reveal discrimination of SCs/STs in the contemporary society and their human development and poverty, respectively. In both these chapters their socio-economic and political aspects were analysed. Appropriate data were used for acute poverty and discrimination against the social groups. Poor performance in implementation of development schemes for the benefit of these communities is noticed in all the States in the country.

Chapter five examines the various levels and patterns of income by using consumption expenditure as a poverty indicator for SCs and STs. The NSS data expressed the fact that consumption and expenditure are very low among SCs/STs as per their 38<sup>th</sup>, 49<sup>th</sup> and 55<sup>th</sup> Rounds of NSSO for the years 1983, 1993 and 1999-2000, respectively. The author clearly mentioned in the chapter that consumption pattern levels among SCs/STs and non-SCs/STs was significantly low and high, respectively. Chapter six provides the disparity levels in poverty to the extent of disparities indicated in the incidence of poverty among the social groups which brings out the inter-state and regional variations in levels of disparity.

Chapter seven presents the literacy and education levels among the social groups like SCs/STs with special reference to social, gender and inter-state inequalities among non-SCs/STs population. Chapters eight and nine thoroughly examine housing amenities and health, nutritional status among the social groups, respectively. The housing facilities in India increased by about two and half a times as compared to those in 1961 to 2001. The author

has defined that the term 'Census House' pertains to houses used for residential, partly residential and non-residential purposes. The index of housing shortage expressed as number of residential and partly residential census house per 1,000 households increased from 933 in 1961 to 974 in 2001 for both rural and urban.

Chapter ten analyses the changes in the livelihood patterns among social groups in India, and specifically examines three major aspects of occupational diversification such as, shift from agriculture to non-agriculture occupations in rural areas, pattern of diversification within agriculture sector and changes in occupation pattern in urban areas.

Chapter eleven explores the changes in access to land and capital assets of *dalits*. The NSSO surveys have shown the disparities in land assets, non-farm asset holdings having disparities in aggregate capital assets. The authors highlighted that distribution of land is fairer in case of STs than SCs. Chapter twelve discusses the gender-wise estimates of employment and unemployment and disparities among SCs/STs in rural and urban areas. The data focused by the author show that rural male employment rate was lowest for SCs (46.2 per cent) followed by non-SCs/STs and STs, female employment rate was the lowest.

Chapter thirteen outlines the main provisions of reservation policy and examines its impact on the employment and education of SCs and STs. Article 16(A) of the Constitution of India permits reservation in favour of marginalised groups like SCs, STs and OBCs. The author highlighted its impact on employment, education and legislation. Chapter fourteen provides the road for *dalits* in the new millennium. This book could justify the factors which contributed to disparities among SCs and STs and human development to support the inter-social groups during the period between 1980–2000. The authors who themselves are editors of this book, observed a positive

improvement in HDI and HPI. In this book, the gaps or disparities between SCs and STs on one hand, and non – SCs/STs, on other in terms of HDI, HPI are ably analysed. However, the editors seriously tried to address the issues of social exclusion in human development which would have been useful to plan and implement suitable policies to tackle the challenges that confront the marginalised social groups.

Obviously, this book presents brilliant ideas for all stakeholders and researchers in universities and academic institutions. This will also help higher bureaucrats connected with the development of SCs, STs and OBCs in appropriate policy formulation for the targeted rural disadvantaged.

*Dr. Y. Bhaskar Rao*

**Displacement, Revolution, and the New Urban Condition Theories and Case Studies**, by Ipsita Chatterjee, Published by Sage Publications India Pvt. Ltd., New Delhi, ₹ 645.

Development-induced displacement is not a new phenomenon in India or the Third World. Independence from colonial rule ushered an era of government-sponsored development projects that used and recycled spaces, soils, geological formations, and the bowels of the earth to create dams, power projects, mines and factories. These new spaces hoped to erase the decades of stagnation under colonial extraction and catapult the country into an era of indigenous modernity that would tackle the problems of hunger and poverty. Displacement of the poor and indigenous people was seen as a necessary social cost for erasing uneven development and materialising long-term progress.

This book explored all-pervasive and perhaps ever-present urban issue of displacement. According to the author, displacement is a contradiction, because it uproots people. She made enormous effort to

explain the concept of New Urban Politics (NUP) of displacement with adequate conceptual clarity and evidences of literature. The book revolves around the incidence of displacement and resettlement experiences of Ahmedabad city in India. It attempts to conceptualise the urban exploitation through displacement from a Marxist perspective. To explain the concept, the author has taken the example of Ahmedabad city and visualised the effect of exploitation and displacement of Sabarmati River Front Development (SRFD) project on people who lived on the river bank, under the over-bridge and other places like pavements and slums.

The book has 149 pages of subject matter covered in six chapters, the first chapter introduces the concept of 'New Urban Politics', how the cities of the country get in the process of urbanisation and how people who are living in slums are uprooted without any resistance by the affected. Chapter 2 brings elaborate literature survey on the concept of NUP and handled properly with adequate explanation and justification in understanding the transition from urban governance.

Chapters 3 and 4 discuss in detail about the displacement of the urban poor from the banks of the river Sabarmati through Sabarmati River Front Development project. It looks at the institutional position toward displacement, and brings out the heterogeneity and diversity within these positions to indicate the nature of displacement and resettlement. Chapter 5 looks into the resistance to displacement through the concept of "right to the city". It explains the strategies and outcomes of three organised groups' agitation against the SRFD project of Sabarmati river. The author puts strong argument that, the demand for the 'right to the city' comes from those who are economically excluded, underpaid, and lead below-subsistence life, or

in other words, the working class and the informal social class. The cry for the 'right to the city' comes from those who are culturally alienated, who are not necessarily economically excluded.

In this book, the author attempted to analyse the third world urban condition in the context of globalisation through the example of SRFD project in Ahmedabad city in India. This book brings many concepts which are new to the general public and important areas for theory builders and researchers of the 'life of the urban slum dwellers'. The concepts like New Urban Politics, place promotion, municipal neoliberalism, Phenomenology, Marxian accumulation, estrangement, Neil Smith's elucidation of gentrification and Lefebvre's concept of the 'right to the city' are used for explaining the issues and challenges faced by Muslim minority poor who lived in the river bank and separation, unwanted treatment and negative attitude by the Hindu dominants with the case of Ahmedabad city incidents.

Often books on India or South Asia are read only by Indians, South Asians or people doing research in only these regions, similarly, books on U.S or European cities are read by 'Western'. Moreover, book based on the global south but using theories in the global north are criticised for glossing over the complexities of third world urbanity. This particular book does not belong to or deal with any regional speciality, without becoming timeless, spaceless and over-generalisations. Therefore, to read this book a reader need not to be an Indian or South Asian or third world researcher, anybody interested in understanding the urban condition in the context of globalisation, will find it much useful literature and guiding theory builder.

*Dr. R. Chinnadurai*

**Village Diary of a Heretic Banker** by Moin Qazi, Notion Press, 5 Muthu Kalathy Street, Triplicane, Chennai, Tamil Nadu (INDIA) 2014, Pages 252, Price : ₹ 325.

Village Diary of a Heretic Banker is an excellent piece of work about Banker's view of village and Rural Development. It is an eulogy of banker's perspective of financial empowerment of rural women and poor for poverty reduction in rural India. The book is a product of 'three' decades of his career as a rural banker which describes the financial situation in the village.

The book contains 'seven' parts. First part 'A Banker to the Poor' focuses on understanding the society, financial problems in village, and the banker's role in helping to overcome the poverty. Describing the situation in village, the author puts forward the view of Shri Pandit Jawaharlal Nehru. He describes village as "India's poor still wait for opportunity and justice; too many of their lives are still fraught with poverty, ignorance, and disease. No doubt, some of the worst exploitation of human beings occurs in India-indentured servitude, sexual trafficking of women and children, child labour, female foeticide and infanticide and less dramatic but just as debilitating daily violence of poverty, disease, and hopelessness'. The author maintains that rural poor have intrinsic energy to overcome poverty, if provided with little bit of financial help. But, banker's attitude is most important towards poor. Most of the bankers feel that posting in rural areas is a punishment and preference is for urban areas. Only few people with right attitude can join and bring change in rural areas. The author has emotional attachment to the rural areas and purposively got posting in rural areas. The author feels that background in social anthropology and agriculture is an immense help for bankers to handle rural financial operations.

The second part 'Adventure in the Rural Planet' focuses on traditional rural finance in village. In villages 'sahukar' (moneylender) was

the key person. The author says that 'sahukar' was banker, moneylender, pawnbroker and very often its vampire. All the poor, who are in financial dire straits, will visit the moneylender. The moneylender's house is a 'financial web'. The author brilliantly describes the moneylender "All dirt tracks converged at the house of the sahukar, like the threads in a spider's web and along the tracks came desperate families. Some brought their wives' ornaments wrapped in bits of rags; others brought the produce from their field. Sometimes the women would walk in and remove their glistening nose studs, their wedding chain, and bangles and hand them into the poaching hands of the moneylender. Others had nothing to pledge but their own bodies". But the exorbitant interest rate (20% per day) doomed several families to permanent debt and bondage. Slowly the rural banking has entered in helping the villagers financially and brought change in rural financial institutions.

Third part "Finance for the poor" focuses on entering of financial institutions in rural areas. The author quotes about ancient Indian proverb in village formation, "A village can be formed wherever there come together a river, a priest, and a moneylender". Traditionally moneylender was the financier to the villagers and the changing situation has brought many institutions like SHG model of finance, governments, international financial institutions and NGOs have put many credit-based solutions to rural poverty, particularly in the wake of the World Bank's 1990 initiative to put poverty reduction at the head of development priorities. In 1990s the idea of financial services to low-income people emerged. Thus, slowly many financial institutions have come up in village to reduce poverty. At this juncture bankers have adapted to the harsh realities of rural life. Financial institutions are now engaged in a vigorous battle to enlist the poor as their clients, not just for their business but to open a window for the poor which allows the global development winds to touch their lives.



Part four "A Livelihood of Her Own" focuses on women striving to help themselves through helping financially to live dignified life. In this situation, the author quotes Margaret Thatcher "If you want something said, ask a man; if you want something done, ask a woman". In this part the author explains case studies of women's success in achieving their dignity through financial help. The change in women's lives was beautifully described by the author. "Women have gained new skills and knowledge, their feeling of self-worth has increased, and they have gained the necessary confidence to take a more vocal stand at the household level". The author points out that 'opportunity of financial help to women may not be a revolution but at the very least this is a revolution in the making'.

Fifth part "Shaping their destinies" focuses on how the women are shaping their lives in reducing poverty in villages. All the women are not successful. Women who succeeded were with charisma and personal commitment. The bottom-up approach and participatory development helped the women to participate in development of their lives. Sixth part "Odyssey with Dairy Farmers" focuses on animal husbandry which helps the farmers in drought situation and supplements their income. "Dairying has become a common farmers' ally, thanks to the vision of Kurien", says the author. Seventh part "Vignettes From Villages" focuses on emergence of rural banking as a strong finance in rural areas. Rural banks have become a lifeline of rural people. The author explains that his three decades of rural banking has been varied. He says, "The experiences have been varied: some chilling, some amusing, some exciting but they nevertheless serve as prism which provides a view of every facet of rural society. The author believes that 'there is no universal formula to reduce the poverty. The approach to poverty reduction is multi-pronged, because, every village is unique and diversified'. Finally the author advises the financial

developers to cultivate the mindset of the villagers to be successful in rural development.

This book is a must read for every banker, students, academicians, administrators, development professionals, sociologists, politicians, policy makers, NGOs and research scholars etc.

*Dr. SN Rao*

**Rural Development in India : Challenges and Prospects**, Edited by Madhusudan Ghosh and Apurba Kumar Chattopadhyay, 2013, Published by Serials Publications, 4830/24, Prahlad Street, Ansari Road, Darya Ganj, New Delhi – 110 002, pp. 373, ₹ 1295 (Hardback).

Authors have brought out an edited volume comprising twenty one research papers, examining some important issues of contemporary relevance on agricultural and rural development in India. This volume has been divided into four parts; the volume evaluates the impact of public policies, employment, unorganised sector and microfinance on rural development in association with agricultural development.

Part – I includes seven articles studying various aspects of agriculture. The first chapter on growth and performance of commodity futures market in Indian Agriculture was reviewed by Madhusudan Ghosh. The results suggest that greater integration of the spot and futures markets by encouraging higher participation of farmers and allowing free playing of the markets is necessary for the future markets to perform the price discovery role more effectively and to act as an efficient mechanism of price risk management. The next four papers investigated the regional pattern of agricultural development in India and West Bengal.

The second chapter on "Mechanisation in Contemporary Indian Agriculture" by Anupam Sarkar explored the regional and sectoral differences in the spread of mechanisation in agriculture and inter-household disparities in the

access to mechanical technology in terms of ownership and use of different machineries across different socio-economic indicators. The discussion has led to conclusion that mechanisation in agriculture has progressed in varying degrees in different parts of India with most mechanised States concentrated in Western and Northern parts of the country. Irrespective of level of mechanisation there is high degree of inequality in ownership of agricultural machinery and equipment. The reliance on machinery increases progressively with increase in farm size.

Rituparna Dey, Sreenita Mondal and Tania Debnath have contributed a chapter on "Trends in Agricultural Development in New Economic Era: A State Level Analysis". Authors have estimated the level of agricultural development in terms of Agricultural Development Index (ADI) and evaluated the relative performance of the Indian States in two time periods (1995-96 and 2005-06). Chapter – IV is contributed by Snehasish Karmakar and Debashis Sarkar. They examined the regional variation in adoption of specific agricultural inputs and outputs over the pre and post-reform periods in West Bengal. Authors have suggested that steps should be taken to advocate region-specific technologies which will help the farmers to adopt modern technologies for the betterment of agriculture. Credit facilities with lower rate of interest with area-specific approach may narrow down the regional variation.

Performance of Food Grains production in West Bengal has been authored by Dipyaman Pal and Arpita Ghose. They have observed that the foodgrains production was significant after the introduction of land reform policies in 1977-78 and Panchayati Raj System during 1982-83. However, they noticed strong inter-district variation in South – Bengal. Achiransu Acharyya presented a chapter on "Groundwater Irrigation in West Bengal: A Review of Theory and Practice". The author has suggested that formal water market should be encouraged through property right to water and certain other legal measures.

Prasanta Bauri and Bidisha Banerjee presented a chapter on "A Study on Rural Economy of Purulia District with a Focus on Diversification in Agriculture". They concluded that declining trend in crop diversification index (both the Berry and Entropy index) of Purulia district explains insignificant agricultural growth. However, the district has huge potential for agricultural growth and development; necessary steps could accelerate the agriculture growth.

Part-II includes six articles evaluating the performance of various programmes in employment generation and livelihood security. In chapter – 8, Arun Kumar Nandi and Dipika Basu examined the problem of unemployment, poverty and disparity among social groups across regions in rural West Bengal on the basis of unit level NSSO data. Authors have suggested six policy strategies. Chapter – 9 discussed the efficacy of public works programme such as Mahatma Gandhi NREGAct in a region affected by discontent and extremism is examined based on the household level primary data. Author has evaluated the performance of the Mahatma Gandhi NREGS in ensuring sustainable means of livelihood in rural area by facilitating the rural poor to earn additional wage income. Arindam Chakraborty, in his paper on "Women Empowerment through NREGA: District-wise scenario of West Bengal" reported that women participation in NREGS works are creating greater access to institutional finance and ensuring substantial participation in all levels (Planning, implementation, monitoring and social audit) achieving the agenda of gender equity.

In eleventh chapter on "Performance of Panchayats in Executing Indira Awas Yojana in West Bengal" author's survey has inferred that the institutional discouragement and the socio-political structure of the society hinder active participation. The most deprived of the society remains marginalised and isolated from the panchayat institution and activities. K. Kirubakaran, in his paper on "Dependence on PDS for Food: Household Level Analysis" stated that PDS dependence does not increase with the increase in food requirement, hence, there

is a need to relax the upper limit in PDS rationing of major food items. In the paper on "Role of Public Capital in Rural India: Identifying the Bottlenecks of Welfare", Somdeep Chatterjee and Rituparna Dey attempted to demonstrate the welfare effects of infrastructural developments in rural India. Contrary to the general view, they find lack of association between Rural Infrastructure Index (RII) and Human Development Index for the Indian States.

Part III includes four papers examining some aspects of the unorganised sector and its impact on rural development. In the paper "Unorganised Sector Growth in India: A State level Analysis" authors have explored the growth dynamics of the unorganised sector in India over the period 1983-84 to 1999-2000. Jiban Kumar Ghosh, in his paper on "Status of Agro-based Industries in West Bengal: Constraints and Task Ahead", attempted to understand the status of agro-based industries. It is also evident from the fact that the rural component of the manufacturing sector is more dominated by Own Account Manufacturing Enterprises (OAMEs) had a share of 94.2 per cent in West Bengal as against the all-India average of 92.7 per cent. Such enterprises suffer from various infirmities in the form of low capital investment, backward technology in use, diseconomies of scale, marketing problem, various commercial problems. Author has suggested strong policy intervention to improve productivity levels, particularly for the numerically preponderant groups of manufacturing enterprises. It is also stated that banking institutions should come forward to extend institutional credit facilities.

Apurba Kumar et. al., studied the economic conditions and strategies in non-farm activities of two districts in West Bengal. The authors have discussed the return or wages in non-farm activities, working hours and employment generating ability of those non-farm activities. Authors have concluded that the households with landholding status 0.01-0.4 ha and 0.41-1.0 ha have shown that above 85 per

cent of their non-farm activities are non-seasonal; mainly due to push factors like insufficient income in agriculture and high degree of uncertainty of primary sector. The paper "Recession – A Boon for the Informal Sector?" by Biswajit Mandal studied a general equilibrium trade model with informal sector to substantiate what could happen to the skilled labour, capitalist and commodity production due to an economic recession.

Part – IV includes four papers examining role of microfinance and self-help groups in rural development. A research paper by Panchali Bhattacharjee demonstrated that micro-financing could ensure livelihood security of the poor. In the paper "Impact of Participation in Self-Help Groups (SHGs) on Economic Condition of the Rural Poor in West Bengal" authors have examined the impact of SHGs on financial inclusion and economic condition of the rural poor. M. Suresh and K. Mohan (Microfinance in Fishing Enterprises – its Impact on Economic Development of Andaman Islands) has studied the impact of enterprises against fishermen community, SHG individual members and SHG groups by applying the cluster sampling method. The study has concluded that the value of assets holding after joining SHG group has significantly increased. Microfinance has brought saving habit among the members which facilitated in enhancing their standard of living and alleviated the poverty. S. Sarumathi and K. Mohan has presented a paper on "Women's entrepreneurship in Micro-Enterprises: A Study of Self-Help Groups in Pondicherry". The study findings indicated that the micro-financing has facilitated in improving the socio-economic development resulting in building their social interaction capacities, decision-making process and confidence on self-reliance.

This book is recommended for students, researchers, academicians and policy makers having concern in Rural Development.

*Dr. V. Suresh Babu*



**Journal of Rural Development**  
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- (iii) study functioning of the Panchayati Raj Institutions and rural development programmes across the states.
- (iv) analyse and propose solutions to problems in planning and implementation of the programmes for rural development; and
- (v) develop content and disseminate information through periodicals, reports, e-modules and other publications.

Considering the challenges faced by the Government in the development of a large section of rural poor across the country through its various policies and programmes, NIRD & PR as apex training Institute in the field of rural development has to cater to the training and capacity development needs of a large clientele. To achieve these objectives, a nation-wide network of training infrastructure has to play its rightful role. The clientele include a large number of elected PRI representatives at different levels, rural development functionaries, NGOs, Bankers and other stakeholders. Capacity building of rural development personnel and elected representatives is an intrinsic part of the entire rural development process. It helps to improve their managerial skills while keeping them abreast with the latest changes in strategies, government policies and programmes to augment their knowledge and working efficiency resulting in strengthening of the delivery mechanism for the benefit of all the stakeholders. The challenge is huge and NIRD & PR has been able to play its role in the country's rural development initiatives by facilitating qualitative changes in programmes implementation through a process of training, research, action research, consultancy, information dissemination and information building on a continual basis. This has enabled the Institute to emerge as the National Apex Institute for capacity development in the area of rural development.

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