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Foreword

In recent years the IFFCO Foundation has emerged as a credible Think Tank in the area of rural and agrarian development and has successfully established itself as an authority in the area. As a Think Tank, it is engaged in policy analysis, policy dialogue and holds regular workshops and conferences on a wide range of specific topics identified by our Governing Body as the Foundation's thrust areas: skill development, women's empowerment, cooperative development, governance, art and culture and climate change. The IFFCO Foundation *Bulletin* is an effort to connect the field dynamics with theoretical propositions and gain insights into pressing socio-economic issues in the national and international context in an effort to inform policy-making.

It is in this background that we, at IFFCO Foundation, are pleased to launch our thrice-yearly research journal, The IFFCO Foundation *Bulletin*. It is a small endeavour on our part to promote rural and agrarian studies, especially by young scholars. Our objective is to encourage and bring centre-stage new knowledge, build on existing knowledge and subject existing works to new enquiry in relevant areas. Operating as medium of expression for field researchers, theorists, policy-makers and grass-roots organisations, the *Bulletin* explores how best to respond to challenges faced by rural India. This is imperative considering that though majority of our population directly or indirectly depends on agriculture, this sector has been completely bypassed the comparatively higher economic growth rate in recent years. Moreover, despite concerted efforts of various stakeholders, oppressive and exploitative socio-economic relations and social structures still persist. Promotion of critical initiatives and interventions is one way we can arrive at realistic, feasible and viable alternatives.

The IFFCO Foundation is a non partisan Think Tank. The Foundation does not identify itself with one particular political ideology, nor does it enter into any ideological alliance. The opinions expressed by authors are personal and not those of the IFFCO Foundation as such. However, IFFCO Foundation does provide a forum for free and frank discussion on important issues facing society, for a multi-perspective analysis and deliberation. I wish the *Bulletin* the very best of luck in its mission and hope that in the coming time it will evolve into a powerful voice and an honourable medium for free-exchange of ideas.

(J.N.L. Srivastava)
Managing Trustee

The Paradox of Agrarian Stagnation in Bihar, India

Avinash Kishore¹

Agriculture in Bihar has remained stagnant for more than a century now. Over the last 40 years, value of agricultural output grew at a mere 0.7 per cent per annum—the slowest growth rate among all states in India. Till recently, this stagnation was blamed on the slow adoption of yield enhancing inputs like chemical fertilisers, hybrid seeds, irrigation and agricultural implements like pump sets and tractors. The argument was that the annual flood risk and semi-feudal production relations reduce farmers’—landowners’ and sharecroppers’—incentives to invest in productivity enhancing inputs. However, recent data shows that Bihar has caught up with the rest of India in the use of fertilisers, hybrid seeds, tractors and pump sets in the last two decades. This catch-up has happened in spite of poor institutional credit and agricultural extension infrastructure in the state. Still, agricultural productivity in Bihar continues to lag behind the rest of India. The productivity is not only low, but also highly sensitive to inter-annual variability in rainfall, more so than the rest of India even when the state has rich resources of groundwater, considered the best protection against vagaries of rainfall. We argue that ‘the energy squeeze’ faced by farmers due to dependence on expensive irrigation with diesel pump sets makes farmers economise on the use of groundwater, resulting in low and variable yields and low cropping intensity. Lack of electricity and high price of diesel are the key reasons as to why Bihar is unable to convert abundant groundwater into livelihoods.

Keywords: groundwater irrigation, agricultural growth, cost of irrigation, weather dependence

1. Background

In 1876, APMcDonnell, in his ‘Report on Food-grain Supply of Bengal and Behar’, recorded average rice yield to be 1,000 to 1,200 kg/hectare (ha) in Tirhut and 500 to 1,700 kg/ha in Champaran (district average being 979 kg/ha) in a good year. He reported double-cropped area to be 30-32% of cultivated land (cropping intensity of 1.3-1.32). In some parts of Champaran, cropping intensity was as high as 1.62 (McDonnell, 1876 cited in Hunter, 1877/

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1976). One hundred and thirty-five years later, in 2011—when the population pressure on land has increased five folds and most people (74 per cent of the workforce) are still employed in agriculture as they were in 1876; when nearly two-thirds of land has been brought under irrigation; and use of chemical fertilisers and hybrid seeds have become common – average rice yield is not much higher in these parts of Bihar. Cropping intensity, now at around 1.4, has not increased significantly either. Green revolution by-passed the state in its first wave in 1960s and 1970s. Subsequently, there was a short interval in the late nineteen eighties and early nineteen nineties when agricultural growth rate reached almost 3 per cent per year, one of the highest in the country, though, over a smaller base. Even this modest growth was short-lived and stagnation has set in again. This article explores why.

Section two of this article points out an inconsistency in the public data that has misled some researchers and policy makers to conclude that agricultural growth in the state had accelerated to more than 5 per cent per annum after 2000-01. We show that it is not the case after the data inconsistency is accounted for. Section three discusses the slow change in cropping pattern, cropping intensity, and crop yields in Bihar and uses recent data to show that productivity has remained low in spite of rapid intensification of input use in the state over the last three decades. In section four, we present the argument that high cost of irrigation is one of the main reasons why crop productivity and cropping intensity continue to be low in the state. Section five, the last section, discusses some policy imperatives for engendering sustained agricultural growth in the state.

2. Discrepancies in the Central Statistical Organisation (CSO) Data

There have been a number of recent papers and government documents reporting rapid growth in agrarian economy of Bihar in the last few years (World Bank, 2007; GoI, 2008; Gulati et al, 2009, GoB, 2009). A report of the Special Task Force on Bihar claims that from 1993 to 2003, agricultural GDP of Bihar grew at 2.7 per cent per year “*which was next only to West Bengal and Andhra Pradesh among the major Indian states. A study for the period 1995-96 to 2004-05 not only confirms above findings, but also shows that Bihar went ahead of both these states, though marginally*” (GoI, 2008, page 17-18). Similarly, Gulati et al (2009) show that Bihar’s agrarian economy grew at 5 per cent p.a. from 2000-01 to 2007-08, compared to the national average growth rate of 2.9 per cent. A report card by the Government of Bihar (GoB) claims 5.58 per cent annual growth in agriculture between 2004-05 and 2008-09. All these growth figures have been calculated from CSO’s annual estimates of value of output of agriculture and allied sectors in Bihar. A closer scrutiny reveals an inconsistency in the CSO data that inflated the agricultural growth rate of Bihar over the last decade.

If we look at crop-wise data, we find that there was a sharp decline in value of output of all major crops: rice (by 48.9 per cent), wheat (by 21.4 per cent), all cereals (by 31.2 per cent) and all pulses (by 15.1 per cent) in year 2004-05 compared to the triennium before it, and the slump persisted in the subsequent years. These crops account for about 85 per cent of the gross cropped area (GCA) of Bihar. During this time (1999-00 to 2005-06), the share of

milk and other livestock products in value of the total agricultural output increased from 27.2 per cent to 38.73 per cent. Clearly, much of the reported high growth in Bihar's agricultural gross domestic product (GDP) was driven by growth in the livestock sector.

But did livestock sector grow as sharply as the CSO data suggest? CSO reports a sudden jump in the value of milk output from 43.3 billion rupees in 2003-04 to 63.6 billion rupees in 2004-05, an increase of 50 per cent in just one year. Growth rate before and after this year has never exceeded 10 per cent per year. Increase in value of milk alone is responsible for 53.6 per cent of the total reported increase in the value of output during this period and the overall livestock and fisheries sector accounts for 84 per cent of the increase. What explains the sudden jump in the value of livestock sector output in 2004-05 in Bihar? It is a data inconsistency.

Unlike crops, whose production is estimated from crop-cutting experiments, estimates of livestock products (milk and meat) are based on the number of livestock of different types. Livestock census, which is conducted once in every five years, is the source of these numbers. Livestock census was not conducted in Bihar in 1987, 1992 and 1997. Projections based on 1977 and 1982 census were used in subsequent years. When actual census was conducted in Bihar in 2003, after a gap of more than two decades, the number of livestock was found to be much higher than what earlier projections suggested. This led to a sharp upward revision in value of dairy and other livestock output in the year 2004-05. This revision in value of livestock output accounts for a large fraction of the 5 per cent growth in agriculture and allied sector reported for the period of 1999-2005. Actual growth rate would be much lower. It also means that the growth rate of agriculture and allied sector from 1982-83 to 2003-04 was somewhat higher than what the CSO data suggests as the CSO underestimated the growth in the value of livestock outputs during this period. In sum, agricultural growth in Bihar was slightly faster during 1982-2003 and much lower during 1999-2005 than what we infer from the CSO data.

If we look at the long-term trend, agricultural growth in Bihar has been the slowest of all states in India over the last five decades. According to Bhalla and Singh (2009), the compound annual growth rate (CAGR) in the value of agricultural output was a mere 0.7 per cent from 1962-65 to 2003-06 (see Table 1). Total population and the population of agricultural workers grew almost three times as fast during this period. In effect, per capita (and per worker) value of output of agriculture has been shrinking over the last four decades in Bihar (see Figure 1).

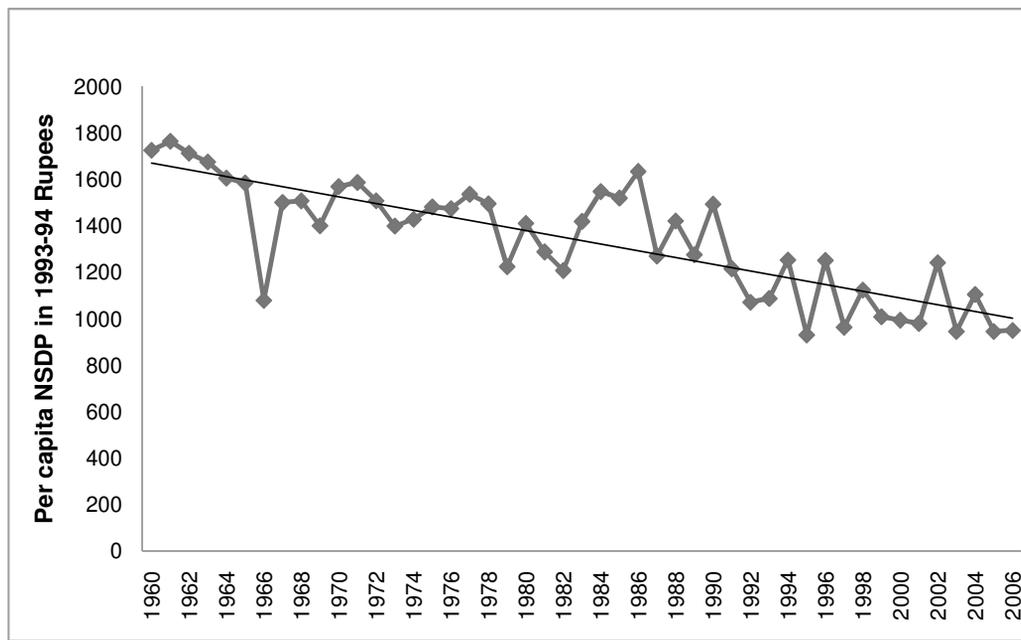
Table 1: Compound Annual Growth Rate (%) in value of outputs (44 crops) in Bihar

State	1962-65 to 1970-73	1970-73 to 1980-83	1980-83 to 1990-93	1990-93 to 2003-06	1962-65 to 2003-06
Bihar	1.12%	-0.41%	2.07%	0.26%	0.7%

Source: Bhalla and Singh (2009).

Note: The state of Bihar here includes both Bihar and Jharkhand of today. Agriculture growth after 2006 has been slow too due to three drought years in 2009, 2010, and 2012.

Figure 1: Per capita NSDP-Agriculture at 1993-94 constant prices in Bihar, 1960-2006



Source: Calculated using NSDP data from Directorate of Economics and Statistics, Government.

There is an impression in the media and policy circles that like the rest of the economy, agricultural economy of Bihar has also turned corners in the last six years. Recent data on crop production, however, betrays a different reality. Productivity remains low and subject to extreme fluctuations. There has not been two consecutive years of growth in the real NSDP of agriculture in the state between 1993-94 and 2010-11. A year of increase is regularly followed by a decline next year and the magnitude of fluctuation is quite high (GoB, 2009). The last two rows in table 4 (see p.11) show the coefficient of variation of wheat and paddy yield of Bihar and all of India for the period of 1993-94 to 2010-11. The coefficient of variation is significantly higher in Bihar for both paddy and wheat in spite of better irrigation coverage. Thus, apart from persistent low yields, vulnerability to weather is another cause of worry for agriculture in Bihar.

3. Understanding Agrarian Stagnation

There are three ways in which the value of agricultural output could grow: i) cropping pattern shifts from low to high value crops, ii) gross cropped area increases due to increase in land area sown more than once and iii) crop productivity increases. We explore trends in cropping pattern, cropping intensity and crop productivity in this section. The fourth source of growth in value is, of course, increase in the relative price of agricultural products. All our data are in constant prices adjusted by the GDP deflator.

3.1 Cropping Pattern

First let us look at the cropping pattern. Agriculture in Bihar is dominated by the rice-wheat system (72 per cent of GCA in 2007-08) that offers low returns to land – the scarce resource, and does not use much labour or water, two resources that are in abundance in the state. Food grains (cereals and pulses) account for nearly 85 per cent of the gross cropped area (GCA) – the highest of all states in India and their share in GCA has not significantly declined over the years, unlike in the rest of the country.

Kharif (monsoon) crop is beset by problems of flood and water logging in large areas of Bihar. In north Bihar, more than half of all the cultivable land is flood prone. Altogether floods frequently affect 41 per cent of the total cropped area in Bihar. Lowlands (*Tal, diara and chaunrs*) occupy another half a million hectares (mha) of land in both north and south Bihar (GoI, 2008).² There is not much scope of crop diversification and incentives are poor for intensive practices in such areas in Kharif season. Agro-ecology does limit options in the Kharif season, but Indian Council of Agricultural Research's (ICAR) field experiments show that yields of both rice and wheat crops could be increased by advancing transplantation of Kharif paddy by a month in areas where flood and water logging is not a problem (Singh et al, 2001). Advancing the schedule would require intensive irrigation in preparation and transplantation of seedbeds. With diesel pumps and the current diesel prices, it is prohibitively expensive. Hence farmers prefer to wait for monsoon rains and forego the opportunity to increase yields. High cost of irrigation is, therefore, the biggest hurdle in large scale adoption of this proven strategy of yield enhancement in rice-paddy systems of Bihar (Kishore, 2004).

Given that options are limited in Kharif, one would expect that farmers would make the most of *rabi* (winter) and *garma* (summer) seasons using cheap labour and abundant water available to grow crops that may be labour and water intensive, but offer high returns to land. One such crop is 'boro' paddy that farmers in neighbouring West Bengal grow with much enthusiasm and which propelled the state to high agricultural growth in the mid-1990s. There is hardly any cultivation in the summer season in Bihar and Rabi cropping is dominated by wheat (60 per cent of sown area), followed by pulses (18 per cent), maize (11-12 per cent) and oilseeds (4-5 per cent). Wheat and pulses are neither labour nor water intensive and also offer low returns to land – the scarce resource in the state.

Wheat yields are low in Bihar and if farmers continue to follow the current crop-calendar, yields are likely to remain low and somewhat unresponsive to input intensification. The recommended sowing time for wheat in Bihar is 19-25 November when the winter paddy is still in the field in large areas of the state. Sowing delayed by a month reduces wheat yield by more than 50 per cent (Singh et al, 2001). Furthermore, growing wheat requires relatively low labour input (55 man-days/ha) and only 2-3 irrigations (less than 2,000 m³ of water/ha) are applied (Kishore, 2004). Net return from wheat is less than Rs 5,000/ha. If one includes

² *Tals* (low order monsoon stream), *Diaras* (saucer shaped flood plain of a river) and *chaunrs* (remnants of river course) are low lying lands that remain inundated under deep water throughout the monsoon season and even afterwards.

implicit costs of family labour and land rent, the net return turns negative (GoI, 2008). Yet farmers in Bihar continue to grow wheat. Area under wheat has grown from one-sixth (17 per cent) of GCA in 1970-71 to nearly one-third (27.4 per cent) of GCA in 2007-08 even as yield remains stagnant and returns are low. Similarly, pulses, the second major rabi crop group, are grown on soil moisture; traditional seeds are used, and are not labour intensive. Pulse yields are low (<1,000 kg/ha) and have not increased in last three decades. This is true not only in Bihar, but throughout India.

Thus, with the exception of winter maize, agriculture in Bihar, even in the non-monsoon season, is set in a subsistence mode with low use of labour and water and low returns to land.

There is an old body of literature ascribing agrarian stagnation in eastern India to its flood prone ecology (Ballabh & Sharma, 1992; Ballabh & Pandey, 1999; Boyce, 1987). Crop yields are indeed lower in parts of Bihar where flood is a bigger problem (see Table 2). However, the fact that agrarian dynamism is missing even in flood free regions (south Bihar) and seasons (winter and summer) shows that ecology, though a challenge, is not the main constraint to agrarian change and dynamism.³

Table 2: Flood affected area and crop yields in the three agro-climatic zones of Bihar

Agro-climatic Zone	% Net Sown Area affected by floods	Rice Yield (tons/ha)	Wheat Yield (tons/ha)
North-west Bihar	44	1.30	1.81
North-east Bihar	84	1.14	1.58
South Bihar	6	1.88	2.20

Source: Percentage net sown area affected by floods calculated from Annex III, GoI (2008).

Bihar is land scarce but rich in labour and water. There are more cultivators and agricultural labourers per hectare of cultivable land in Bihar than in any other state of India. There were 3.8 cultivators and agricultural labourers/ha of net sown area (NSA) in Bihar in 2001. Today this number is close to 5 cultivators/ha of NSA. Providing full employment would mean creating at least 500 man-days of employment on every hectare of land in Bihar. The current rice-wheat system can provide at most around 160 days/ha of employment (Joshi et al, 2004). Clearly, there is a large hidden unemployment in Bihar and the problem is getting worse as population grows. No wonder, outmigration from the state increased three-folds between 1991 and 2001 (Gupta, 2009). Agricultural wages are low and freshwater too is available in plenty at low depths. But this is not reflected in the choice of crops and crop practices of farmers. Instead of maximising return to land, they seem to be economising on irrigation, growing crops that require less water and also less labour.

³ Less than 3 per cent of the total land in south Bihar is regularly affected by floods (Source: <http://disastermgmt.bih.nic.in/>; last accessed on 18th October, 2012).

We hypothesize that one of the reasons is high cost of groundwater irrigation due to use of diesel pumps. These costs can be as high as Rs 120/hour of irrigation for a farmer who buys water from a pump owner. Most farmers in Bihar are water buyers. Before us, Kalpana Wilson (1999), in her survey of a village in Nalanda district of Bihar, also found that:

“Different classes of cultivators in Chandkura are unanimous in identifying the increased costs of irrigation as one of the principal factors currently preventing them from accumulating agricultural surpluses on any significant scale” (p. 330).

3.2 Cropped Area

Bihar had NSA of about 5.9 mha and gross cropped area (GCA) of about 8.2 mha in 1967. Both NSA and GCA peaked in the triennium of 1976-78 and have declined since then by about 5-10 per cent. There has been a reduction of 0.3 mha in NSA and 0.9mha in GCA from 1976-78 to 2007-08. Overall, the long-term picture is that of stagnation, or even slight decline in both net and gross cropped areas. The same is true of cropping intensity (CI). CI has hovered around 140 per cent over this period. For a short while it reached 146-147%, but did not sustain the high level and has fallen back to its long-term level. This is slightly higher than the national average (135 per cent), but much lower than CI in neighbouring states like West Bengal (179 per cent) and Uttar Pradesh (UP) (151 per cent) with similar population pressures and irrigation ratios.

Increase in population pressure creates demand for agricultural intensification (Boserup, 1965) and access to irrigation makes agrarian intensification possible by allowing cultivation of second and third crops. In Bihar, rural population and agricultural labour force (cultivators plus agricultural labourers) have increased by more than 80 per cent; per capita agricultural land available has reduced by half (from 0.13 ha in 1971 to 0.07 ha in 2001) and gross irrigated area has increased by 67 per cent between 1971 and 2001. Yet gross cropped area has remained stagnant or has even declined.

Could floods be the reason for this stagnation and decline in cropped area? Recent reports suggest that floodwater stays longer and it spreads to a wider area than it used to till a few decades ago (Mishra, 2008). This could be part of the explanation of stagnation and decline in cropped area since its peak levels in 1970s. However, the fact that long term trends and year to year variation in GCA are similar in flood prone north Bihar and largely flood free south Bihar, suggests that flood and drought are not the main drivers of observed trends in cropped area and cropping intensity in Bihar. Since the pattern is similar in both agro-climatic regions, the causal factor is probably something that is common to both regions.³

Our surmise is that sharp increase in the price of diesel is one such factor. We see a decline in NSA, GCA and cropping intensity in years when retail price of diesel increased sharply. Our hypothesis is that the patterns in NCA, GCA and CI are driven, at least partly, by diesel prices. Eighty five per cent of pump sets in Bihar are run on diesel (GoI, 2001) and 97 per cent of irrigators irrigate their lands from diesel pumps (NSS estimate cited in World Bank,

⁴ Similarly, the variability in yield of paddy, the main flood season crop, is also about the same for north and south Bihar: 19 per cent and 17 per cent, respectively.

2007), the highest proportion among all Indian states. Increase in the price of diesel raises the cost of irrigation for those who irrigate from diesel pumps. The increase in cost is even higher for water buyers (Shah, 1993, 2007).

In a survey by World Bank in 1997-98 that covered a random sample of 1,035 households in Bihar, more than 70 per cent of farmers reported buying irrigation (Living Standards Measurement Survey, 1997-98). This is corroborated by the NSSO 54th round (1999), that shows that 68.6 per cent of farmers in Bihar report hiring in irrigation services from others – the highest among all states in India (Mukherji, 2008). Thus, more farmers in Bihar depend on diesel pumps for irrigation than in any other state and a large proportion of them buy water. Sharp rise in the price of diesel discourages these farmers from growing second and third crops, which gets reflected in reduced cropping intensity. Nominal price of diesel is negatively correlated with cropping intensity ($\bar{n} = -0.46$). Once we control for time trend, the association becomes stronger ($\bar{n} = -0.61$) and it is statistically significant at 99 per cent confidence level (see Table 3). The coefficient implies that a one-rupee increase in the nominal price of diesel is associated with reduction in cropping intensity by more than half a percentage point in Bihar. High diesel prices and the fact that rise in diesel price is disproportionately passed on to the water buyers (majority of farmers in Bihar are water buyers) discourages them from growing high value, but water intensive crops. This is a classic example of ‘economic scarcity’ of water amidst physical abundance.

Table 3: Effect of Price of Diesel on Cropping Intensity and Production of Wheat

Variables	(1) CI	(2) Wheat production
Diesel price	-0.606* (0.146)	-52.61* (15.24)
Wheat area		1.48* (0.54)
year	0.324* (0.111)	98.02* (15.00)
Constant	-498.8** (219.2)	-194093* (29047.18)
Observations	33	32
R-squared	0.39	0.93

Standard errors in parentheses

* p<0.01, ** p<0.05

Source: Regression using data on retail price of diesel on 31 March every year, cropping intensity and wheat production from www.Indiastat.com on 8 October, 2012.

Note: CI is Cropping intensity (%), wheat production is in thousand tons and wheat area is in thousand hectares.

3.3 Production and Yield: Stagnant in spite of Increased Input Use

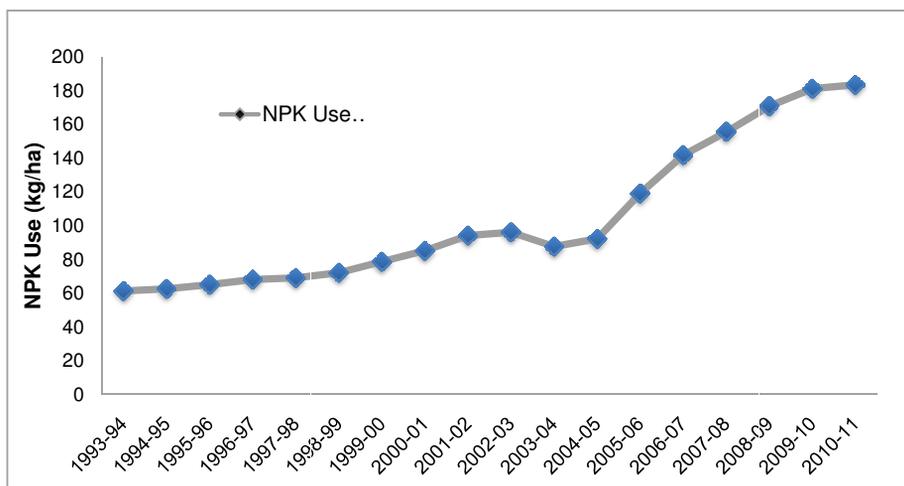
Even if the net sown area and gross cropped area stagnate and cropping pattern does not change, it is possible to increase the total value of agricultural output by increasing yields and hence overall production of crops. However, yields have been rising very slowly in

Bihar. From 1970-71 to 2006-08, yield growth has been slow for rice (1.27 per cent per year) and wheat (1.49 per cent per year), two main crops that account for more than 70 per cent of gross cropped area of the state.⁵ If we consider all crops, the value of output per hectare of GCA at constant price has increased at 1.06 per cent per year in Bihar from 1962-65 to 2003-06 compared to 1.6 per cent per year in the eastern region and 2.01 per cent per year in all-India (Bhalla & Singh, 2009).

Average rice yield in Bihar was 1,271 kg/ha in the triennium ending in 2010-11, which puts it in the lowest productivity group by the Directorate of Rice Development (DoRD) classification. If we look at the district level data, all districts of north Bihar, except West Champaran (1,863 kg/ha), are low productivity districts with yield less than 1,500 kg/ha while in south Bihar, six out of fifteen districts are in the low productivity group. The picture is not much better for wheat either. Though wheat yield is higher than rice yield (2 tons/ha), the yield gap between Bihar and the rest of India is higher for wheat than for rice.

This record of stagnation in crop yields is striking especially when it is seen against trends in availability or use of yield enhancing assets and inputs. Both net and gross irrigated areas in Bihar have increased by more than 60 per cent between 1971 and 2008. Almost twice as many cultivators and agricultural labourers are available to cultivate land. Density of tractors has increased from 4 to 17 per thousand hectares of NSA and use of high yielding varieties (HYV) is much more common now (see table 4). Even more remarkable is the increase in the use of chemical fertilisers. In 1971, chemical fertilisers were barely used in Bihar (9.06 kg/ha) and the use remained quite low till early 1990s (57.2 kg/ha in 1992-93), but has increased rapidly since then (see Figure 2).

Figure 2: Increase in use of chemical fertilisers (NPK) in Bihar from 1993-94 to 2010-11



Source: Annexure XXV, GoI (2008) and <http://krishi.bih.nic.in/Fertilizer.htm>. Site accessed on 4 October 2012.

⁵ We are not considering the most recent triennium (2008-10) because 2009 and 2010 were two consecutive years of drought with lower yields. If we consider the triennium 2008-10, yield growth will be 0.8 per cent and 1.4 per cent per year for rice and wheat respectively.

Table 4: Input Use and Yields of Major Crops in Bihar and India in 1981-82 and 2001-03

	Bihar		India	
	2001-03	1981-82	2001-03	1981-82
Labour Availability (Cultivators + Ag Labourers/100 ha)	379	222	166	104.28
% Area Irrigated	61	49	39	29
Fertiliser Use (NPK/ha GCA)	95.79	21.54	91.45	34.34
Tractor Density (#/1000 ha)	~17	2.46	~17	3.65
Pumps/100 ha	12.05	6	11.05	4.7
HYV as % cropped area of Rice	73.9	24.7	NA	NA
HYV as % cropped area of Wheat	92	76.9	NA	NA
Rice Yield (kg/ha)	1,469	858	1,967	1,266
Wheat Yield (kg/ha)	1,912	1,353	2,695	1,691
*CV (Rice yield) [1993-94 to 2010-11]	15%	7%		
CV (Wheat yield) [1993-94 to 2010-11]	9%	6%		

*CV is coefficient of variation. **NA = Data not available.

Source: Percentage cropped area under HYV for rice and wheat is from Annexure XX of GoI (2008). All other data are from Indiatat.com accessed on 15th October 2012.

Labour, irrigation, fertilisers, high yielding varieties and mechanisation are main inputs to increase yield. Today Bihar is at par or ahead of the national average in availability (or use) of all these inputs (see Table 4). This is confirmed from several data sources, such as the NSSO's Situation Assessment Survey of Farmers in 2002-03 (NSSO, 2005) that shows that 89 and 91 per cent of farmers in Bihar reported using chemical fertilisers in Kharif and Rabi respectively as against the national average of 76 and 54 per cent. In a primary survey done in 18 villages in Bihar by International Livestock Research Institute (ILRI), 100 per cent of respondents reported using chemical fertilisers and 80 per cent of the land was under irrigation—almost exclusively irrigated by diesel pump sets (Thorpe et al, 2007). Yet the yield gap between Bihar and India persists; in fact the gap has widened from the time when Bihar lagged behind the rest of India in the availability of these inputs. This paradox of stagnant or declining output in spite of increasing use of inputs is difficult to explain. Why would farmers continue to invest in fertilisers if the yields are not increasing? Similarly, why would farmers continue to buy new pump sets if the existing ones are already severely underutilised due to high price of diesel?

We do not yet have good answers to these questions. Part of the explanation could be in what Shah (2007) found in Simra village of Bihar, where sharecroppers and marginal farmers had started intensive cultivation of irrigated onion crop during the summer “as a strategy to beat the rising cost of irrigation of wheat and other crops” (p. 4008). Onion required thirteen

irrigations (against 3–4 for wheat) and intensive use of fertilisers and labour, but also offered much higher returns than wheat. As the area under onion expanded, it stimulated more diesel pump purchases.

It may be so that, as in Simra, farmers across large areas of Bihar are shifting to cultivation of input intensive high value crops on small parcels of land and this change is not being fully accounted for by our current data collection system resulting in underestimation of value of agricultural output. We could not find enough recent primary studies to verify this conjecture.

Stagnant yield, in spite of high input use, is a puzzle and further research is needed to unravel it.

4. The Puzzle of Agrarian Stagnation and a Hypothesis

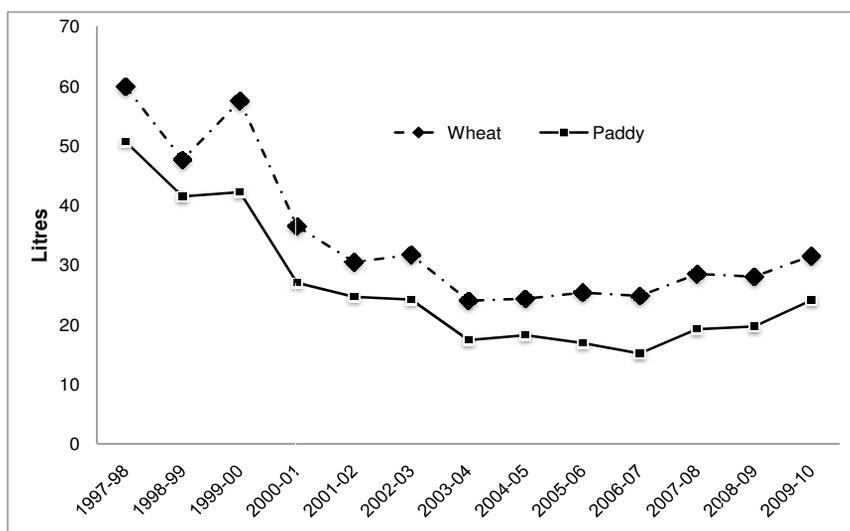
In 1970s, the agrarian stagnation in Bihar and the rest of eastern India was believed to be due to low use of modern technologies and inputs. The big research question was: why are farmers in eastern India slow to adopt yield enhancing inputs and practices? However, the input use patterns shown in table 4 suggest that the big question of 1970s and 80s has become somewhat irrelevant today. Farmers in Bihar have caught up with the rest of India in the last two decades by investing heavily into assets like tractors and pump sets and rapidly increasing their use of inputs like hybrid seeds and chemical fertilisers. If agrarian dynamism were to be measured by trends in farmers' investments in yield enhancing assets and inputs, we see greater dynamism in Bihar than in the rest of India in the last two decades. So, the question now is why do these technologies and inputs have low returns in Bihar? In the face of such low returns, why is it that farmers have kept investing in them for at least two decades now?

We hypothesize that it is the indifferent public policy in the form of poor infrastructure, poor incentives and non-existent technological support—that negates private initiative and makes it less productive. In other words, assets created by private initiative and investment are not being leveraged well due to lack of public support both in the form of infrastructure and incentives. Nowhere is this clearer than in case of irrigation as we shall show in this section.

Farmers in Bihar have invested heavily into pump sets and bores over the last three decades. As a result, access to irrigation is widespread now across all landholding groups. In the World Bank's LSMS survey in 1998, 78 per cent marginal, 70 per cent small, 57 per cent semi-medium, 54 per cent medium and 59 per cent large farmers report all (100 per cent) of their land as irrigated at least once in the year. Public data also shows that 61 per cent of NSA in Bihar is irrigated against the national average of 40 per cent. But irrigation intensity remains low in the state. Farmers under-irrigate their crops because irrigation is expensive, though plenty of water is available at shallow depths. Almost all groundwater irrigators in Bihar irrigate from diesel pump sets, either of their own or rented. Retail price of diesel has increased rapidly over last few years while food prices have failed to keep up (see Figure 3). Price of diesel quadrupled between 1997 and 2009 while farm harvest price of paddy

and wheat increased only half as fast (World Bank, 2007). This worsening of terms of trade is one of the drivers of trends in production and yield that we observe in Bihar: the return back to slow growth after a short period of acceleration in 1980s and early 1990s. Rapid development of groundwater irrigation in 1980s unleashed agricultural growth, but it was quickly reversed by the pincer movement of falling food prices and rising diesel prices. This phenomenon was observed in West Bengal (Mukherji, 2006) and eastern UP too: two neighbouring regions with high dependence on diesel fuelled irrigation. However, the effect was deeper on agriculture in Bihar because: a) there is a greater dependence on diesel pumps and b) lower productivity of agriculture in the state to begin with. Low productivity makes agriculture more vulnerable to an input price shock.

Figure 3: Litres of diesel that could be purchased by selling one quintal of wheat and paddy



Source: Data on retail price of diesel and farm-gate prices of wheat and paddy taken from indiastat.com on 8 October 2012.

High cost of irrigation negates the natural advantage that Bihar enjoys of being water rich. The drought of 2009 illustrates how. Bihar was one of the states' worst hit by the drought. The area transplanted under Kharif paddy went down to 18 mha from the normal area of 34 mha due to the drought. After Jharkhand, this was the highest percentage reduction in area under paddy of all states. As on 12 August 2009, rainfall was deficient or scanty in 27 of the 36 meteorological sub-divisions of India. In Bihar, rainfall was 40 per cent below the normal. The deficit was comparable in Punjab (35 per cent), and much worse in eastern UP (53 per cent), western UP (68 per cent), Haryana (66 per cent) and Andhra Pradesh (46-59 per cent). Yet, the percentage reduction in area under paddy was much lower in all these other states. In Punjab, the reduction was barely perceptible in the data (0.7 per cent); in Haryana it was just 10 per cent. The figures were high for AP (29 per cent) and UP (36 per cent), yet significantly lower than in Bihar (57.7 per cent). At the national level, there was

a 20 per cent reduction in area under Kharif paddy from 341.44 mha in 2008 to 272.83 mha in 2009; in Bihar the reduction was 57.7 per cent – more than twice as high (Business Line, 2009). The reason for such a drastic decline in Bihar, and not elsewhere, we claim, is due to lack of affordable irrigation. In Punjab, farmers coped with rainfall shock by resorting to groundwater irrigation, made affordable by free electricity. In Bihar, farmers could not afford to transplant paddy using groundwater irrigation—simply because the cost of providing that irrigation was uneconomic given the overall crop economics.

Access to irrigation is the best bet against droughts and among the different sources of irrigation, groundwater from alluvial aquifers provides the most effective drought proofing (Dhawan, 1985). If so, one would expect Bihar (and eastern UP and West Bengal) to be least vulnerable to droughts. The region has rich stores of groundwater at shallow depths and a high concentration of mechanised wells to access it. But the latest data on areas left fallow due to drought shows that the reality is just the opposite: Bihar was one of the worst affected states by the drought even when rainfall deficit was not the highest there.

The economic scarcity of water in Bihar, in spite of physical abundance of the resource and investments by farmers, is the reason behind this paradox. Irrigation is completely dependent on diesel pump sets in the state and diesel is expensive. Further, cash-strapped farmers have to make upfront payment for diesel in cash. In the absence of institutional lenders, they borrow at high rates. Bihar is not only the least electrified state of India; it is also the least banked. Bihar has only one bank branch for every 13 villages and the C-D ratio is 32 per cent, against 73 per cent at the national level (GoI, 2008). High cash outlay of irrigation combined with costly and scarce credit makes intensive irrigation unviable for most farmers in Bihar.

The problem of energy squeeze and credit squeeze is only worsened by the price squeeze. Let us illustrate how. On 20 August 2009, the Agriculture Minister, Mr Sharad Pawar, announced an increase in the minimum support price (MSP) of rice from Rs 850/quintal to Rs 1,000/quintal. He also promised open market interventions by Food Corporation of India (FCI) to keep food grains prices in check and discourage speculators and hoarders. Increase in MSP of rice would have encouraged farmers of Punjab, Haryana, Western Uttar Pradesh and Andhra Pradesh—from where FCI procures bulk of rice – to invest up to Rs 4,500/ha in supplementary irrigation and other inputs to drought proof their rice crop. In Bihar, this increase in support price did not matter to farmers' crop economics because there is little procurement by FCI in the state. In year 2005, FCI procured only 7 per cent of the total Kharif production of Bihar while in AP, Haryana, Punjab, and UP, it procured 78 per cent, 64 per cent, 87 per cent and 28 per cent of Kharif production respectively.

At the same time, open market intervention announced by the government – when successful—means that prices remain suppressed in spite of scarcity. Producers of Bihar would have gained little from the first (price support) policy, but lost substantially due to the second (open market intervention). Thus, in face of a natural calamity (deficit rainfall in 2009), Bihar was unable to make good use of both nature's bounty (rich groundwater aquifer) and the federal government's generosity (raised MSP). This, we argue, is at the heart of the agrarian stagnation in Bihar.

5. Policy Imperatives

Bihar's gross state domestic product (GSDP) increased at 9 per cent per year between 2004-05 and 2009-10, and yet, the head count ratio (HCR) did not decline from a high 55 per cent. With 600 poor people/sqkm, Bihar harbours the highest concentration of rural poverty in the world. The impressive growth in the state's economy failed to make any dent in poverty because even as the overall economy grew rapidly, agriculture remained stagnant. Rapid growth in agriculture is essential for poverty reduction when 90 per cent people in the state still live in villages and 81 per cent of workforce reports agriculture as main source of income.

Government of Bihar is making serious efforts to jumpstart agricultural growth. The state's planned expenditure on agriculture has increased from Rs 0.25 billion in 2004-05 to Rs 8.44 billion in 2011-12—a thirty-fold increase. Bihar became the first state in India to constitute an agriculture cabinet with ministers from 17 departments to improve coordination in the government in implementation of agricultural projects. At the grassroots level, agricultural extension workers called *krishi-mitras* (farmers' friends) have been hired in all panchayats of the state to bring new technologies and practices to farmers. The state government is offering generous subsidies on farm implements (tractors, power tillers, harvesters, pump sets, etc.) and quality seeds and has simplified the process of accessing these subsidies. Fifty seven thousand kilometres of new roads have been built between March 2004 and March 2011, raising the road density from 78.41 km to 138.74 km. per 100 sqkm of area (www.indiastat.com) and the quality of existing roads has also improved.

All these efforts and investments, however, have failed to unleash agricultural growth in the state. Agricultural productivity remains low and variable. We propose that this is partly because there has been no improvement in power availability in the state. Power situation remains grim in rural Bihar. More than half of the villages do not have electricity and in the other half, supply is poor and unreliable. Rural electrification has to improve in Bihar to catalyse agrarian dynamism. Investing in improving rural power supply can be the most effective stimulus plan for the stagnant agrarian economy of the state. Both the state and the centre should come together to make it possible before the end of the twelfth five-year plan.

The state government's ongoing programme of subsidising diesel pump sets is unlikely to work. As several large surveys (like LSMS, 1997-98; NSSO, 1999; Thorpe et al, 2007) show, almost all of the cultivable land in Bihar has access to irrigation. What Bihar needs is intensification of irrigation and not so much the expansion of it. Intensification will take place only if the variable cost of irrigation comes down. Rural electrification will make it possible. Providing one time capital subsidy to small and marginal farmers, along with metered electricity connection at non-trivial tariff rates (thereby keeping subsidy to a minimum), much like the neighbouring state of West Bengal (Mukherji et al. 2009), will make irrigation much cheaper than the current option of diesel pumps. Provision of electricity will have several other spin-off effects too, such as investment in cold storages and agro-processing units that will enable farmers to diversify towards high value perishable crops such as fruits and vegetables.

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Mahatma Gandhi National Rural Employment Guarantee Scheme: A Critical Appraisal

Avanindra Thakur¹

Employment generation was one of the most important objective and a challenge for Indian Planning since Independence. Several decades, policies and initiations later, an evaluative retrospect hardly satisfies us in terms of achievements in this regard. Nevertheless, the decades of 1970s and 80s might be seen as exceptional decades, undoubtedly reflecting some improvements in employment conditions. A brief note of the then existing political scenario and policy regime indicates comprehensible government initiations and focus on employment generation. But the streak of silver lining proved short lived. The initiation of neo-liberal reforms since 1991 and the consequent withdrawal of the state from various activities virtually doomed the overall prospects of employment generation. The neo-liberal regime has been witnessing accelerating unemployment rate as well as deteriorating employment conditions. An improvement in the existing condition was deemed necessary and the enactment of a 'right' based employment programme was the need of the day. The culmination of intellectual engagement found its creative manifestation in the Mahatma Gandhi National Rural Employment Guarantee Act. Time is ripe to analyse the impact of this scheme and the extent to which it has succeeded in achieving its goal. Criticisms are rampant and often correctly so about the inadequate allocation of funds, poor implementation of the programme, widespread corruptions etc. for the unsatisfactory performance of MGNREGA. Despite the well acknowledged weaknesses, the role of MGNREGA in putting upward pressure on rural wage rate, enhancement in the negotiating power of the rural labour in general etc. cannot be denied. This paper reviews the scheme and analyse its relevance in the present day context.

Keywords: MGNREGA, employment, neo-liberal reforms, fiscal and monetary policy, real wage.

1. Introduction

In a regime of neo-liberal reforms where state has continuously been retreating from an active role in the economic process, the initiation of the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGA) can be definitely termed as a well intentioned and timely exception. The neoliberal policies have been marked distinctly by the decline in public expenditure, credit availability in rural sector and massive cut in the overall subsidy in the economy; particularly in farm related subsidies. Against this backdrop, MGNREGA, despite being in contrast to the overall policy framework, is one of the most progressive

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step seen in the last two decades. Time is ripe to investigate the factors responsible for this policy initiation and to evaluate its performance and suggest remedies for inadequacies, if any, in order to have a more comprehensive, integrated and focussed targeting of the problems of rural economy.

With an introductory prelude about the overall macro-economic conditions and policies since 1991 and analysing their impact on the employment conditions in rural areas, this article proceeds with a critical appraisal of MGNREGA. This paper relies on various rounds of National Sample Survey (NSS) reports for the all India scenario and the primary data draws on a household survey conducted by the author in some of the villages in Katihar district in Bihar during the first half of 2012. The change in the overall employment conditions vis-à-vis the initiation of MGNREGA would be emphasised by looking at the trends and patterns evident in employment related data and reports on MGNREGA in the period since its start in 2006. The field based analysis of MGNREGA and its impact would provide a critical vantage point to analyse the policy and its actual implementation. The concluding part of the article suggests some measures in order to have more adequate and long term redressal of the employment related problems prevailing in rural India.

2. Situating MGNREGA: Macroeconomic Policy and Employment Conditions post '91

2.1 Employment Conditions Prior to the Enactment of MGNREGA

Broadly speaking, during the last three decades the developing world has been witnessing the ascendancy of market led reforms and India has been no exception. The implications of the globally ascendant neo-liberal policy regime for the employment scenario and overall well-being of labour have generated much debate both in favour as well as in opposition. Persistence of high levels of unemployment in different regions of the global economy during the recent decades of neo-liberal reforms lends strong support in favour of the view that the macro-economic policies based on such doctrines are hardly consistent with a progressive employment agenda, even in the structurally more advantageously placed economies. As is well-known, one of the major premises of neo-liberalism is the argument that in the case of developing countries, the inward looking capital-intensive import substitution policy has resulted in a bias against agriculture and other employment-intensive activities, with respect to both the domestic and external markets and thus labour utilisation had been well below potential. It has been hoped by the advocates of neo-liberalism that the market reforms would rectify this bias and facilitate a surge of investment, both from domestic and foreign sources, in labour-intensive projects with significant export-orientation. However, all the available evidence since the ascendancy of the neo-liberal economic policy package leave very little scope of optimism about greater labour utilisation in the global economy, through changes in the structure and intensity of employment.

The developing world provides overwhelming evidence of very low employment elasticity in recent years, thus supporting the view that the employment elasticity of whatever growth that has occurred in the recent years has been extremely low. Based on a careful survey of the relevant literature, Chandrasekhar and Ghosh (2002) conclude: "what is striking is how

most of the employment elasticities appear to be. Even more striking is the negative elasticities that emerge in some cases, also in a range of manufacturing sectors that are typically thought of as being labour-intensive". The study also reports that employment scenario for aggregate industry, rather than just manufacturing, has been as grim during the period under consideration. The conclusion that emerges is: the period of globalisation and liberalisation has been far off the mark in creating a conducive scenario from the point of view of employment expansion. Clearly the hopes of the advocates of neo-liberal market reforms seem far from being materialised.

In the Indian context, by all accounts, the post reform decades provide a progressively grim depiction of employment scenario across all sectors of the economy. The rate of employment generation during the recent years has fallen considerably and the unemployment rate, on current daily basis, as per the NSS rounds, went up to over 9 per cent in 2004"05 (NSS 61th Round) from around 6 per cent in 1993-"94 (NSS 50th Round). Moreover, during the entire period of planned development, not unexpectedly, increase in the incidence of unemployment has been sharper for relatively more vulnerable social and economic groups. Various major data sources such as the Economic Census of 2001, Population Census of 2001, Employment Exchange statistics for different years, the various rounds of NSS etc., have acknowledged the increasing gravity of the unemployment problem.

A careful gleaning through the numbers unmistakably brings forth the fact that the challenges of labour absorption for Indian economy have been further aggravated in the post reform era. Moreover, even the traditional parking lot, namely agriculture, has been unable to perform the function of the residual sector and the rural areas have borne the brunt of sharp deceleration in employment generation. In fact, the much talked about process of diversification of employment from the mid-1970s to the late 1980s, away from agriculture and primary activities towards a variety of non-agricultural avenues, primarily through the generation of employment in public sector as well as promotion of suitable environment for non-agriculture self employment, has tended to come under pressure and the growth of latter has also slowed down considerably. As is well known, it was primarily on account of very significant acceleration in public expenditure in rural areas in 1970s and 80s that the above noted diversification had gathered momentum. However, the 1990s witnessed a policy shift for the worse in this regard.

Factors like substantial compression of rural development expenditures, increasing input prices, vulnerability to world market price fluctuations due to greater openness, inadequate /non-existent crop insurance and substantial weakening of the provisioning for credit, along with the governments' apathy to the demand for remunerative prices for farm produce are among the obvious causal correlates of decline in the labour absorption in the rural economy as a whole (Sen, 1996; Patnaik, Utsa, 2007; Jha 2007; Chavan, 2004; Chandrasekhar & Ray, 2004; Patnaik, Prabhat, 2007).

During the period from 1991 to 2004"05, the condition of rural employment has not been much different from the overall scenario and was marked by relatively worsening trends. This is also evident in the trends and patterns of rural wage during this period. The rate of growth of real wage for the period since 1991 has not been impressive in spite of some rise

in the real wage during the decade of 1990s. The growth of real wage rate shows a definite pattern and strong correlation with various policy related factors. For instance, with the increased government spending in rural areas, the decade of 1980s witnessed a sharp rise in the rural wage for both agriculture and non-agriculture sector. The macroeconomic instability of late 1980s had halted this trend and for the period from 1987 to 1993⁹⁴ there had been sharp deceleration in the real wage rate for both these sectors in the rural areas. However, from 1993⁹⁴ to 1999²⁰⁰⁰, the rural economy witnessed some acceleration in these wage rates which was partially the base effect and partially because of the long term stagnation in nominal wage of rural labour and consequently their raised voices against it. This acceleration did not sustain for long and during the next period from 1999²⁰⁰⁰ to 2004⁰⁵ there was a sharp deceleration in the real wage rate in both the agricultural and non-agricultural sectors. During the entire period from 1987⁸⁸ to 2004⁰⁵, the rate of growth of real wage on an annual basis was substantially lower than what had been observed for the period from 1993⁹⁴ to 1999²⁰⁰⁰. Quite expectedly, the deceleration of real wage in rural areas affected the absorption capacity quite adversely. Sure enough, the deceleration of real wage in rural areas has a lot to do with the decline in the absorption capacity of the farm sector as well as lack of non-farm employment opportunities during the reform period. Deficiencies in the demand for additional labour, in obvious ways, were the effect of contractionary fiscal and monetary policies that have been given paramount importance under the neo-liberal reform period.

2.2 *Employment Conditions After the Enactment of MGNREGA*

After the defeat of the National Democratic alliance in 2004, it became increasingly clear that a significantly large proportion of the Indian population did not find 'India Shining', in spite of the announcement of large scale infrastructural projects, some of which even targeted to the rural areas. However, the political necessity of the hour was aptly identified to be the direct targeting of the lower rung of the population. Under the pressure of some of the coalition parties, the newly formed government of the United Progressive Alliances initiated the right based employment programme in the name of National Rural Employment Guarantee Scheme in 2006 in selected 200 districts and in 2008 it was extended to all the districts. This act guaranteed 100 days of employment at a statutory minimum wage for all the households who demanded manual work. In case of unavailability of work on behalf of the concerned authority, the demanding household is to be given compensation.

Though the programme was started with great enthusiasm as well as expectations on behalf of the concerned academicians and policy makers, the performance, ever since the beginning, has clearly been off the mark. The actual benefits for the target groups as well as spill over effects on the other part of the economy remained far below the potential. Nevertheless, even after accommodating several systemic as well as implementation level inadequacies, the overall impact of this employment guarantee scheme has been sufficient enough to make the period since its inception, particularly in relation to the employment conditions of rural India, a distinguishable part of the reform era. If we look at the various indicators reflecting the performance of the programme now known as Mahatma Gandhi National Rural Employment Guarantee (Act) Scheme (MGNREGA), its deficiencies are quite evident.

Table 1 shows the summary of the performance of MGNREGA based on latest round of NSS reports (66th round).

Table 1: Employment pattern under MGNREGA

	Job cards	Less than 20 days	20 to 50 days	50 to 100	100 and above	Total	Job card no work	Sought and not get	Did not seek job	Average days
Persons per thousand	347.2	102	76	63	2	242	105	193	538	37
Percentage of job cards holder	100	29.38	21.9	18.15	0.06	69.7	30.3			

Source: Employment and Unemployment Report, 66th round NSS

Till 2010, i.e. the end of the survey of 66th round, nearly 34.72 per cent of the rural population was given the job card. Of course this proportion is very high not only in terms of absolute number but also in terms of the gross labour force participation rate in rural India. There is no doubt that as far as distribution of job cards is concerned, the success rate of this programme has been impressive. However, in terms of providing employment to these job card holders, the MGNREGA remained far below the targets. In terms of percentage, it is evident from the table that only 0.06 per cent of the total job card holders got the full employment days of 100 and more days. A significant proportion of them, nearly 29.38 per cent of job card holders got less than twenty days of work. In other words, more than 29 per cent of job card holders got less than one fifth of the total number of working days that is provided in the Act. More importantly, nearly half of the job card holders did not get even fifty days of employment under this scheme. Evidently, the provision of 100 days of employment to all the interested households is nowhere near the target. More than 30 per cent of the eligible persons did not get any employment under this scheme. Besides, more than 19 per cent of the rural population sought for job and did not get any; some of them did not even get job cards. Thus, in spite of having a right based approach, the programme has hardly been able to ensure the realisation of the rights of the targeted population.

In terms of the wage rate given to these workers, the average for men and women was 90.93 and 87.20 rupees respectively in 2009"10. Thus the average wage rate for a person as a whole during the same period was nearly eighty-nine rupees. Therefore, as compared with the minimum wage rate for different states, the average wage rates for both male and female remained significantly lower than that stated in the Act itself. Nonetheless, for females, this wage rate has been much higher than the prevailing rate in rural areas for casual work other than public works.

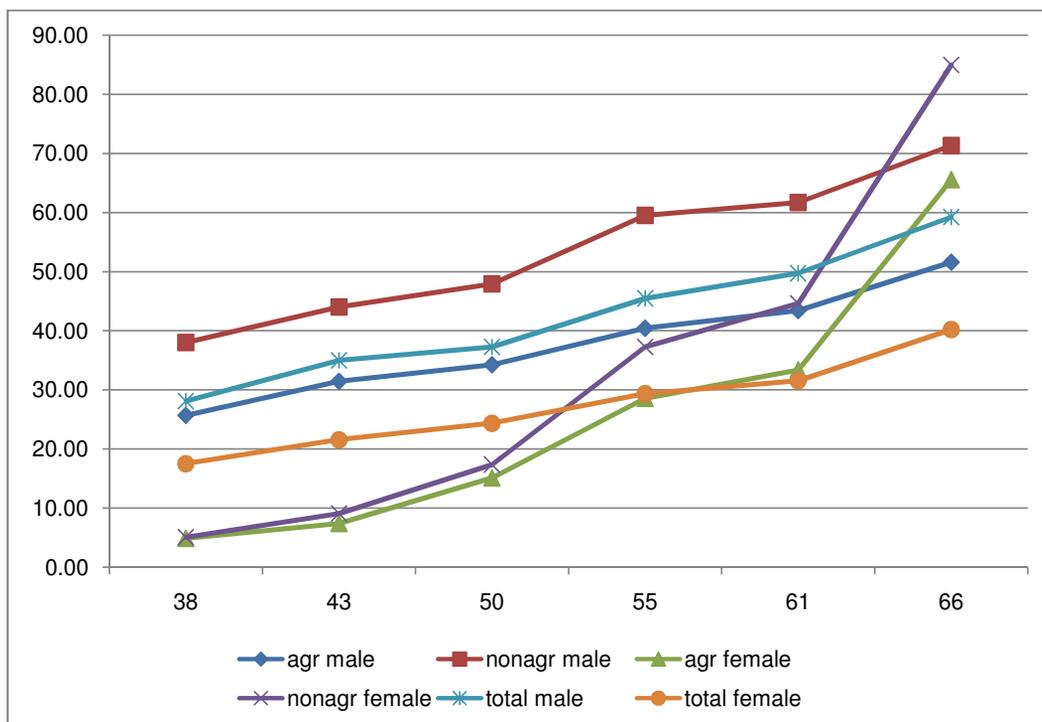
An attempt to evaluate the scheme requires a prior understanding of the basic objective of such right based approach. The role of MGNREGA could easily be defined by addressing the broad issues related to the well-being of rural labour during the neo-liberal policy regime. First among them which needed to be addressed on priority basis is the decline in

the labour absorption capacity of the entire rural economy in general and the agricultural sector in particular. Second, near stagnation in real wage rate in rural areas for male and female, both in agriculture and non-agriculture. Third, increasing growth rate of rural-urban migration and consequently worsening of living conditions of migrant population in urban areas. Fourth, in an economy where everything is getting monetized, the real purchasing power of the rural mass in general has continuously been subject to contraction. And last, given the inadequacies regarding the infrastructural facilities, decent livelihood conditions of more than 70 per cent of the country's population is hardly achievable. Therefore the need as well as focus of the right based employment scheme should have been to address these problems in an adequate manner. Thus, in order to assess the efficiency of the scheme, one should necessarily look at the performance of MNREGA with respect to addressing these issues.

With regard to the first issue, it is quite evident that the initiation of the scheme improved the availability of the employment days in rural areas but has hardly been satisfactory. Thus, if we look at the availability of employment days in rural areas, though there has been some improvement after the initiation of this scheme, the scale of the improvement has been far from satisfactory. The average number of days available under this scheme was only 37 days during 2009"10 as observed by NSS 66th round. Clearly, this number is little more than one third of what was mentioned in the scheme as the minimum provision. So, in terms of generating sufficient days of employment which would be adequate to compensate the decline in the systemic labour absorption capacity in rural areas, MGNREGA has had a limited impact. Nevertheless, in some regions the performance of the scheme attained appreciable results.

On the second front, i.e., on the issue of stagnant real wage in rural areas, the impact of MGNREGA has really been significant. In spite of the fact that the enactment of the scheme was not sufficient enough to bring about tightness in the labour market, it remained instrumental in raising the floor wage rate in rural areas in both farm and non-farm sectors. As may be seen in figure 1, there has been a sharp rise in the real wage rate in rural areas for both males and females in agricultural as well as non-agricultural works during the period 2004"05 to 2009"10. Further, the rate of rise has been significantly higher for females in both agricultural and non-agricultural works. This is not unexpected, as under the scheme there is the provision of same wage rate for males as well as females. And even in realisation, the gap between male and female wage rates under the scheme remained more or less moderate and within an acceptable range. Till 2004"05 the real wage rate for females was much lower as compared to their counterpart, and therefore, with the provision of equal wage for males and females, the wage rate for female workers rose at a much higher rate than that of male workers.

Figure 1: Growth in the real wage during the last three decades in rural areas



Source: Various rounds of NSS reports.

On the issue of migration, the impact of MGNREGA has been significantly lower than expected. The generation of additional employment as well as income under this scheme has been too low to curb the rate of growth of migration. In other words, the additional income generated under this scheme nowhere matched the income of the rural migrants. Thus, migration to urban areas remained an important labour strategy to ensure decent livelihood conditions in rural areas. Nonetheless, the NSS report on migration in 2007-08 reflects a clear deceleration in the growth rate of migration during recent period. This deceleration can be identified in obvious ways as an impact of MGNREGA and thus to a certain extent, it still holds the promise of casting a significant impact on the incidence of migration, if implemented at a high level of efficiency.

Last, the requirement of having better infrastructural facilities has been the least addressed issue. Inadequacies in infrastructural development under this programme can be explained through two perspectives. Firstly, the primary objective of the scheme being generation of employment as well some kind of Keynesian multiplier in the rural economy, the role of the MGNREGA in creating asset and developing infrastructure at the village level largely remained ignored. Second probable cause is the high level of corruption involved in the scheme. In most cases, this led to improper planning as well as underutilisation of workers. Further, since a major part of the working days are only provided on paper and not at the

actual ground level, the level of work actually done and shown in the official paper has been substantially different, both in quantity as well as quality. Furthermore, given the restriction in the use of machineries in any construction project, the work performed under this scheme itself suffers from severe limitations, both in terms of quality as well as quantity. In other words, mostly the work performed under this scheme remained limited to soil work and failed to generate sustainable or durable assets in rural areas, except a few localities where some collective efforts have been successful in creating quality infrastructural development. But one can hardly view the scenario with much optimism.

3. Observations from the Field

To develop a nuanced understanding of the issues related to the well-being of the labour discussed in the forgoing, this article will bring forth the observations made during a field study and attempt to have a realistic understanding of the situation. This section is based on a survey of randomly selected 466 households from five villages in Katihar district of Bihar during the first half of 2012.

3.1 Socio-Economic Conditions of the Rural Masses and the Need of MGNREGA

Of the total sample of 466 households surveyed, 298 were interested in MGNREGA work. Therefore, in this analysis only those 298 households are included. Of the 298 households, most were either landless labourers or marginal farmers having operational holdings less than two acres. Broadly, their income constituted four parts: agricultural income, wage earnings, income from migration, and wage income under the MGNREGA. It is important to look at the economic conditions of these households in order to judge the relevance and impact of MGNREGA in this region. In other words, the need and performance of MGNREGA can only possibly be evaluated if an attempt is made to understand the real economic conditions of rural masses in general and rural labour in particular.

In case of agricultural income, it was clear from the survey that the profitability of agriculture has declined significantly over the years. The decline is primarily accounted for by the increasing cost of production (as the cost of fertiliser, seeds, weedicides etc. rose significantly) on the one hand, and the decline and fluctuations in prices of various farm output on the other. Depending on the quality of land, the income per acre of land has remained in between 5,000 to 9,000 rupees. However, the profitability also depended on the level of capital investment by the farmers because farmers were not able to use adequate inputs in proper proportions due to lack of funds.

It was very clear from the survey that agriculture has lost its capacity to sustain a family and to provide basic needs even in case of holdings of more than two acres. In some cases, it was found that small land holders with more than five acres of land had gradually started either leasing out or even selling their land in order to sustain their families. All of them reported that the cost structure and the low sale price of their produce made agriculture unviable. All of them generally sold their produce just after harvesting and often the rate that they get is as low as half of the minimum support price fixed by the government for the concerned crop. Therefore, most of the farmers have resorted to sustainable cultivation,

only to meet their food requirements and show little or no intention of selling their produce in the market. In almost all the surveyed areas, it was found that farmers were reluctant to use cash crops or high value crops in order to generate more profit from a given small unit of land, especially because of low level of infrastructure and the absence of any guarantee of minimum support price of these produces at the time of harvesting.

In case of wage earnings, the problem was not much different. People were not getting sufficient working days in rural areas. This can be primarily attributed to three reasons. Firstly, limitation to labour requirements in the process of farming, i.e., not more than ninety days of work were available in the agricultural sector for a year, accompanying with the tendency of the farmers to use family labour as much as possible to avoid high labour cost. Secondly, excessive use of weedicides in all categories of farms has contributed significantly to the decline of labour absorption in the agricultural processes in general. Thirdly, lack of non-farm activity in the rural areas as a whole during the recent period has also weakened the possibility of getting out of the farm employment. This is also, to a certain extent, reflected in the lack of public work, particularly low level of infrastructure development in villages. Lower availability of works both in the farm and non-farm activities have been responsible for unsustainable annual wage income not only for landless labourers, but also for marginal and small farmers who supplement their agricultural income with wage income.

The level of agrarian distress in the villages automatically aggravates the possibilities of out migration from the villages. This is also quite evident in the survey itself. More than half of the households of the total sample stated that at least one member of the family has resorted to migration”either seasonal or permanent in nature. However, migration in itself did not solve the problem. These migrants reported that they were not able to get employed in the organised sector and remained attached with the unorganised sector with low wage rates. Moreover, in case of migration in rural areas, these migrants were not getting sufficient days of employment. Therefore their income from migration was not only insufficient but also declining over time. The majority of the migrants undertook migration only for a period of two to six months, which happened to be the slack season in terms of employment in these villages. Clearly, the fundamental factor behind such migration was not the attraction of better jobs outside the village economy, but the lack of employment availability in villages. A careful observation of the period of migration clearly reveals that more than 90 per cent of the migration takes place seasonally between July and October. This is the period in which the employment availability in the farm sector has been minimal. Further, during this season, mostly paddy is cultivated and in recent period, the demand for male workers in the paddy cultivation has declined significantly.

The main factor behind such a decline has been the extensive use of weedicides in the cultivation process. Initially inter-culture and field preparation were the major sources of male labour demand and most of the demand for transplantation and sowing was fulfilled by female workers. However, in recent times, with a sharp rise in the use of weedicides, inter-culture and field preparation became almost a labour-free activity. Thus, in the said period, the seasonality of migration increased significantly. Further, during the last five

years or so, the cultivation of maize gained momentum. Being a highly labour intensive crop, maize cultivation has created additional demand for labour in the *rabi* season. Therefore, the incidence of migration during this season has been low. Less than five per cent of the total migrants are out of the villages during this season. Clearly, additional demand of labour generated with rise in the acreage of maize has been instrumental in the shift to seasonal migration and raised the seasonality component of migration. Nonetheless, the cropping pattern presently witnessed in these villages has created huge employment gap for around four to five months mostly from June to October and in this period August, September, and October show negligible demand for labour. In effect, for about six months straight, from June to November, the demand for male labour is negligible.

Quite evidently, the survey reveals that these villages are suffering from severe distress and this is not only true for marginal farmers and the landless, but also for the small and to some extent large farmers. Further there is a near absence of employment availability for a large part of the year, in addition to declined employment availability during the entire year. Income of the farmers, who are mostly marginal or small land holders, has been far from adequate and often needed some supplementary income to have a command over decent livelihood conditions. Hence, these situations give rise to the need of the enactment of MGNREGA, which in these circumstances expected to generate additional employment and income and thereby check out migration. The question arises that how far MGNREGA has been successful in addressing these problems?

3.2 The Impact and Assessment of MGNREGA in the Survey Region

A look at the performance of MGNREGA in the surveyed villages does not inspire much optimism. The average days of employment under MGNREGA remained below twenty days. Since the labourers were generally illiterate, they were not able to get the desired benefit from the scheme. In some of the villages, no type of work was undertaken. Nevertheless, the job cards were full of signature.

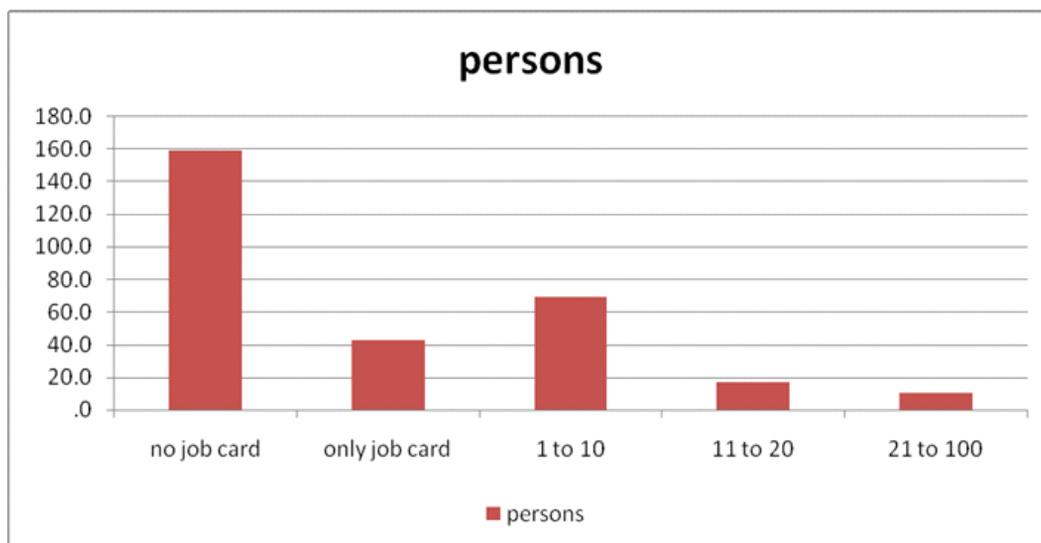
Table 2 (and figures 2 and 3) show that nearly 53.36 per cent of the total persons, in spite of being interested in work, did not possess job cards. Even holding of job cards did not ensure employment to more than 14 per cent of persons. Only 3.36 per cent of the total of 298 workers got more than twenty days of work. Of the total job card holders, nearly 31 per cent of workers did not get work and as high as nearly 50 per cent of them got less than ten days of work under this scheme for the year 2011-12. The limited success of this scheme in this region is reflected in the fact that only little more than 7 per cent of the job card holders got more than twenty days of work and an insignificant proportion of them got 90 or more days of work under MGNREGA during 2011-12.

Table 2: Distribution of persons according to the number of days of MGNREGA work

Number of days	Persons	Percentage of total	Percentage of total working
No job card	159.0	53.36	
Only job card	43.0	14.43	30.94
1 to 10	69.0	23.15	49.64
11 to 20	17.0	5.70	12.23
21 to 100	10.0	3.36	7.19
Total	298.0	100	100

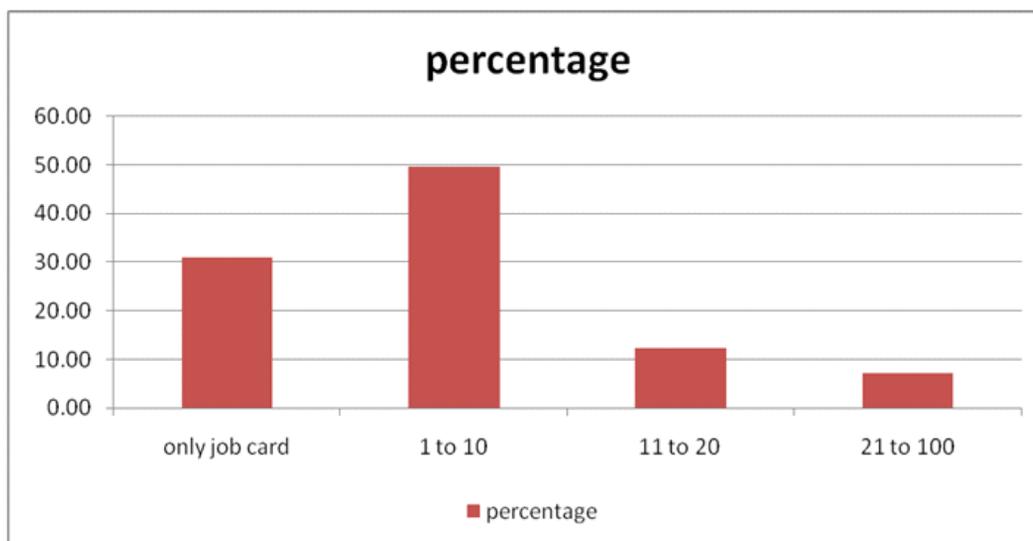
Source: Field survey.

Figure 2: Distribution of workers according to number of days worked under MGNREGA



Source: Field survey.

Figure 3: Percentage distribution of persons according to number of days of MGNREGA employment out of total job card holders



Source: Field survey.

The wage rate in the MGNREGA work does not hold out much hope though the situation has been comparatively better to that of the number of employment days made available for job card holders. Nearly 28 per cent of the total workers who worked under the scheme, got less than 100 rupees of wage per day and little more than 52 per cent of them got in between 100 and 120 rupees. Further, slightly lower than 18 per cent got the wage rate between 120 and 140 and nearly 2 per cent got more than 140 rupees. In other words, nearly 72 per cent of those who worked under MGNREGA got a wage rate higher than 100 rupees per day in these villages (see Table 3, Figure 4 and Figure 5). The prevailing wage rate in agricultural operations in these villages was less than 100 rupees per day prior to the enactment of MGNREGA. Further, it is not very difficult to trace the movement of local agricultural as well as non-agricultural wage rates during the last three to four years. There is clear evidence that the wage rate in local operations for both males and females moved with a certain lag along with the MGNREGA wage rate. In other words, the MGNREGA wage, being much higher than the prevailing rate in the rural areas, has been instrumental in raising the floor wage rate for the entire rural economy of this region. Since the female wage rate was much lower than the wage rate given under MGNREGA, a sharp rise in the wage rate for female workers has been experienced during the recent period in these areas.

Thus, there have been two major impacts on the prevailing wage rate in the economy with the enactment of MGNREGA. Firstly, the gap between the MGNREGA wage rates for males as well as females lowered over the last two or three years and therefore a significant rise in these rates were observed in the survey. And secondly, during the last three and four years the MGNREGA wage has itself risen, putting further upward pressure on all kind of wage rates other than the MGNREGA. Indeed, in the last three years, on an average the

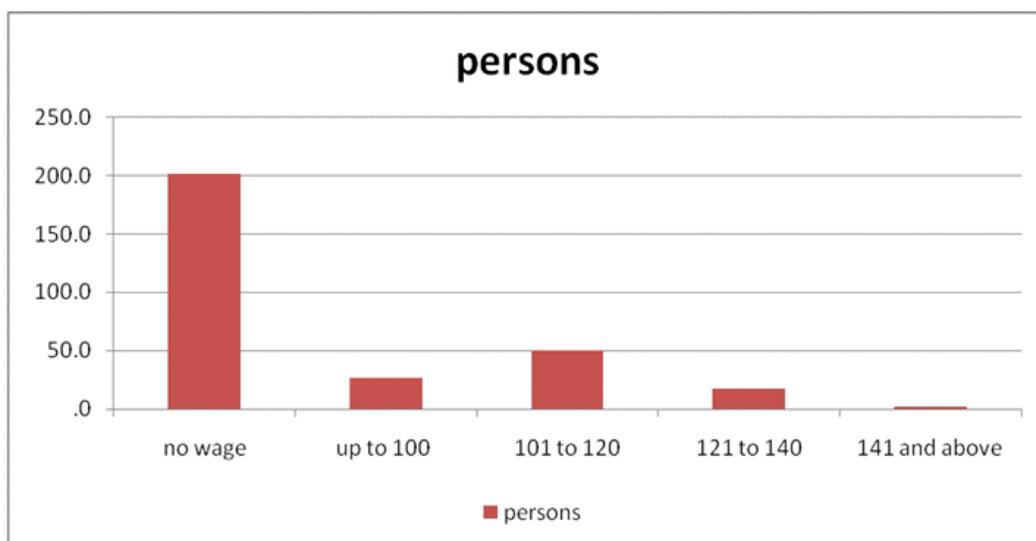
local wage rate in almost all the villages under this study rose by nearly 50 to 70 per cent in line with the rise in the MGNREGA wage over the same years. Thus, similar to the national experience, this region also witnessed a sharp rise in the wage rate for males and females in both farm and non-farm sectors. This rise is attributed to the fact that the enactment of MGNREGA has raised the floor wage rate in rural areas to a much higher level than what had prevailed prior to the enactment of the same. Sure enough, the success of MGNREGA on this aspect has been far reaching than on any other aspects of rural life and for rural masses in general.

Table 3: Distribution of persons according to MGNREGA wage

Wage rate	Persons	Percentage of total	Percentage of total working
No wage	202.0	67.79	
Up to 100	27.0	9.06	28.13
101 to 120	50.0	16.78	52.08
121 to 140	17.0	5.70	17.71
141 and above	2.0	0.67	2.08
	298.0	100	100

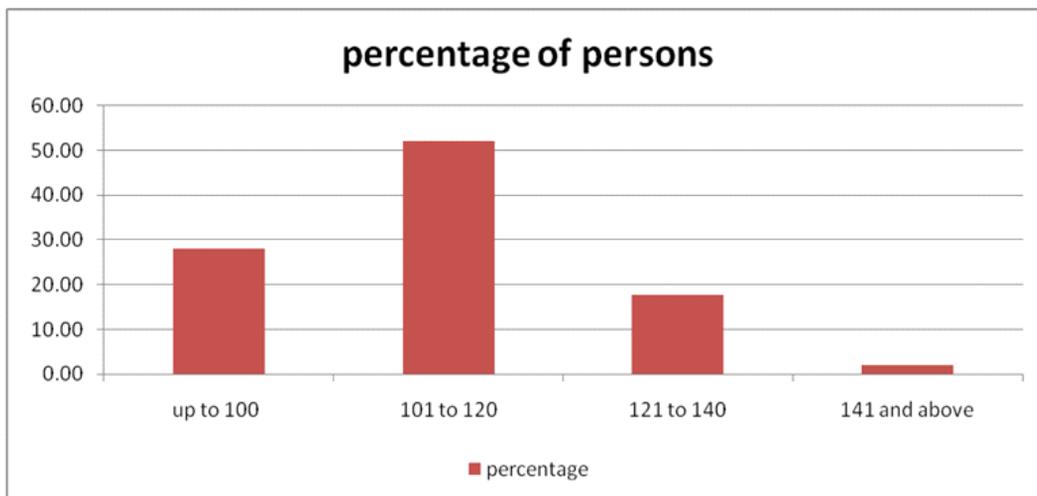
Source: Field survey.

Figure 4: Distribution of persons according to MGNREGA wage



Source: Field survey.

Figure 5: Percentage distribution of persons according to various MGNREGA wage group out of total working under MGNREGA



Source: Field survey.

The survey also conforms to the all India experience about the limited performance of the scheme in generating sufficient amount of additional income for the poor working class in rural areas and in lowering the rate of migration in these villages. Given the extremely low provision of working days, this scheme remained far below its potential in addressing some of these issues in general. Table 4 and figure 6 show that only 3 per cent of the total persons working under this scheme got more than 10,000 rupees and more income and nearly 50 per cent of them got insignificant amount of additional income through this scheme. In nutshell, more than 86 per cent of the total workers in MGNREGA got less than 2,000 rupees as total wage income.

Sure enough, this meagre additional income generated through MGNREGA has been far from sufficient to help a substantial proportion of the rural masses at the margin to move out from their distressed economic conditions. Further, the amount provided under the scheme also proved to be inadequate in having any permanent impact on the migration pattern in these villages. From the survey, it can be observed that most of these works were provided during the *rabi* agricultural season in which availability of farm employment is not very low. Instead of providing employment in relatively slack agricultural season such as between June and November, the actual provisions were made during February and March in which maize cultivation already accommodates a substantial proportion of rural labour. Ironically, on being enquired, one of the panchayat representatives replied that during the agricultural slack season most of the workers migrated from the villages and this made it difficult to implement any work during this period. Since most of the workers returned during the period of maize cultivation, it was easier to get workers for MGNREGA works. In fact, the number of days of employment provided in this scheme has been too low to prevent people from migrating. A provision of 100 days of work might have lowered

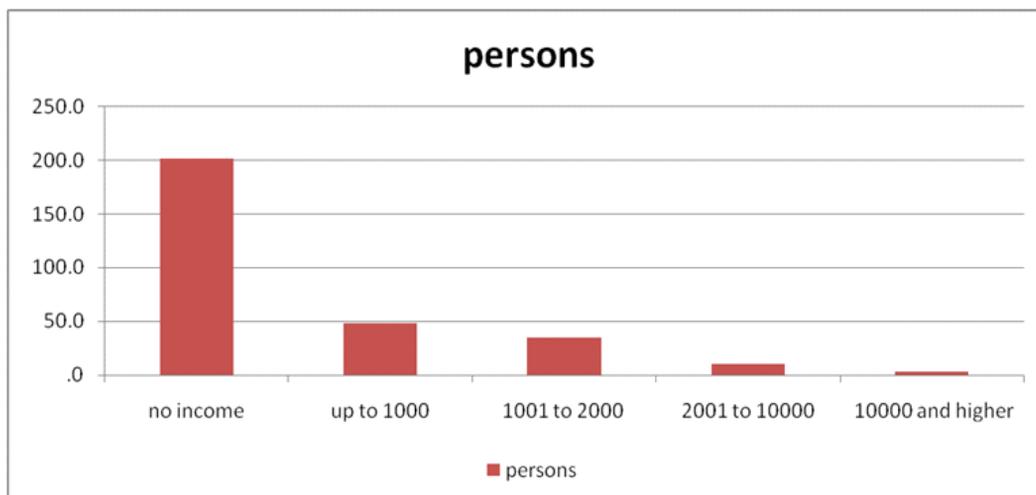
the incidence of migration to an appreciable extent but that also seems too ideal to be true. Besides, it is not migration which is the reason behind the unavailability of workers. Rather, it is the unavailability of adequate number of working days under MGNREGA which is responsible for not having significant impact on the rate of out-migration from these villages. The migrants did not find sufficient incentive for staying back in the villages during the agricultural slack season because they knew that the availability of employment under this scheme is not at par with what they get from migrant work.

Table 4: Distribution of persons according to various MNREGA income group

Wage income	Persons	Percentage of total	Percentage of total working
No income	202.0	67.79	
Up to 1,000	48.0	16.11	50.00
1,001 to 2,000	35.0	11.74	36.46
2,001 to 10,000	10.0	3.36	10.42
10,000 and higher	3.0	1.01	3.13
Total	298.0	100	100

Source: Field survey.

Figure 6: Distribution of persons according to various MNREGA income groups



Source: Field survey.

Within the village, benefits of the scheme were unevenly distributed across different social and political segments. The panchayat being the nodal agency of its implementation, the role of its head in allocating the benefits of MNREGA has been extremely important. In this context, personal relationships have been instrumental. The community or group of individuals having a close relationship with the panchayat head undoubtedly reap higher benefits from this scheme. For instance, the villages under the survey were dominated by the Other Backward Caste (OBC) group and their influence in getting employment under this scheme was clearly visible during the survey. The accessibility of Scheduled Castes and Scheduled Tribes to this programme has been dismal. The average number of days for these two groups has been significantly lower than that for the OBCs. Even within the OBC group, people closely associated with the panchayat head remained the top beneficiaries of the scheme. The upper caste, in this region, numerically a minority and relatively stronger in economic terms, has not been significantly participative. However, the established social hierarchy did not prevent them from fetching sufficiently higher days of employment than any other caste group.

4. Some Concluding Remarks

Despite a great deal of variation in the actual need and performance across different regions and states, a few general conclusions can be drawn with regard to the broad dimensions of MGNREGA. First among these has been the fact that this scheme was initiated at a time when the entire rural India was witnessing severe distress in employment conditions such as decline in the absorption capacity of the farm sector, near absence of non-farm employment, almost stagnant rural real wage for more than a decade, a high degree of underemployment as well as disguised unemployment along with increasing rate of rural unemployment etc. The need for such a right based employment scheme was inevitable from the perspective of providing decent livelihood conditions for the rural masses in general and rural labour in particular. However, in terms of implementation, there have been serious deficiencies across all regions to varying degrees. The poor implementation has limited the achievement of the actual goals as well as objectives as was conceived during its inception. Therefore, the impact on the whole remained much below its potential.

The most important issue which needs urgent attention with respect to MGNREGA is the provision of sufficient number of employment days during any year. The corruption involved in the implementation of this scheme should be checked with utmost exigency. To counter the problem, the Government has attempted to take effective steps like direct transfer of funds to the Panchayat and more precisely to the account of job-card holders, provision of social auditing etc. Greater decentralisation of policies and funds along with awareness campaigns in rural areas and stronger and effective social audit would definitely prove beneficial in countering the problem of corruption. At least 100 days and nothing less than that would make this scheme worthy. Direct transfer of money in the account of workers would be an appreciative step in this regard. Focussing on the better functioning and targeting of MGNREGA is very important not only with regard to providing employment in rural India and reducing poverty but also to make rural economy self-sufficient and developed.

Any scheme enjoys the taste of success only when conceived with proper planning and implemented with a view to achieve perceivable quality work. In fact, careful execution of the former ensures the latter. Since there was a lack of long term planning within the villages regarding implementation, the quality of assets created under the scheme was not satisfactory. In most of the villages, *kachchi* (unpaved) road and ponds were constructed without analysing their requirement and sustainability in the long term. Ponds were dry for more than three months. So, when there was demand for water, these ponds were not able to meet the demand. Moreover, there is a limit to having such ponds in the villages. In such cases, long term sustainability of the scheme in creating assets, has been limited under the present structure and nature of work in the scheme itself. Besides, the assets created under the scheme have not always been sufficient to raise the productive capacity of villages. In other words, they have been static in nature and have generated employment and income only during the period of implementation. They have had a very limited role in generating future stream of income and prospects for the villages or the entire rural area as a whole. In sum, the type of work undertaken in the scheme is questionable on the grounds of sustainability, enhancement of productive capacity, fulfilment of local demand, and long term viability.

Achievement of these goals is a great challenge. In this regard, some measures can be suggested. Firstly, proper long term as well as short term planning to address the need and potentials of the concerned village is very important. Infrastructural need of the villages should be identified on the priority basis and ordering of the need of that infrastructure should be mentioned under village level planning.

There is no need to stick to works like digging ponds, making *kachchi* roads etc. Instead a large number of works should be undertaken, based on an ordering of priorities including ‘*pakki*’ (construction works using brick, cement etc.) works. A comprehensive and integrated approach towards irrigation needs to be taken under the scheme. If major irrigation work is not feasible, then a large number of minor projects targeting small and marginal farmers should be included under the scheme. Judicious linkage of *Pradhan Mantri Gram Sadak Yojana* (a national scheme providing good all-weather road connectivity to unconnected villages) to MGNREGA can also be a useful endeavour provided it maintains the minimum requirement of labours and employment of local labourers. If a pond is made out of the funds under the scheme, it should be ensured that along with adequate irrigation for a whole year, fisheries are also promoted as an additional occupation. Some other infrastructural projects based on local level demands such as levelling of lands, development of community land as productive assets, building of cold storage or simple grain houses etc. should also be undertaken based on comprehensive planning.

Thirdly, in order to raise the productive capacity of the villages, an altogether different approach is needed. The work under the scheme should not be restricted to develop infrastructure. Rather, it can be used to generate direct employment such as promotion of food processing industries at the individual level. With the help of funds allocated under MGNREGA, a grain bank at the village or block level can be created. Instead of allocating cash wages, these workers should be provided with certain amounts of food grain so that

they can sell these grains after processing and earn a higher income than the direct wage. It will not only generate employment at a point of time, but also enable them to generate a future stream of income. Secondly, the creation of a grain bank would create sufficient demand for food grain at the village level itself and raise the income of concerned farmers without compromising the sale price of the products. Thirdly, it would solve the problem of food insecurity at the village level itself. Food processing should not be limited to food grains. It could also include other items such as pickles, fruit juices, chips etc. depending on the local level of production.

However, to implement all these projects, adequate development of infrastructure is needed and that should again be mentioned under the local level planning and be focused on a priority basis. Similarly, fishery development can be addressed through the MGNREGA funds and again instead of giving simple cash wage, fish worth the same amount can be given to the workers to sell in the nearest market. Along with this, horticulture development can also be undertaken, subject to the local conditions. Notably, this region being water abundant possesses great potential for fishery and horticultural development. Furthermore, a co-ordinated approach among villages, blocks and districts in order to identify and address more demands at a broader level shall have to be undertaken. More precisely, small power projects, canals for irrigation purposes, embankments in order to control flood, or other projects depending on regional requirements can be considered under the project.

Lastly, it might be appropriate to suggest that the labour hours of the workers be considered as their asset. Using their labour power as collateral, banks and other institutional credit providers could provide them with adequate credit for self-employment activities and development of skills. Moreover, imparting skills to the workers requires a comprehensive skill development programme by the government to render the unskilled labourers capable of generating higher and more sustainable incomes in the long term. The initiation of MGNREGA is a welcome step in improving the lot of the deprived majority of the Indian population. A careful reappraisal of its functions, a focussed approach towards its implementation and a careful evaluation of its impact at regular intervals holds the prospect of contributing to the overall development of the Indian economy as a whole by making rural India self-sufficient and the centre-stage of the development process.

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New Seed Policy as a Source of Oppression or Liberation? A Political Economy Perspective from Chhattisgarh Agriculture post 1990

Sejuti Das Gupta¹

This article brings out how the consequences of the shift to the neoliberal policy regime, in the context of Indian agriculture, are refracted through social status and economic position. It is argued that the upper caste-class combine is able to further entrench its rule-cum-dominance and expand its influence. At the other end, those clustered at the bottom of the caste-class hierarchy are further squeezed into an increasingly servile and exploitative position. The outcome is the subversion of equity and inclusive growth and development, the very promise of the new policy environment. This argument is built with reference to Chhattisgarh agriculture in the post reforms phase of the early 1990s.

Keywords: Neoliberalism, seed policy, agricultural classes

1. Introduction

An envisioned goal of the logic underpinning agrarian neoliberalism is the augmentation of farm incomes through enhanced production and yield by making available better quality and a greater variety of inputs under a free market regime. The question considered in this paper is how this policy shift affects rural classes-big farmers, landlords and small farmers-in Chhattisgarh: have they gained from the privatisation of inputs and if they have, whether these gains have been uniform across the social and economic stratum. This is investigated from a political economy perspective. Evidence presented is drawn from district and village level qualitative fieldwork conducted over three months in six districts of Chhattisgarh state. The stakeholders interviewed included farmers, academicians, political leaders, activists, journalists and bureaucrats. One proviso though needs to be stated at the outset itself: academic writing on agriculture is limited as other sectors like mining and industry have gained precedence in Chhattisgarh economy and political discourse.

This paper is organised in the following manner. The following section reflects on the transformation of the Indian seed sector in the 1990s and the response of the farming classes to the changed context. This section makes clear that policy's impact is mediated by a strong socio-economic position, among other factors. Thus, it becomes necessary to delineate the class structure in rural Chhattisgarh. This is done in the third section. The section also shows how new avenues of dependency are created and new opportunities get captured by the existing elite to further consolidate their social prestige and economic domination. Based on field findings, it is established that new inputs introduced through

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seed policy have acted as tools of oppression for the small and marginal farmers despite being introduced as a means of liberating farmers through increased yield and higher profits. These points are brought together in the concluding section.

2. The Case of Seeds in Indian Agriculture post 1991

One defining feature of the Indian agricultural policy post 1991 is 'input centrality'. This is a clear shift away from the social justice agenda implicit in the land redistribution of the 1960s and 70s. While the green revolution stressed on improved seeds and methods of irrigation for few specific crops, resolution of every agricultural problem in the last two decades has been addressed through better quality inputs like hybrid seeds or chemical fertilisers. While investment in irrigation and credit has fallen (Reddy & Mishra, 2009), state governments have proactively invited private players, both Indian companies and giant corporations like Dupont and Monsanto, into the domain of inputs. The following section focuses on the seed industry, but it should be remembered that the ongoing wave of privatisation is seen in the case of other inputs as well such as fertilisers and pesticides. This will come up subsequently where field evidence is presented.

In brief, it was in 1967 that the Government of India had first initiated a National Seed Project with the World Bank's financial assistance and under its expert guidance. As a part of this effort, seed processing plants were set up in 17 states with the mandate of producing certified seeds. However, this endeavour saw little success and was beset with technological difficulties, low output, low demand and high stock levels etc. Consequently, the sector was opened to private players in the 1980s as embodied in the enactment of New Policy on Seed Development in 1988. This allowed the import of certain seeds for a limited period by companies in technical or financial collaboration with foreign companies. The objective was to make available the best of seed inputs to Indian farmers to increase productivity and income.

The 2002 National Seeds Policy recognised the central role of private players in securing national food requirements, especially, in areas of seed production and export promotion. The policy sought to encourage research and development in related areas by advancing intellectual property protection. These policies symbolise a major shift from an earlier period of indigenous seed production and farmer independence. Seeds, now the property of private companies, had to be bought from the market. Kloppenburg (2010) has described this conversion of common property into private commodity as 'accumulation by dispossession'. Simply put, such legislation furthered the neoliberal agenda of pushing private sector and reducing government role in seed production and distribution.

In the same vein, the express aim of the 2004 Seed Bill is to 'provide for regulating the quality of seeds for sale, import and export and to facilitate production and supply of seeds of quality and for matters connected therewith or incidental thereto' (Saggi, 2006, p.6). It seeks to hold sellers legally accountable for quality by making registration of all seeds mandatory. This Bill has been criticised for neglecting community rights, for overlooking risks associated with GM crops by allowing them access to the Indian market and issues relating to seed pricing and intellectual property rights.

The Indian seed market is estimated to be worth \$1 billion and by 2014 India will rank third in the global seed business (Shiva & Crompton, 1998). With a 67 per cent share, cereals dominated the certified seed market in 2008-09 and pulses came in second with 20 per cent share. In the same time period, maize, oilseeds, vegetables and most importantly, cotton dominated the hybrid seed market (ibid). Verma (n.d.) has pegged the share of the private sector at 80 percent in turnover in seed. In the general case of hybrid seeds, the public and the private sectors have got into several partnerships but in the specific case of Bt and other horticultural crops, the market has been appropriated by private players. By 2004, the reach of hybrids increased manifold and covered 6 million ha of land, 83 per cent of which was sown with proprietary hybrids (Ramasundaram & Chand, 2011).

Within the public sector, the state seed corporations have gained precedence over the National Seed Corporation. They are important centres of seed breeding, distribution and not only do they circulate seeds produced by them but also buy the same from private companies for crops like oil seeds and sunflower, and circulate them among farmers. It is crucial to note how a state's bureaucracy, its political leaders and its whole machinery in general play an important role in realising and implementing such policies. For example, in Gujarat, the government encouraged Navbharat to sell BT seeds despite the patent of Monsanto, thereby allowing the illegal market to thrive. The seeds were made available to farmers at one third the price of patent seeds. This fast transfer of market share from the public to the private in the seed market has also seen quite a few smaller Indian companies making impressive profits: Nuziveeru Seeds Limited is the most important player, followed by Ajeet Seeds, Century Seeds and Eagle Seeds among others. Among MNCs, Dupont and Monsanto dominate the market.

In Indian context, Bt cotton and wheat dominate the literature on seeds. This limits a comprehensive political economy analysis of seed production and distribution i.e. how social relations and economic position determine access to scarce resources and benefits thereof. A similar argument was made by Byres (1981) in the green revolution. According to him, only bio-chemical inputs are scale neutral, whereas the new technology required high investment. He writes of the emergence of a new class of capitalist farmers who, for a variety of reasons, were able to make the most of new methods, inputs, technology and reap huge profits. The analysis presented in this paper is in the same vein: how new policies have influenced and shaped rural classes? Who has and has not benefited and why?

A select reading of related literature shows that it is not only the transnational corporations who have gained from the unleashing of private capital since the economic reforms. Shops selling established big brand and even relatively new brand seeds, chemical fertilisers and pesticides have mushroomed in suburban and rural areas. Murugkar et al (2006) have offered one explanation of how these traders have created a niche for themselves. Seed companies dealing in big brands offer a 15 per cent margin on seed price to dealers. Companies dealing in lesser known seeds offer up to 35 to 50 per cent of the seed price as dealers' margin. In the latter case, the social capital of the dealer is crucial for the products to gain prominence in the markets. Social capital is important in another sense. Small and middle farmers often meet the high cost of propriety seeds by incurring debt. Here, farmers' social ties and

personal connections with the seed dealer, a source of credit, become important. Once the loan is taken, the credit relation locks in farmers with a particular dealer. This in turn gives dealers the power to influence farmers' seed choices. This dependency is exploited by both transnational and indigenous seed companies, which try acquiring local knowledge and build informal networks so as to expand their customer base and gain market share.

Similar personalised transactions interlocking farmers and inputs have been noted by Harriss-White (2004) and Assadi (n.d.). This mechanism allowed traders cum petty producers to augment their returns and at the same time bypass the high transaction costs involved in direct supervision of agricultural production. With the brief exception of 1980s when formal credit provision improved slightly, private stakeholders have continued to dominate the credit scene and more so in the post-liberalisation phase under which more and more inputs have had to be acquired directly from the market (Ramachandran & Swaminathan 2005). Harriss-White (2004) has argued that rather than simply being construed as sources of accumulation, these transactions are also a source of general dominance. This producer and product market interlocking is also an important source of farmers woes caused due to failed crops owing to bad quality inputs. Given the higher profit margins in unbranded or lesser known seeds, dealers encourage farmers' to use unbranded seed on a part of their holding. The profits from the sale of unbranded seeds are almost three to four times of the profits made from branded seeds' sales. Illegal Bt has been a source of higher margins for seed dealers and producers and a source of accumulation. On the other hand, use of inferior inputs in the absence of public support services has resulted in failed crop seasons and indebtedness of farmers, leading to suicides in extreme cases (for example see, Ghosh, 2005; Patnaik 2003a, 2003b).

Shiva and Crompton (1998) highlight other aggressive means employed by private companies to capture the market, for instance, intensive advertising, campaigns in local languages and farmer-to-farmer advocacy by industry representatives. The governments provide financial assistance to some of these in the name of providing better quality and a greater variety of seeds available to farmers'. One specific example comes from Cargill. Cargill identifies ten fields where their seeds were used and the result was exemplary. Owner farmers of these fields speak to other three hundred invited farmers about their experience. On these occasions, experiments are also conducted to demonstrate the expected high quality output. Cargill also holds 'Intensive Customer Contact Programmes' (ICCPs) where the company holds in-depth informal long sessions with farmer groups. To cite another example of corporate marketing strategy, ITC Zeneca provides farmers with free seeds for planting. At harvest time, up to 500 neighbouring farmers are invited to a 'farm-day' where farmers relate their experience of using seeds provided by Zeneca and the attending company technical staff back these claims.

The other side of the reality is that not all farmers have benefited from the new seed policy alike. Introduction of new seeds created a demand of other kind of extension and support services which came under public purview prior to the reforms. For example, when and how much of a specific input to use and what kinds of ancillaries to use. Since the reforms, these services have been much neglected due to neoliberal diktat of reigning in public

expenditure. This vacuum has meant that it is mainly literate farmers and those with contacts in urban areas and seed companies who can put these new seeds to use more appropriately and effectively. One consequence has been the creation of a hierarchy among farmers (Assyag, 2005). Agricultural universities and state agriculture departments have failed to fill this vacuum. One indication of institutional callousness is provided by Kulkarni (2004). According to him, despite the fact that 20,000 acres of Bt cotton are sown in Andhra Pradesh and Karnataka together, no risk assessment has been carried out by the state agriculture departments, universities or even the Kisan Vikas Kendras even though in recent years a large number cotton growers have been driven to the extreme step of committing suicides due to a complex web of economic, social and political factors (for example, see Patnaik 2003a, 2003b, 2004; Ramachandran et al, eds., 2010; Reddy Mishra, 2009). In the absence of any authority to advice farmers on new crop technologies, local retailers and dealers have come to occupy a prominent position as knowledge providers.

In addition to favouring those better placed to access various factors of production, the new seed policy has also been associated with rising cultivation costs and land dispossession (Raghavan, 2008; Janaiah, 2002; Shiva & Crompton, 1998). Entering debt relations is crucial to accessing necessary investment capital for new cropping system and technologies as farmers attempt to break from poverty. Ironically, their means of pursuing betterment end up subverting the very objective, perpetuate farmers' dependent and subservient position and even force farmers to commit suicide (Frankel, 2005). Farmers are increasingly polarised as a certain section of farmers is able to invest in new seeds and other inputs and continue to accumulate and diversify, while another section of farmers is increasingly marginalised and pauperised.

Privatisation of the seed industry and the rapid proliferation of poor quality seeds is been accompanied by privatisation of other crucial inputs such as fertilisers and pesticides and in fact, their demand has increased as inferior seeds are very pest prone. Herring notes that this has lead to the spread of proprietary hybrids in a poorly regulated market (2008). How fast and extensive the spread of fertilisers and pesticides has been clearly comes out in the cost of cultivation survey data. It shows that the all-state average expense per hectare on insecticides, which worked out to less than a rupee in the 1970s and by 80s was over Rs 25, shot up by 365 per cent in the 1990s and by as much as 1,115 per cent in the first half of this decade (Raghavan 2008). According to Shetty (2004), pesticide now forms nearly 30 per cent of the cost of cultivation in southern states. Fertilisers, especially chemical inputs, account for a major jump in operational costs. In fact, overall, the input structure has diversified and become more capital intensive.

The above account leads to the crucial question of what is the social, economic and political background of these successful farmers, retailers and dealers and how does it explain their emergence and domination. Understanding this is central to a political economy treatment of the question implied in the title of this article. This is dealt with in the following section with special reference to Chhattisgarh.

3 The Chhattisgarhi Agrarian Class Structure and Agrarian Neoliberalism

The first part of this section will delineate the main agricultural classes and the second section will deal with intersection of classes with the neoliberal policy regime, specifically in the seed and to a lesser extent in the fertiliser and pesticide sectors.

3.1 Agrarian Social Structure

Given the complete absence of literature on this, the following discussion is based on fieldwork entirely. The objective was to understand how farmer interests percolate the political system and so big farmers were targeted. But during fieldwork, it became apparent that small farmers and emerging landlord were important actors in agrarian politics so excluding them would weaken any kind of analysis.

3.1.1 Traditional Big Farmers

A renowned academic scholar and a member of the State Planning Commission elaborated on the various castes and classes in the state and explained their historical roots and present position in emergent social structure. He described the big farmers as those steadily moving to input intensive cash crop cultivation. Rajgonds belonged to the traditional feudal landlord class and ruled over the tribal villages of Bastar and Jabalpur. Originally from Rajasthan, Rajgonds came to settle in Chhattisgarh via Madhya Pradesh. In post independence India, their subsequent generations were educated in the premier institutes of the national capital and even abroad. This younger generation gained access to structures of political power by entering the prestigious Indian Administrative Services. The community's early educational and political ascendancy secured it a place among the emergent elite urban intelligentsia and bureaucracy. Such erstwhile landlords have managed to manipulate the ceiling laws and they are still large landowners and over the years, they have diversified into business and cemented their political position. More generally, the *Gotias* i.e. the pre-independence regional landlords comprised mostly Thakurs (upper caste), Kurmis (Other Backward Classes) and a few Satnamis (Scheduled Caste/SC). Correlation between caste and landownership at the top is strong as seen in the case of Thakurs. In other words, the social base of the landed gentry was narrow. Irrespective of caste, these large landowners have shown upward mobility and urban migration in past two decades. For example, Thakurs originally hailed from Madhya Pradesh and Rajasthan and over the past century have settled in Chhattisgarh. As in the case of Rajgonds, these Rajput Thakurs, commonly going by the surnames of Singhdeo and Judeo, have successfully used their economic dominance to commandeer prominent political positions.

There were several instances of Chandrakars and Sahus, spread across urban Chhattisgarh. They were small contractors, auto drivers, shop owners and even bureaucrats. Drawing on Khan (1996, 2000), this preponderant petty bourgeoisie class occupies leading positions in the civil society, exerts political pressure on the state, is able to influence the distribution of rents by the state in form of subsidies, tax breaks and licenses and also stop the state from removing unproductive rents. Over the years, they have augmented their land base and in the last 15 years have successfully diversified into industrial activities. The reservation

policy has gained them access to political power as a significant number of OBCs have joined the bureaucracy. Based close to the state capital of Raipur, the Chandrakars have especially managed to cultivate and strengthen their political base and power. During fieldwork, it was observed that some members of this caste were officers, elected members of legislative assembly and even ministers in the ruling government. Big and middle farmers from this social category also hold membership of the Bharatiya Kisan Sangh, an affiliate of a right wing political party. In fact, OBCs are a trusted electoral constituency of this right wing political party (Berthet, 2011) and this is reflected in its comfort and proximity with the state at various levels. Out migration to urban areas by the younger OBC generation for educational and employment reasons is common. This trend was observed across Dhamtari, Bilaspur and Korba districts. Agriculture is looked after by the older generation residing in the villages.

As the portfolio of big farmers has broadened and they have become increasingly mobile, the phenomenon of reverse tenancy has gained ground. For example, in Bilaspur there has been a steady movement of big farmers from rural to urban areas where they are now based. These farmers lease out their land and visit their villages periodically to collect rent. Under the most common lease system, the produce is shared on a 50:50 basis, while the entire cost of cultivation including seed, fertiliser and labour are borne by the tenant. In some cases, tenants also employ waged labour. The middle and big farmers, with landholding usually ranging from 5 acres to 15 acres, who are employed in the professional and government sectors are the net lessors of land and small and marginal farmers are net lessees.

3.1.2 Emerging Urban Landlords

This was not the focus of my study at its outset but in field there were several references to urban landlords' category. While it is subject to further research, and in limited time, only some information was gathered, it was established that they are important players and are indicative of changes occurring within agriculture and in other sectors. The strict definition of farmer also becomes questionable once this category is introduced and so should be included in this paper.

This emergent class of investors, mostly based in Gujarat, Delhi or Mumbai, is buying up large land tracts of 100-200 acres as land prices have steeply appreciated in Chhattisgarh in recent times. According to one estimate, the profit margin on land has gone up by anything between 60 per cent and hundred per cent. Aside from asset accumulation such purchases serve as tax breaks since agriculture is a non-taxable subject in India. So, while technically this incipient class is a farming class, in reality they are better understood as urban investors. This feature distinguishes them from traditional big farmers who have not only retained a link with agriculture but also draw an agrarian surplus, albeit indirectly.

3.1.3 Marginal and Small Farmers

Marginal and small farmers constitute 75 percent of the total farmers in the state (GoC). There is a class and caste overlap with SCs and Scheduled Tribes (ST) owning most of small holdings in the state. Primarily engaged in paddy cultivation, a small number are

diversifying into vegetable farming depending on the availability of water. For example, in a Korba village it was seen that farmers were increasingly venturing into cash crop cultivation. This was triggered by a well in the village which made water available. The same trend was observed in a Bilaspur village with rain-harvesting facility. In fact, Bhakar et al (2007) have cited poor irrigation facilities as a reason for the prevalence of monoculture in most areas of the state.

The tribals in the northern districts mainly grow maize, rice, millet except for cashew in some pockets of the region. In Jhanjgir Champa they used to grow watermelon on the riverbed of Hasdeo river, but this has been gradually phasing out over past few years with coming in of contractors from Bihar and Jharkhand who are leasing in the land for the same purpose. Small farmers are finding it difficult to compete with the contractors and the rising cost of cultivation. Local state officials are more keen to oblige the outside contractors rather than local farmers. Overall, cropping intensity remains low due to dry agro-climatic conditions. In addition to water scarcity, irrigation remains limited in most districts. Champa, Dhamtari and Durg are the exceptions. Rapid industrialisation has depleted water resources: canal irrigation and mining activities are especially causing a shortage of ground water. Food insecurity in the state has also been a major concern in past decade. Therefore, to ensure household reproduction, these marginal and small farmers are simultaneously involved in local agricultural wage labour and migrant casual non-agricultural labour in surrounding districts, particularly Bilaspur and Raipur where urbanisation has been high. Migration is not strong in geographically remote villages due to poor transport links. Cultural factors and illiteracy is also an obstacle in accessing city jobs. This is especially true for southern districts, where there is no rail connectivity. The language that tribals speak is also different from mainstream language which excludes them further.

Debt as an instrument of survival is common: it is incurred to meet marriage, health expenses and even to make funeral arrangements. Public cooperatives and informal sources are common sources of credit, but the former is mostly used by big and middle farmers alone. Informal credit relations severely restrict the bargaining scope of marginal and small farmers in post-harvest sale. Poor physical infrastructure means high transaction costs which these farmers cannot afford. To top it, marginal and small farmers' hurry to sell produce and clear their debts which further depresses the sale price. Low profit margin in crops cultivated by marginal and small farmers is also a disincentive for self-cultivation. In other words, both spatial and structural constraints put downward pressure on crop prices.

India's agricultural crisis and the distress conditions faced by a substantive number of its marginal and small farmers finds resonance in Chhattisgarh as well (for an overview of the recent Indian agricultural crisis see Reddy and Mishra, 2009; Ramachandran et al, eds., 2010). An extreme manifestation of the crisis is farmer suicides. According to the Kisan Sabha, there have been as many as nine thousand farmer suicides in Chhattisgarh since three years.² While the state has vehemently denied this for obvious reasons (Sharma, 2012), the Kisan Sabha has established the authenticity of this figure on the basis of criminal

² It is a left wing peasant organisation and its parent party is Communist Party of India (Marxist).

records available with the local police stations. These marginal and small farmers, who had incurred debt to meet the cost of new inputs and technologies necessary for high-value cultivation, were driven to death in the face of crop failure, mounting debts, poverty and social humiliation. Despite this, the state government continues to propagate the new cropping pattern with its attendant cost and risk liability through slogans like “paddy brings poverty” (interview with a journalist, Raipur).

The above description gives an idea of the diversity of farming classes. Their history, social background, economic strategy and interests are different and in cases, even oppositional. Their development trajectories have and continue to be different and therefore, it is logical that these classes would be differentially impacted by agrarian neoliberalism and similarly, they would respond to the changed environment differently. The next section discusses this in detail.

3.2 Political Economy of Agrarian Neoliberalism: The Case of Seeds and Fertilisers

The government seed supply covers only 4 lakh hectare of cultivable land, accounting for only 10 per cent of total demand. This leaves nearly 90 per cent of farmers dependent on own seeds or private sources. Private seed companies are working hard to capture the lucrative Chhattisgarh seed market.

A senior bureaucrat explained the seed development process and the political economy of access to quality seeds from public institutional sources. The foundation seed is produced from the mother seed which has been tested in the state agricultural university. This production process is carried out annually and the new seeds are then sent to the state seed board. Around twenty seven thousand varieties come to the board. These seeds first need to be reproduced before circulation. The process of seed germination requires about three thousand hectares of land but the Seed Corporation has only five hundred hectares of land. According to another senior officer, land of seven thousand registered farmers was hired to meet the shortfall. These farmers were actually big and well-connected landowners. Once the process of germination is complete, the seeds go to the germination centre for certification. It is at this stage that contact is established between the bureaucracy and big capitalist farmers and a symbiotic relationship is formed between the two classes. Not only do these farmers have preferential access to good quality seeds at comparatively reasonable cost, but they also acquire reliable knowledge about various stages of the cultivation process. So, from the outset itself, the system marginalises the small farmers.

An interviewee noted that fertilisers and pesticides are procured from the market and seeds used for paddy are mostly indigenous. The cost of pesticides has gone up and so has the use of pesticides. Hybrid seed crops are pest prone right from the stage of sowing to cutting. As the area under these crops expanded, so did the use of expensive pesticides in desperate attempts to save the crop. Marginal and small farmers are worst affected, but while they reel under additional costs, big farmers and bureaucracy have steered the discourse towards rising labour costs which directly affects them and therefore their emphasis on the need to adopt new technologies. As put by one, the state government was ‘very corrupt and anti-people’.

Rising input cost structure is only one of the several other issues confronting marginal and small farmers. One other issue is that of timely access. While private seed and fertiliser outlets are numerous, the public sector reflects dismal performance. One interviewed farmer pointed out that the quality of seeds and fertiliser received from government sources were of inferior quality, leaving the public with no option other than approaching the private sources. Even farmer cooperative societies were not dependable since they were almost always late in provisioning fertilisers and pesticides. If agricultural output is low or bad and in the absence of other reliable income sources or any form of public support, a farmer then has no option but to sell his land in order to bear expenses for weddings, illness or education of children.

In line with the literature presented in the previous section, a senior manager of a pesticide giant described how private companies deploy an aggressive strategy of credit sourcing and personal social networks to capture and expand market share. Driven by profit motive, private pesticide companies employ agents at district level. These agents personally approach suppliers and farmers and attempt to persuade them that use of their company products will ensure a safe and big yield. This mechanism is not without coercion. Central to such 'persuasion' is a not so subtle use of social capital and deployment of credit ties. As stated previously, marginal and small farmers finance their input capital by incurring debt. Private companies take on the role of creditors. They advance inputs to farmers and allow them to defer payment till after harvesting. To ensure debt recovery, a wide network of kith and kin is used to keep tract of debtors, alongside the use of force and fear. It is this base to which new products are pitched.

A veteran of the Communist Party of India pointed out that the introduction of chemical fertilisers has given rise to a class of '*sahukars*' or traders who give loans to farmers to buy chemical inputs and machinery. Delay in debt repayment or failure to repay results in dispossession as marginal and small farmers lose their mortgaged land to traders who accumulate land. Others highlighted the pervasive penetration of traders into rural lives many of whom belonged to the Agarwal community or were outsiders as they stated. Shops dealing in agricultural inputs, including the big shops, are owned by traders-cum-creditors but few capitalist farmers have also used this opportunity to further their economic gain. So when post harvest, paddy is given to the rice mills for processing, the traders buy the rice directly from the mills.

The farmers who have taken debt from these traders are in no position to negotiate for prices, even if prices are high in the market. In pre-fixed terms, they are coerced to sell their crops in order to settle their loans and save any further accumulation of interest. This trend is seen in Champaran in Raipur, in Dhamtari and Bilaspur. These traders also operate as middlemen or '*dalaals*' in the land market where they serve as agents of the industrial class accumulating land. Their function is to see through land deals in the interests of this industrial class. Big farmers are also traders, moneylenders and input merchants who reap additional profits from new agricultural practices, especially commercial crops.

A further factor that entraps marginal and small farmers in the vicious debt cycle is the pricing of food grains by the central government. Several respondents reported that the cost of production per quintal now comes to more than two thousand rupees while the minimum support price declared by the government is eleven hundred rupees. Further, this rate is only applicable for the buying of *khariif* (summer) crops. Chhattisgarh claims to be the most farmer-friendly state because unlike most states, it is actively procuring crops from farmers. In a period, when farmers in many states are facing acute price fluctuations, the government here is protecting the farmers by direct procurement. However, in reality, this procurement is done only over three months. For nine months farmers are at the mercy of private buyers who buy the crops at less than the MSP price. As a farmer puts it 'MSP is actually the Maximum price not Minimum price we get'. This naturally acts as a disincentive for growing rice in the *rabi* (winter) season. Many mentioned the cost of cultivation of rice is not covered by the price they sell at.

It was confirmed in several interviews that, overall, the fertiliser and pesticide market is dominated by the MNC Dupont which enjoys a near monopoly status. It has successfully penetrated the rural districts. Public institutions are beset with issues of quality, efficiency, transparency and moreover, their resources are controlled and distributed by the dominant social structures occupying important positions in public institutions. For example, agrarian cooperative societies are headed by upper castes (Thakurs) or OBCs (Yadav, Kurmis, Sahus) who direct public institutional resources among kith and kin. Obviously then, this group reaps most profits because access to better seeds and fertilisers, at cheaper rates that too. The marginal and small farmers are completely excluded from this privileged circle and have to procure the same from private dealers and shops. Occasionally a Maheshwari may be peripherally included.

The following is an example of how political patronage is organised along socio-economic lines and take on a personal hue. A big farmer from Bematara in Durg district, owning one hundred and fifty acres of land, had applied to the state agricultural department for a license to open a pesticide shop. A member of the Rashtriya Swayamsevak Sangh, this farmer sported a vermilion mark on his forehead, a mark of respect and high socio-cultural and religious status. He was interviewed in Chhattisgarh during his meeting with a senior level officer in state agricultural department. He cited agriculture as the primary profession. According to him, land consolidation, new cropping patterns and technologies had made agriculture profitable as never before due to high profit margins in cash cropping. Even the younger generation keenly engaged in agriculture.

This big capitalist farmer, who is known to be close to prominent politicians, was assured by the deputy director of favourable consideration of his application. Exchange of political favours is instrumental in maintaining the existing class structure in this case. At the same time, this was a case of capitalist farmers diversifying into input shops, making good use of the new policy prescription. While not enough instances were found along this line, cash crop farmers with high income are likely to diversify into such trading and business opportunities. In interviews in Champa and Dhamtari, respondents spoke of presence of such traders who are from Rajasthan or Gujarat and investing in this sector. There was a

special mention of Agarwal traders.³ There are instances of interlocking of factor markets – operate as moneylender, own private input shops and sometimes also buy crops.

4. Conclusion

While more attention has been devoted to giant corporations, a seamless change has occurred in the lives of various farmer classes. New inputs were introduced with the promise of changing the lives of farmers and indeed they have done so – the big and capitalist farmers have found new opportunities thanks to the policy change. They have now steadily diversified into input shops and money lending. Urban traders have also been able to penetrate into the same market. They enjoy the protection of the state when it comes to availing loans from formal sources like banks and cooperative societies and procuring seeds and fertilisers from the latter. Therefore one can say that the privatisation of inputs might have raised cultivation, but there are new opportunities which have also arisen simultaneously. Thus their socio-economic situation has not deteriorated as a class. There is an observation of Murugkar that holds true in case of Chhattisgarh. He says that it is the people who live off agriculture alone who are the ones facing difficulties. Their profit margins have fallen due to the rise in input cost, making cultivation on a small holding unviable. The reported suicides from different parts of India over past decade which are often associated with cash crop cultivation represent a case of farmer distress. It can be concluded that one factor which has contributed to limiting the farmers' livelihood option and depleting his income is privatisation of inputs, thus pushing them to the edge.

The increase in the cost of cultivation has seen farmers resorting to incurring debt from informal sources and the failure to repay these then result in farmer suicides. Byres' (1981) analysis showed that technology in the Green Revolution era was not resource neutral and affected different classes of farmers differently. This is equally applicable in this case where resource – interpreted as landholding size and use of technology – creates a difference of outcome between big and small farmers in response to same policy. Big and capitalist farmers have found new avenues of income through the same policy that is dispossessing the mass of small farmers from their land. Their income has also risen with cash crops and productivity increases due to use of chemical inputs. While small farmers have two choices; either to enter into debt traps to adopt them or remain with traditional cropping methods where income is low and insufficient. Certainly a kind of polarisation among the classes is unfolding in the state. To add to their plight, the increasing price of land, the hawk eyes of mining and real-estate companies and lure of new marketed products is making those on fringes quit agriculture and opt to become labourers.⁴ Liability in latter is less and sale of land also gives an immediate financial relief. But in long term, this leads to concentration of land resources in the hands of few, like industrial class and its petty allies; thus altering

³ The Agarwal community came to Chhattisgarh over past decade as silk traders and then started lending money to local people. Now they form the most important political and economic class and community of the state, exerting tremendous influence on the state.

⁴ Across interviews, in remote areas, young men had mobile phones. Many spoke of bikes as a tool to liberation and a symbol of status.

the distribution of resources. It should be mentioned though that tribal farmers are not as keen to move out of agricultural for cultural and identity issue.

It is clear than that labour instead of farmer is being doubly oppressed. First one loses his ancestral landed property, then faces the constraints of being rural labour. A common misconception is that labour is a very expensive commodity in agriculture, which is making it increasingly difficult for them to find work. As observed in the course of fieldwork, the rising cost-of-cultivation has made agriculture increasingly investment intensive but the average wages as a ratio of operational costs have not increased in the same rate as its other components, over the past two decades. In fact, labour is the input that has been fast replaced by other means of agricultural input as seen in the survey. The wages paid to hired- labour as a proportion of operational costs have stagnated through the same period (Raghavan 2008). Therefore, small farmers are left with no other option but to move on to other sectors to find work, given the fall in the employment potential within agriculture.

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Bernstein in India¹

Ishita Mehrotra²

Agrarian political-economy studies, focussing on class analyses, are sidelined in the Indian context. Conspicuous by their absence are empirically informed theoretical debates in pace with the ground scenario. There are several reasons for this stagnation: an aversion to experiment with the new out of the fear of negative evidence, especially in the case of young researchers; an overemphasis on cultural identities to the neglect of other analytical variables and how multiple identities cut across one another; a dogmatic political belief that does not encourage conceptual and methodological rethinking; and a degeneration of academic public institutions. This article is a small endeavour to reinvigorate debates on 'old' formulations in the light of new evidence in attempting to conceptualise rural labour of today. It introduces Henry Bernstein's conceptualisation of differentiation among the marginal and small farmers and makes a case for its relevance and superior analytical strength in the current Indian scenario as compared to some of the more accepted perspectives on agrarian class relations in India.

Keywords: Bernstein, petty capitalists, petty producers, classes of labour, caste, gender

1. Introduction

The need to reconceptualise rural labour emerges from the gap between theoretical propositions with which researchers operate even while churning out new evidence which cannot be adequately captured or explained by long established suppositions. How has the neoliberal policy logic implicated rural social classes and especially the hitherto rural labour or labour originating from village agrarian economy? Do rural and agricultural labourer mean the same? Who is a labourer today? How do Indian specificities of caste and gender implicate an understanding of class relations? This paper attempts to fill the gap in our knowledge on these issues by juxtaposing Bernstein's understanding of rural social differentiation with the main parameters of old philosophy. On the basis of field evidence, this paper endorses and proposes Bernstein's theoretical framework as a more useful theoretical and analytical tool to study India's complex world of labour.

It is well documented that agrarian neoliberalism has profoundly altered the landscape of agriculture and rural life. Rooted in neoclassical economic theory, the policy change reordered the state role from being the main agent of development to being a mere facilitator for the institution of free market as the main driver of economic growth. Central to this strategy is contraction of public expenditure, privatisation and trade liberalisation. The

¹ This chapter is an excerpt from the unpublished thesis: Mehrotra, Ishita, 2013. *Political Economy of Rural Female Labour: A Study of Labour Relations in East Uttar Pradesh (UP), India*. London: School of Oriental and African Studies (SOAS), University of London.

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implications have been tragic, especially for the preponderant small farmers and those marginalised on the basis of caste, religion, gender etc. Poverty, unemployment and food insecurity increased as rural development expenditure drastically declined. Discontinuation of subsidies and extension services and privatisation of the input industry added to the costs and risks of cultivation. Liberalisation increased susceptibility of the domestic economy to volatile international price movements and cheaper imports pushed down local prices. Interlocked land, labour, credit and produce markets and farmer suicides in extreme cases became the new reality and labourers resorted to oppressive and exploitative combinations wage labour, self-employment and migrant work to secure basic household reproduction. In a structural context of employment scarcity, socio-economic cleavages among farmers became pronounced (Ramachandran and Rawal, 2010; Chandrasekhar & Ghosh, 2002; Ghosh, 2005; Reddy & Mishra, 2009; GoI, 2007; Ramchandran et al., 2010; NCEUS, 2007, 2008; Patnaik 2003a, 2003b, 2004; Ramachandran, 2011; Jodhka, 2006; Suri, 2006).

At the same time, it is important to note that the distress faced by small and marginal farmers is not just a direct consequence of neoliberalism. It is a culmination of long-term structural/institutional factors like changes in technology, cultivation practices, accumulation strategies and fragmentation of landholdings which have had grave implications for agrarian labour in terms of labour demand and returns from agriculture. One other explanation is found in the sectoral imbalance of India's growth pattern. The share of agriculture in GDP declined from 30 percent in 1990-91 to 14.5 percent in 2010-11, while more than half of Indians presently depend on agriculture for their livelihoods (GOI, n.d.; see also RBI, 2008; GOI, 2007).

Despite these sweeping changes, agriculture has continued to be the preferred entry point for most studies on rural labouring classes populated mostly by marginal and small farmers in India. Rural labour continues to be either perceived as predominantly agrarian or at least originating from the village agricultural economy. The problem is that while the structural context in which rural labour operates has changed and so has their response and adaptation to it, the theoretical lenses deployed to explore and comprehend these have remained static and not challenged or informed by new field enquiry. This comes out clearly in the subsequent sections. The second section explains Bernstein's framework of differentiation among small farmers. The third section briefly outlines Patnaik's empirically informed conceptualisation of Indian agrarian class structure and makes a case for Bernstein. Only Patnaik's work is considered in relative detail because latter political economy works draw from her to a great extent and because her work till date occupies the centrestage in Indian debates on rural social relations. Based on the author's fieldwork in Kushinagar district of Uttar Pradesh (UP), the fourth section presents the results of applying Bernstein's framework in the region. The fifth and concluding section brings together the central argument of the paper.

2. Bernstein: Recasting Agrarian Questions and Rural/Agricultural Labour

Bernstein uses the agrarian question approach to elaborate on differentiation among small and marginal farmers, the peasantry or petty commodity producers as Bernstein identifies them.

According to Byres (1977, 1996), the classical agrarian question can be interpreted in three ways. For Engel it referred to political alliances between the emerging industrial working class and the peasantry in the process of capitalist development. The second interpretation is based on Kautsky and Lenin's works concerned with the form and extent of capitalist agricultural development and impediments to this process. The third aspect dealt with the generation of an agrarian surplus to finance industrialisation as seen in the work of Preobrazhensky.

Bernstein (2010) writes of an agrarian question of capital and an agrarian question of labour. He interprets the classical agrarian question as that of capital i.e. establishment of the capitalist mode of production involving the transition from a predominantly agricultural economy to an industrial economy by using the agrarian surplus to finance industrial development. For Bernstein, this aspect of the classical agrarian question is no longer relevant since petty commodity production and capitalist social relations were already features of former Asian and African colonies at the time of their independence. Generalised commodity production implies that an existence outside the market is not possible. Petty commodity producers are subject to the logic and imperatives of market, combine subsistence with commercial agriculture and simultaneously pursue other types of labour commodification. The possibility of their differentiation into classes of capital and labour arises from the fact that the petty commodity producers combine elements of capital and labour. Class locations are also underscored by variables like gender or labour and income patterns in families.

The contemporary structural context of neoliberal capitalist globalisation is different from that of state led development where the agrarian question of capital gained precedence. In other words, industrial and agricultural development are delinked. Industrial development is no longer dependent on an agrarian surplus as alternate financial resources are available and developing states no longer have the power to direct investment and redistribution or command economic growth strategy as was the case in the developmentalist stage (Lerche, 2008). To what extent is Bernstein's assertion of the classical agrarian question of capital being no longer relevant the case in India? Applying Bernstein in India, Lerche (2008, 2011) states that capitalist social relations existed in India at the time of its independence and that generation of an agrarian surplus is no longer a financial prerequisite for industrialisation. Overall high growth rates in recent years and simultaneous decline in agricultural growth rates indicates the delinking of agriculture and industrial sectors in comparison to previous decades when a close linkage between them was presumed essential for financing industrial development and providing labour for the same. Therefore, the agrarian question of capital is no longer relevant in the Indian context.

What was the classical agrarian question of labour? Successful capitalist agricultural transition is associated with the movement of labour out of agriculture in the countryside and their absorption as wage labourers in the industrial development process in urban centres. An important element of this transformation was the destruction of landed gentry through taxation and land reforms. These changes obviously impacted the labouring classes and essentially then, the classical agrarian question was also a question of labour (Bernstein,

2004). Bernstein goes on to consider the classical agrarian question of labour and whether there is still an agrarian question of labour.

Land redistribution as a means of promoting socio-economic justice, diffusing conflict and boosting agricultural production constituted the agrarian question of labour (Bernstein, 2002, 2006b, 2008, 2010). Under a paradigm of state led development, such land reforms occurred in various developing countries, took different forms and had a varied outcome. They were made possible by a broad political consensus, promoted in the name of modernisation. However, as seen in India, as market relations spread and intensified further, regional and social differentiation also increased in the face of half-hearted reforms (for example see Cleaver, 1972). In the present era of neoliberal globalisation, the market has replaced the state even in the area of land reforms. The discourse of land reforms changed from appropriation and redistribution to a demand based voluntary transaction, allowing for transparency, accountability and survival of the fittest i.e. efficient productive farmers (Borras, 2003). While the state model has been criticised for red-tapism, corruption, its emphasis on supply side and distortion of the land market; the market led model is criticised for not taking into account how socio-economic and political relations influence land deals (Borras, 2003; Bernstein, 2002).

What have changes in capitalism meant for the agrarian question of labour? According to Bernstein (2001, 2002, 2004, 2006b, 2010), the possibility of land reforms of the scale and type seen in early post-independence decades occurring is very unlikely. Part of the reason is that development is no longer dependent on agriculture for financing and the role of agriculture in rural livelihoods is itself changing. Bernstein has pointed out that forging broad based political alliances would be difficult and at best temporary and fractious, given the diverse economic trajectories of rural classes who are no longer subsistent on agriculture only and their competing class interests in an environment of social fragmentation along lines of caste, gender etc. In other words, the problem is not only arriving at a common ground for demanding land reforms but that even if land reforms took place, it is unclear to what extent they would benefit labourers. In this scenario, it makes more sense to talk of labour against neoliberal capitalism rather than land reforms per se. The present structural context of wage employment scarcity and labour fragmentation and mobility as labourers struggle to secure daily reproduction by combining agriculture with other types of employment activities is the source of the contemporary agrarian question of labour (Arrighi and Moore cited in Bernstein, 2006b, p.457). Bernstein's reconceptualisation of the agrarian question of labour as one of 'reproduction squeeze), finds resonance in India too as mentioned earlier.

Combining elements of capital (land, machinery, seeds) and labour (individuals), petty commodity producers are subject to differentiation and disintegration into classes of capital and labour as they undertake different types of wage labour, self-employment, migrant work and non-remunerating but value adding labour to secure their survival. What are these classes?

In Bernstein's (2010) schema, the petty capitalists head the petty commodity producer hierarchy. These rich farmers or emerging capitalists accumulate, diversify their economic

portfolio and are able to reproduce as capital over a long period of time. In the middle are petty producers or medium farmers. This class does not accumulate but is able to reproduce itself on a simple basis. Primarily, medium farmers depend on a combination of family and wage labour in their own cultivation but they may hire labour as and when required. Middle farmers may do wage labour as well when needed. They may also be involved in sharecropping arrangements. As such, they are exploiters of wage labour and are themselves exploited as the boundaries between them and the bottom strata i.e. classes of labour are increasingly blurred down the hierarchy. Classes of labour combine agriculture with other casual modes of oppressive wage employment and self-employment. They are fragmented as they are constantly moving between work sites (Lerche, 2010) and further along caste, religion, gender etc lines (Harriss-White & Gooptu, 2001) as they compete for scarce employment opportunities. These factors as well as others like resource position, agricultural production processes and livelihood diversification shape the process of class differentiation as described by Bernstein (2010).

Bernstein's framework is not just an abstract theorisation. He clearly explains the changing nature of capitalism and what this has meant for agriculture and rural classes. He has derived dynamic analytical categories which can be applied in field research. Below, I briefly outline the preeminent theorisations on the Indian rural class structure and make a case as to why Bernstein's framework is superior and more relevant in the present context.

3. Indian Agrarian Social Structure: A Select Political Economy Review

There is no single understanding of class structure that can be uniformly applied to the Indian countryside. Regional level factors pertaining to ecological condition, level of technological development, socio-cultural matrices, land structure, industrial make-up etc preclude this possibility. Field based class analyses of rural India, in the political economy tradition, identify classes either solely on the basis of land size or this is combined with other criteria such as nature of participation in agricultural processes, extent of labour hired in or out, income and surplus generated and reinvested etc (for example, see Patnaik, 1987; Ramachandran, et al. 2010; Ramachandran, 2011). Till date, one of the most influential methods derived to identify rural classes is Patnaik's formulation. This is outlined here in relation to Bernstein. Others such as Rudra, Beteille, Breman, Bardhan (1984), Harriss (1999) and Harris-White (2003, 2004, 2005) have also made important interventions on evolving rural social relations in the process of agricultural development. But given space and word limitations, these will only be indicated below.

3.1 Utsa Patnaik's Labour Exploitation Index

Patnaik's (1976, 1986, 1987, 1988) is a seminal work on agrarian political economy in India. Writing at a time of rapid capitalist penetration of Indian agriculture in the form of green revolution, she emphasised on the continued salience of semi-feudal elements like the caste system, the intensification of rural differentiation and the heterogenous character of the peasantry. Her work departs from traditional Marxian accounts in incorporating other factors like the size of the household, level of technological application, cropping patterns and cultivation practices, resource endowment etc, in addition to landholding size,

in delineating classes. On the basis of these and the exploitation criteria as deployed in the labour use index (whether a household is a net hirer and exploiter of labour or vice-versa), Patnaik (1976, 1987) identified five classes-big landlords, rich peasants, middle peasants, poor peasants and landless or full-time labourers.

The big landlords have a substantive resource base. Their agriculture is completely based on hired labour. Rich peasants differ from big landlords in combining manual labour with hired labour in own cultivation. Both, the big landlords and the rich peasants, are an accumulating and exploitative class. The middle peasantry is mostly subsistence based and draws on family labour. It can further be classified into upper and middle peasants. The upper class of peasants is a small surplus producing class and is exploitative to the extent it hires labour. Self-employment and family labour are crucial to middle peasants for their sustenance. Since these do not hire labour, they are not perceived as exploiters. They differ from the better off middle peasants in undertaking wage labour as and when required and as such are themselves exploited. Poor peasants may or may not own land, but in either case, their survival is dependent on wage labour. Some may also have leased in land. Petty tenants, able to meet land rent and less dependent on wage labour, are slightly better off from the rest of the poor peasants who are barely able to provide for their daily reproduction and depend more on wage labour irrespective of cultivation on owned or rented land. Livelihood insecurity and lack of any assets have made the bottom strata of labourers completely wage labour dependent. It is the poor peasantry and labourers who constitute 'rural labour' for Patnaik.

As acknowledged by Patnaik (1976, 1988) herself, her method overlooked non-cultivating households which further marginalised vulnerable sections of the population like widows or the aged. In such cases she proposed that the exploitation criteria be combined with other variables like ownership of means of production or scale of hired labour. Irrespective of whether a household was a net exploiter of labour or was exploited, factors like caste and gender overrode economic considerations-a fact accepted by Patnaik but which her theorisation failed to take into account. Moreover, as Patnaik herself stated, this method can only elaborate the class position existing at the time of research. Her emphasis on the immediate production process overlooked important processes like the interaction of classes with the market or how overlapping economic and social relations outside of agriculture underlined production and labour process. Patnaik accepts that these are equally important for a dynamic conceptualisation of classes.

Like Patnaik, Bernstein does not interpret the process of class differentiation narrowly. For Patnaik, exploitation is the main criteria in assigning class locations. For Bernstein, accumulation is the determining criteria but the process is very much influenced and shaped by other factors like caste, gender, property structure and takes into consideration labour use patterns and type and extent of occupational multiplicity pursued. Unlike Patnaik, Bernstein's formulation can be applied to all small and marginal farmer households and not just cultivating households. By elaborating how and to what extent they secure reproduction as capital and/or labour and by taking into account relations of the labouring poor outside of cultivation, Bernstein's formulation is more in tune with the ground reality

of decentring of agriculture in rural livelihoods and the critical contribution of overlapping socio-economic relations in reproduction. It is a dynamic conceptualisation capturing the changing class spaces. For example, my fieldwork shows that a petty producer household may slide down into the category of classes of labour in a bad harvest year due to unforeseen health expenses and the related loss of wage employment. On the other hand, a household from the classes of labour category may move up in the category of petty producers if a household member came into regular and better paid employment. In such cases, a watertight compartmentalisation between the exploited and exploiter is not possible and often these boundaries are fuzzy and fluid as households may be exploit labourers and may themselves be exploited.

Peasant differentiation does not feature in the recent writings of Patnaik (2006, 2010) where she writes about peasant pauperisation under neoliberal globalisation. It is this contradiction between peasantry and capitalism which is stressed at the cost of how the interface between the structural context and peasant classes is mediated by other socio-economic variables.

3.2 A Broad Brushstroke: Agrarian Social Relations in the Indian Countryside

Agrarian social relations in India are one of the most debated topics, as evident from the perspectives mentioned below.

Ashok Rudra proposed a dualistic conceptualisation of Indian agriculture (1978b, 1978c). He identified the big landowners and agricultural labourers as the two main agrarian classes defined in opposition to each other, the former exploiting the latter. He classified others such as landlords, tenants, rich peasants and poor peasants, tenants and poor labourers as social groups since contradictions between them and big landowners and agricultural labourers respectively were absent or weak. One main criticism of Rudra has been his neglect of the class of middle farmers as pointed out by Bardhan (1979) and the failure to fully capture social differentiation.

Andre Beteille's (1997, 2007) triumvirate rural class hierarchy identified the class of landowners, tenants and agricultural labourers taking into account landownership and access to land through various tenancy arrangements, nature of participation in own cultivation, extent of hired labour and participation in wage labour. Importantly, writing at the time of 1960s, Beteille already recognised the importance of caste, income and occupational profiles in any class analysis and the increasingly divisiveness of the countryside along the lines of these variables, as well as the intensification of rural differentiation, which precluded the emergence of a collective class consciousness. Beteille mentions but does not elaborate on the disintegration of 'pure' classes of capital and labour, the conditions under which class circulation takes place and the structural context in which they operate. Importantly, his analysis is rendered weak because it completely misses out on the exploitation variable in his class analysis (Patnaik, 1987).

Breman's (1985, 1994, 2003, 2007) seminal longitudinal ethnographical work in Gujarat centred on capitalist agrarian development, changing rural class relations and the

implications thereof for the labouring poor. He too wrote of the divisive role of affiliations of caste, religion and region which preclude labour solidarity, undercut class tensions and severely weaken the bargaining power of labourers. Breman (1985) identified a class of large farmers (owned 15 acres and more), middle farmers (5-15 acres), small landowners (less than 5 acres) and the class of landless proletariat. Breman's understanding of classes is ethnographically informed and he laid out characteristics of these classes on the basis of land structure, caste status, access to political power, type of economic diversification, nature of investment of agrarian surplus, type of participation in own cultivation and extent of wage labour undertaken.

Then there are some who have not directly dealt with the class structure per se, but have made important observations regarding class relations. For example, both Bardhan (1984) and Harriss (1999) wrote on how a strategic confluence of class, caste, political power enables the dominant minority to influence the state in their favour. Harris-White (2003, 2004, 2005) has highlighted the role of social identities like gender, caste and religion in the organisation and regulation of labour markets. She illustrates how accumulation strategies draw on these identity based affiliations. These multiple affiliations, labour mobility and fragmentation serve to subsume the contradictions of capitalist development (Harris-White & Gooptu, 2001).

4. The Complex Web of Indian Labouring Poor: New Realities, New Concepts

Political economy approaches to study agrarian classes have not kept pace with new realities. For example, the approaches summarised above still operate with the notion of peasantry where small farmers are concerned. The term peasantry refers to subsistence oriented family farmers. However, it is not clear what is to be analytically gained by the continued use of this terminology when it is clear that survival outside the market is not possible even providing for regional specificities such as the pace of capitalist development and the extent of integration with the market (for example, see Hariss-White et al., 2009). 'Old' approaches do not explore and account for the possible movement between classes of small farmers and the conditions under which this takes place. While it is accepted that socio-political institutions like caste, gender, religion, property rights and income and occupational structures influence class, these are not factored in theoretical propositions to see how the process of class differentiation is shaped by them. As will become clear subsequently, there is substantive evidence to show that rural labour is not synonymous with agricultural labour and that agriculture does not constitute the main component in the wage labour and income structure of farming households. In fact, in view of labour mobility, it would be wrong to even call it rural labour. However, new concepts have not emerged or been applied in the Indian context in the light of new evidence.

Here, the outcome of a systemic attempt to move away from these inadequacies is presented, by way of a caste and gender based mapping of the dominant socio-economic relations in Kushinagar, eastern UP, using Bernstein's framework. The information is based on village level ethnographic research undertaken by the author over a period of one year. Assigning class locations to various social groups in Bernstein's terms clearly brought out the theoretical

relevance and operational utility of his approach in identifying who is a labourer. First some general observations are made before moving onto the description of differentiation among small farmers, underlining how caste, class and gender intersect in the process.

First, however, we must be aware of some contextual generalisations. Though there is economic variation within castes, caste and class coincide to a significant extent. In eastern UP, landlessness is limited and small landowners are preponderant. Caste and gender are the organising principles of the village labour market. While men reflect greater occupational diversification involving movement out of agriculture, women are concentrated in agriculture only. Within agriculture, there is a sexual division of labour wherein women are involved in the least paid and low status tasks. Male occupations, agricultural and non-agricultural, are remunerated at a much higher rate. In line with Lerche (2010) and Chen (2008), different forms of wage labour and self-employment activities can be arranged in a hierarchy depending upon the security and social status attached with a job; the employment of others and the underlying asset base; extent of power, influence and freedom/unfreedom involved etc. For example, public employment commands the most respect, power and is paid well. This is true of even non-regular workers like *anganwadi* workers³. At the bottom, brick kiln and agricultural work are most stigmatised, irregular, least paid, involve exploitative debt and unpaid labour relations. Women are concentrated at the bottom of the occupational hierarchy. The wage structure is more or less fixed but likely to vary with individual labour relations, mode of employment and the location of the work site. Some of these points will be returned to subsequently.

4.1 *Petty Capitalists*

According to Bernstein (2010), petty capitalists are the rich small farmers. These farmers can provide for themselves over a long time, generate and accumulate surplus and diversify into better non-agricultural activities. Bernstein does not deny the possibility of these farmers eventually joining the ranks of rich capitalist farmers.

Most of the upper caste households (Brahmins and Rajputs mostly) come under the category of petty capitalists. Upper castes constitute a minority in the field villages but are the largest landowners.⁴ As such there is a strong coincidence between social and land base. As the largest employers of agricultural labour, upper caste petty capitalists are also economically dominant. They either occupy political positions or can access political power through their personal networks or by supporting a proxy figure in local elections. This combination of social status and economic and political power underlines the general dominance of upper caste petty capitalists. For example, they are a source of credit; act as mediators between labourers and government structures; help access public provisions and

³ Under the Government of India's Integrated Child Development Services Programme, *Anganwadi* workers are non-regular workers providing health advice, administering vaccines and helping out in school activities.

⁴ The National Sample Survey (NSS) landholding classification is used: landless-0.01ha, marginal-0.01 to 1.00ha, small-1.01 to 2.00ha, semi-medium-2.00 to 4.00ha, medium-4.00 to 10.00ha, large-more than 10ha).

funds such as BPL ration cards, MGNREGA and IAY⁵; sponsor religious functions; help out with transportation and money in health emergencies and take crucial political decisions like the use of Gram Sabha land or the building of a school which impact the labourers particularly. For petty capitalists, these are important ways of creating labour cum vote lobbies couched in the patron-client relationship and securing capitalist accumulation by fragmenting labour.

Few petty capitalists belong to middle castes like Ahirs. They are perceived with lower social prestige than upper caste petty capitalists. They are known to favour their own *jati* labourers. Unlike upper caste petty capitalists, middle caste petty capitalists are directly engaged in own cultivation. They are not as big landowners as upper caste petty capitalists. As such, they do not employ wage labour to the same extent. The scope of their political power is limited to them directly occupying political posts. Economic rivalry and political competition among petty capitalists is common, irrespective of caste.

Generally speaking, petty capitalists combine own cultivation with self-employment and migrant work. As relatively large scale commercial farmers, sugarcane cultivation is a primary activity. Certain households may also sell surplus rice and wheat. Agriculture is completely based on hired labour. Use of high yield seed varieties, chemical fertilisers and pesticides, tube-wells, mechanisation of ploughing and harvesting operations are common in this class. As owners of tractor-trolley, implements like cultivator sets, tube-wells etc, they can also rent these out as a means of income. At most, family labour (mainly men and seldom the eldest female member) is indirectly involved in supervisory capacity. Importantly, agrarian surplus has been invested in land purchases in urban centres with the intention of ultimately settling there. Livestock rearing may be undertaken as a commercial activity. Their self-employment activities reflect a strong resource base, employment of others, socio-political networking and comparatively stable and higher returns, for example, as a chemist shop owner in a prime location, owner of a taxi-service, owner/manager of schools, flour mill owners, wood contractors and JCB⁶ owner-operator who work on government contracts. Migration is representative of economic growth, investment in education, diversification into respectable, remunerative and secure profession and employment opportunities. For example, in case of public employment as a doctor, lawyer, engineer, agricultural officer or in police, CRPF⁷, military, CPWD⁸ and legal services; in the case of self-employment as a chemist shop owner, dentist and a lawyer; and a reader. Self-employment activities and migration are undertaken by men. Instances of labour commodification are few among petty capitalists-primarily as teachers (mainly men) and one as a journalist.

⁵ The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) is a GoI initiative guaranteeing hundred days of work to any rural household which demands it. The Indira Awaas Yojna (IAY) is also a GoI initiative, providing housing allowance in the name of women or a joint name.

⁶ JCB is a type of heavy earth moving machinery.

⁷ Central Reserve Police Force.

⁸ Central Public Works Department.

How does gender interact with caste in the case of petty capitalists? Upper caste petty capitalist women live in seclusion as per the local patriarchal socio-cultural value system. There are slight variations depending upon life-cycle changes. For example, where movement outside the house is concerned, at most, the wife of the male household head is seen supervising female labourers working on the plot adjoining the household or interacting with villagers passing by from the door-step. With the exception of her, other women of the house cannot step out without veiling themselves. In households where men are not available and land is not leased out, elder women or daughters may approach lead labourers as and when required. The wife of the head of the middle caste petty capitalist household shows more mobility in comparison as she takes on a more hands on approach with male and female labourers working on the family's distant fields. Irrespective of caste, the burden of the domestic economy, including care and reproductive responsibilities, are borne completely by women. But here too there are subtle differences. For instance, the youngest daughter-in-law does most of the house work. She cannot come in front of elder male relatives and male and female outsiders. All married women have to wear saris in the village and their behaviour is reverential i.e. being polite, soft-spoken, consenting at all times, serving male members first at meals etc. In isolated instances where upper caste women work as school teachers or as *anganwadi* workers, they observe long veils, but they are not seen as challenging the established order for secure employment is glorified and these women are not taking over male jobs. However, upper caste petty capitalist women qualify that they do not adhere to these practices in cities. Even middle caste (Ahir) petty capitalist household women, settled in cities, are highly skilled professionals.

4.2 *Petty Producers*

According to Bernstein (2010), petty producers are medium farmers, able to secure their basic sustenance. They primarily rely on family and wage labour. In certain cases, they may hire labourers or undertake wage labour to secure survival. These farmers may also lease in or lease out land.

Petty producer class households are mostly from the middle or Other Backward Classes (OBC)⁹ (Ahirs, Koeiris, Ansaris, Chauhans etc). Some are upper castes (Brahmins, Rajputs, Baniyas, Kayasths) and scheduled caste (Chamar, Khatiks and Gond). Occupational profiles of all are different.

The few semi-medium and medium landholdings in the petty producer class are concentrated among the upper castes (Brahmins, Rajputs, Baniyas, Kayasths). Of the upper caste petty producer households, Brahmins and Kayasths are the most landed. In the absence of running income sources, portions of Brahmin landholdings have been mortgaged over time to meet health, ceremonial and living expenses in keeping with their social rank. These cash poor Brahmins also cited reasons such as rising labour costs, low yields, lack of resources to finance cultivation and the absence of family labour as reasons behind mortgaging

⁹ Classes other than SCs and General category who have low social, economic and educational level are classified as OBCs.

landholdings. Therefore, at the time of survey (2009-2010), the operational holdings of these semi-medium and medium Brahmin landowners was much less.

Depending on the landholding size, upper caste petty producers combined subsistence and commercial agriculture. Both men and women (though to a smaller extent and with the exception of young daughters-in-law) are involved in own cultivation though in many cases, participation is indirect in the form of labour control. The extent of hired labour is less than petty capitalists and depends on land size, individual economic circumstances, availability of family labour and seasonal demand. Few Baniyas, who are ranked below other upper castes in social status, relied on exchange labour. Agricultural modernisation is limited to renting of tractors for ploughing, levelling and such operations and the use of high yield variety seeds, chemical fertilisers and pesticides. In addition to sale of livestock, sale of surplus milk/curd is also a common business activity. Though men, if in the village, share some responsibilities of livestock rearing like taking livestock for grazing and feeding them, women do these as well as collect fodder and make cow-dung cakes. Some households that own tractors and pump-sets rent these out. Men owning bullock carts and ploughs rent out carts and/or work as ploughmen.

Instances of non-agricultural self-employment (seen in men only) are scattered and include home based carpenters, a tractor mechanic and petty businessmen such as a medical store owner, clock/watch repair man, a wedding music band and a small tent house operation. Self-employment is especially strong in the case of Baniyas. They show a strong continuation with their traditional caste occupation of being traders: as peddlers selling vegetables, food items, wool, cosmetics, clothes etc and as owners of village or market based mobile or fixed stores selling grocery, snacks, fertilisers, construction material etc. Where these were village or home based, senior female members helped out. Isolated cases of female self-employment included one home based small general store owner and two home based tailors. At the minimum, these self-employment activities show some skill, asset base, possible employment of others and are not perceived as degrading which is important given their high caste status. However, given the small customer base, limited and seasonal demand and low purchasing power of the local population, income from these activities fluctuates widely and is irregular and low. In comparison to home based businesses, shops located in markets benefit from a broader customer base, higher service rates and timely payment. By extension it means that women are systemically deprived of these opportunities as they are forced to operate from home due to the lack of capital and because of the patriarchal value system.

Local labour commodification among upper caste petty producers is very rare, and is undertaken only under conditions of extreme duress and is circumscribed by gender and age. This is because local agricultural and casual labour is considered humiliating and is perceived as work of dalits. Instances of even relatively prestigious local jobs like that of teaching are rare. In a village setting, it is particularly shameful and embarrassing for upper castes to do low status jobs for better-off upper castes or dalits. They would rather ask *bhiksha* (asking for alms) than taking to wage labour and to protect their self-respect and honour, they would rather give their own clothes and food to a needy person rather

than turning him away empty handed. Migrant work is uncommon and where seen it is unusually stable in terms of destination and work type. Only men are engaged in migrant work. For instance, as welders, dye master, an electrician, a crane driver, labour contractor, vegetable vendors, weavers, construction and other casual labourers etc. The extent of migration is low. Though an irregular source of income, it is an important contribution to household reproduction. Underlining it is a failure to turn relatively high level of education into productive employment and the mismatch between type of education and labour market opportunities. Successful migration is seen with pride. More than this, it is a preferred route of the not well-off upper castes to escape exploitative village labour not in keeping with their superior social status. Migration linked to government employment, as seen in the case of two Indian Railways employees, may be family based. Overall, very few upper caste petty producers are employed in government services like coal service, New Delhi Municipal Corporation, army and in the district development office.

OBC petty producers are mainly marginal and small landholders. Few are small and semi-medium landowners. They neither enjoy economic influence that comes with being large landowners and employers of labour nor are they politically dominant, directly or indirectly. The boundaries between these and classes of labour are blurred. Many petty producers access scarce public resources and wage labour opportunities by aligning themselves with some or the other petty capitalists as a part of patron-client relations. These overlapping socio-economic relations also serve as a mode of social protection and food security.

Here also, substantial parts of larger landowners' holdings are mortgaged and therefore their operational holding size is smaller. Agriculture is mainly subsistence oriented and organised on family labour basis. Involvement of women in own cultivation and wage labour is subject to usual provisos and the few cases where young women were involved were nuclear households with no productively employed senior relatives who could supplement household income. The component of hired labour is small and dependent on similar factors as in the case of upper caste petty producers. Mechanisation is limited to use of tractor in some field operations. Some marginal and small households depend on exchange labour among neighbours, relatives and friends. Livestock rearing and sale of milk and curd is extensive, especially among the Ahirs whose traditional occupation it is. Other than agriculture and related activities, self-employment is uncommon. The few examples found were seen in the case of men: a fisherman, a veterinarian, flour mill owner, medical store owner, general store owners, tobacco and mobile phone repair shop owner; motorcycle and cycle repair shop owners; a man owning two big speakers rented these out for occasions and shops selling footwear, garments, electronic goods etc. Where these are located in the village or are home based, senior female family members also helped. In a couple of these cases, the start-up capital was extended by a self-help group. Income from such self-employment activities fluctuated widely. Though unskilled or semi-skilled, they are indicative of movement out of agriculture into somewhat less oppressive and better work, their ability to access critical inputs like credit and ownership of a minimum resource base and productive assets. Moreover, the market location of their shops has attendant benefits as explained above.

A substantial number of Ahir men and women, Chauhan men and few Koeiris and Ansaris undertake agricultural wage labour. Some women do not undertake wage labour despite economic duress because of caste reasons. Overall, participation in other local wage labour is limited and seen in the case of men only who worked as labourers in construction, brick kilns and sugar mills, as a shop assistant, watchman, peon, a car/tractor driver and insurance agents etc. Those owning bullocks and ploughs, work as ploughmen. Bullock cart owners ply it to transport men and material. The only examples of some skill based labour are that of skilled construction workers, a nursery teacher and two *anganwadi* workers (the only type of female non-agricultural employment in this group). Migration is more common among the Ahirs, Chauhans and Ansaris. In the case of Ansaris, the trend has a long history as an important means to counter vulnerability and insecurity arising from their relative segregation from the socio-economic relations of predominantly Hindu field villages. Migration is a distress driven phenomenon, undertaken by many young men to maximise income. In the case of few Ansaris who have migrated to Saudi Arabia, migrant work has been very remunerative and remittances regular. Migrant men work as skilled and unskilled construction workers, scrap dealers, weavers, embroiderers, welders, electrical workers, casual labourers, tailors, agricultural labourers, drivers and factory workers. Apart from the very few households with male members in public employment, migration is family based in isolated cases of better migrant work. Few petty producer households are also involved in livelihood activities which do not generate income but are value adding and essential for household reproduction. For example, collection of fire-wood and fodder, making and storing cow dung cakes to be used as fire-wood and fertiliser etc. These activities are undertaken by women exclusively with the exception of men cutting sugarcane tops for fodder on *geda* basis.¹⁰

At the bottom of the middle farmer category are the scheduled castes or dalits. Small scale sugarcane cultivation is the only commercial agricultural activity apart from livestock rearing. Mechanisation is limited to ploughing operations. Both men and women are involved in these. Some had leased in land. Households where a member was or is in government service or non-regularised salaried work as in the case of *anganwadi* workers, are better-off than others to the extent that they show greater investment in land and education, are less likely to slide into classes of labour category due to unforeseen expenditure and can sustain themselves on their service income or pension and small agricultural surplus. This was seen in the case of four Chamar households whose members were not seen in local labour, self-employment or migrant activities. These also owned comparatively more land than other dalit petty producers who are mostly marginal landowners and very few are small landowners. These four Chamar petty producer households are different from other dalit petty producer households (including Chamars) in that their women may not be directly involved in cultivation if male labour is available and they are not seen undertaking livelihood

¹⁰ *Geda* refers to a sugarcane harvesting arrangement. In the field areas, wage labour is hired for sugarcane harvesting only if the crop is of very poor quality or the land area under sugarcane cultivation is large. Mostly, sugarcane is cut by men who take the leaf tops for fodder and leave the sugarcane on the field. Groups of men do this in own and neighbouring villages but women only cut leaves in own village.

activities or doing exchange labour. So there is a slight status difference in this section as well.

More generally, dalit petty producer households are extensively involved in the wage labour, self-employment and migrant work to varying extents. For example, Khatiks rely more on non-agricultural self-employment activities, while Gonds rely mostly on local wage labour. Self-employment activities are seen in the case of men only: selling vegetables and fruits as peddlers or from the roadside (their traditional occupation), a rickshaw driver and one owning two generators and fancy lights which were rented out. Few men who owned bullocks, plough and/or cart worked as ploughmen and plied the cart to transport men and material. Women are occasional agricultural wage labourers. They work in own or neighbouring villages where they share close socio-economic relations with employers. Extent of men in agricultural and casual labour is low. In local non-agricultural casual labour market, they work as security guards, tractor and taxi drivers, an insurance agent, a teacher and as a head clerk in a private college. Young men engaged in migration worked as casual labourers-as coolies, potter, welder, truck driver skilled and unskilled construction workers, painters, welders etc. Migration is stable and family based where linked to public employment. Public employment in these lower end petty producers reflects employment and income security but not the status, education or accumulation as seen in petty capitalists. They are involved in menial works in sugar mills, coal mines, in the Delhi electricity department and in the Provincial Armed Constabulary (PAC).

From the above description, it is clear that caste can be an over determining factor in occupational choices even in the face of economic hardship. A gendered ideology also plays a crucial role in shaping household reproduction mechanisms. Caste, class and gender intersect in unique ways with specific outcomes, though some things don't change, like domestic chores being female responsibilities. Women belonging to upper caste petty producer households are also circumscribed by intra-house gendered relations and life-cycle changes, but to a lesser extent in comparison to their petty capitalist counterparts. Even limited, participation in own cultivation, helping out at village or home based grocery outlets, in interacting with neighbours, in cutting grass for fodder or as occasional wage labourers, these women show autonomy, mobility and visibility. But these are distress driven and not empowering. Among upper castes, observance of socio-cultural norms is the strongest in the case of Brahmin and Rajput women vis-a-vis interaction outside of immediate production process and intra-household relations. Wage labour by a young Baniya woman can be 'justified' on grounds of absence of male relatives or elder women members who can support the family on a day to day basis. In the absence of other members, Brahmin or Rajput households would rather mortgage land and incur debt to meet daily expenditures, rather than allow young women to undertake wage labour. Male honour and social prestige is attached to women more strongly in this case, but then they are also not the poorest class.

Women from petty producer OBC households show similar features with some nuances. In comparison, these women are involved in wage labour and livelihood activities to a greater extent. Surprisingly, traditional Muslim conventions like veiling and seclusion were not seen in the case of Ansari women to any significant extent. Economic prosperity is usually

associated with withdrawal of women from the public domain and hyper-exploitative relations. However, this has at best been a partial development in the case of upwardly mobile Ansari households. While women from these households have withdrawn from agricultural wage labour, they have not been able to withdraw from providing unpaid labour activities to the dominant employer of their village who is also the *pradhan*. This because the *pradhan* control's access to the Ansari fields. Ansaris are indebted to him and though they can meet debt repayments through remittances, they are dependent on the *pradhan*'s fields for fodder, livestock grazing and cannot afford open confrontation with an important source of accessing government initiatives, mediation with bureaucracy or for fear of a backlash. At times, women from these households try to evade these 'tied' labour services through procrastination and by making excuses. Unavailability of male labour is another reason why these women can at least be seen out and about in the village.

Women belonging to dalit petty producer households are much more visible in the local economy and socio-religious functions. Here also, there are some variations. The Chamar women with a family member in regular employment are only involved in own cultivation. The wife of the one in CRPF is not seen outside her house. But both, the widowed *anganwadi* worker who has young children and her widowed mother-in-law are involved in own cultivation. In this and two other households, women take care of own agriculture and can be seen outside their houses in neighbourhood exchanges. In remaining households where women are more involved in wage labour and livelihood activities, observance of socio-cultural traditions is not seen to any significant extent. But then these are also economically the most vulnerable group in the petty producer category.

4.3 *Classes of Labour*

According to Bernstein (2010), classes of labour find it increasingly difficult to reproduce themselves as labour on a daily basis. To secure their survival, they are engaged in informal, insecure, low paid casual labour, self-employment activities and migrant work alongside own cultivation. Given that classes of labour depend on personal connections and social capital to access these exploitative work opportunities and given their mobility across different work sites, these labourers are fragmented along social, religious, regional etc lines.

An overwhelming number of dalit households come under the category of classes of labour. A significant number of OBCs are also classified as classes of labour. Upper castes are a very small proportion in this category. Mostly, these labouring households are marginal landowners or landless.

Only a fraction of these labouring households are from upper castes which have the highest social status attached to them, like the Rajput and Brahmins, while the rest of the upper caste labouring households are Baniyas. Agriculture is mostly subsistence and both men and women (usual provisos applicable) are directly engaged in cultivation. Exchange labour may also be drawn on. Self-employment among Baniya men is very common. They peddle a wide range of goods in villages; one operated a general store, another a cycle repair shop and one other had a tea stall in the market. The only instance of female non-agricultural

self-employment was that of a widow operating a small home based general store and a home based tailoring service. These self-employment activities denote ownership of basic productive assets like cycles, stitching machines, stove etc. But, they are not empowering or even reliable sources of income. For example, the home based tailor, a young married woman, is not unencumbered by socio-cultural restrictions in her job. She cannot freely travel in the village, showcase her work, buy inputs etc. Orders are received and products are delivered by her mother-in-law. Her customers are the village residents who pay less than the market rate, pay late or make only part payment. On top of this, recovery of remaining amount is not assured because caste, neighbourhood, religion, social relations may overshadow the economic relationship.

It is the Baniyas who mostly engage in local wage labour. Women only do agricultural wage labour and this is also qualified by age, family structure and the *jati's* social status. For example, a Brahmin woman whose husband is mad and had six young children to support, did agricultural wage labour. A Baniya woman, abandoned by her husband and in the absence of supporting relatives, undertook wage labour and provided unpaid labour activities to upper caste-class households within her own hamlet because she felt embarrassed. Yet another Baniya woman qualified her wage labour participation by saying she worked only when under extreme economic duress. In upper castes, the notion of male wage as the main household income and the control over female movement in accordance with caste-class status is very strong. In dalit labouring households also the male wage is the breadwinning wage, but women show significant 'freedom' in expression, mobility, wage labour participation and involvement in the village social and religious life etc. So even among households similarly placed in material terms, gender and caste interact in different ways. An *Asha Kiran* worker was the sole example of non-agricultural local labour commodification.¹¹ Men worked as agricultural and casual labourers mostly.

As is the trend among poor upper castes generally, migration is 'preferred' to local wage labour or self-employment. Young men involved in migration, work as an embroiderer, as weavers, vegetable vendors, skilled construction labourers, dyers, private security personnel, brick kiln workers and casual labourers. Returning migrants may undertake the same work in villages as well, as is seen in the case of construction workers. In Brahmin labouring households, earnings (cash, food, clothes) from conducting religious functions or from *bhiksha* are important resources in securing household survival. In material terms, both upper caste and dalit labouring households are similar. However, the upper caste classes of labour are not subjected to oppressive relations typical of village based overlapping socio-economic relations given their absence in the local wage labour market. Moreover, they are not treated with contempt as are the dalit classes of labour.

Among OBCs, many Ahir, Chauhan and Gond households and to a lesser extent, Ansari and Khatik households are classified as classes of labour. Agriculture is primarily subsistence oriented, organised on family and exchange labour. In some landless households and

¹¹ A GOI initiative directed towards promotion of hospital deliveries and extension of advice on various related health aspects. Remuneration is made on a case by case basis.

otherwise as well, women get involved in own cultivation at a much earlier age. Some, like the Ahirs have leased in a substantial land area and may hire a couple of labourers in peak season. Livestock rearing for commercial purposes is common, especially in Ahirs. Non-agricultural self-employment is uncommon and restricted to men: home based tobacco and grocery shops, a flour mill, seasonal vegetable and fruit hawkers, a fisherman and a rickshaw driver. In home based operations, senior women family members also help out. There are very few instances of women engaged in non-agricultural self-employment activities as home based tailors and a grocery/tobacco stall at home.

Local wage labour participation is extensive with as many household members as available working, but it is clear that overall more men than women do wage labour. Women did agricultural wage labour only and a few provided unpaid labour services to upper caste-class combine. A small number of younger women do wage labour given their harsh economic reality and the absence of supplementary sources of earning or supporting family members. In addition to agricultural work, men worked in brick kilns (this involved debt bondage and unpaid family labour), as taxi drivers, as a tractor driver, as a dancer/singer etc. It is common for young men to migrate to urban areas in search of work at the lower ends of the informal economy. Types of migrant work included: skilled construction work, welding, carpet weaving, welding, shuttering, cloth weaving, washing bottles, leatherwork, car repair work, starching saris, casual labour etc. Migrant workers from one household are usually involved in the same work and in the same place. Remittances are rather low and irregular. It is common for returning migrant men to do wage labour when in village.

Almost all dalit households, belonging to Kharwar, Dhobi, Dusadh, Chamar and Mosahar *jatis*, come under the classes of labour category. Here also, agriculture is subsistence mostly. Sugarcane cultivation is minimal. Own cultivation is based on family and exchange labour. Family labour draws on relatively younger women and older women as well. Apart from the extreme economic vulnerability faced by these households, the strong trend of nuclearisation is another reason why women start getting out of the house at a much early age. Rarely, in absence of male family labour or due to old age or sickness, might a labourer or two be hired in peak season. Livestock rearing is a common commercial activity. Livelihood activities are commonly undertaken by women. It is common for women of these households to provide unpaid labour services to petty capitalist and petty producer households. These services may be provided along the lines of debt or patron-client relations and are underscored by an awareness of ritualistic and economic inferiority of dalits and their dependency on the upper caste-class people.

Non-agricultural self-employment is limited and mostly men are involved in it: home based general stores and a tailor; small mobile shops selling sweets, snacks etc; water borehole digging operation; plying donkeys/carts to carry bricks at kilns or transport load, running cycle repair shop, rice mill, as a tutor, a quack doctor, a cobbler, renting out a battery operated speaker, fruit and vegetable hawkers, running an omelette stall, fisherman etc. In home based businesses, women also help out. Where women are involved in non-agricultural self-employment, it is as home based tailors. These self-employment activities indicate ownership of assets like stove, utensils, digging implements, donkeys, carts etc. Income is

irregular and the amount fluctuates. Such self-employment activities are of survival mode, show low skill and capital investment, are an erratic source of income and are associated with low social status. Occupational diversification among dalits has occurred on a very small scale. Caste and untouchability are very real barriers. Dalit women are very reluctant to take up activities not done by them traditionally. For example, all women weave mats, baskets, fans etc, but they do not make these for the market because it is not their job. Untouchability is a limitation because it closes certain avenues to them—some dalits asserted that the demand for milk from their houses is less because non-dalits do not want to have milk from dalit houses. Home based grocery stores get less business because a better-off upper or middle caste is less likely to go to a poorly stocked dalit's shop located in his hut at one end of the village.

Participation in local wage labour is very common. Women, including younger and older women, only do agricultural wage labour. One Kharwar woman washed dishes in a Rajput house and worked as an occasional cook in a village school. Since Kharwars are locally perceived as less unclean than other dalits, they could be hired for work that would bring them in direct touch with the 'pure'. One woman worked as an *anganwadi* worker. A couple of elderly Chamar women provided their traditional services of midwives in the surrounding area. Men are into agricultural and non-agricultural work as car/tractor/horse-carriage drivers, rickshaw driver, skilled and unskilled construction labourers, coolies, carrying head loads of bricks at a kiln or moulding bricks (debt-based and draws on unpaid attached family labour), mud-filling, loading/unloading, tending to livestock, as a watchman, casual labourers, as apprentices to a compounder and tailor etc.

Migration is not as common as one would expect from labouring households struggling to ensure their survival by any means. The decision to migrate depends on availability and capability of family members in the village to provide for the households daily requirements and land position among other reasons. For example, Mosahars who are the worst off among the dalits do not migrate to any significant extent. This is because their landlessness means the absence of a minimum food security assurance in the absence of men. As is usually the case with dalits, the trend of family nuclearisation is strong and there are no relatives to help out. Men therefore need to stay back and sell their labour daily to provide for the household. Male wage labour is important because more male jobs are available and are remunerated at a higher rate. Many of them are indebted to local brick kilns and cannot migrate in the agricultural lean season when kilns function and in the agricultural season, they can find enough work in the village given the high number of labour hiring landowners in their village. Finally, they have poor social networking and lack minimum investment to migrate (see de Haan, 1997,1999). Migrant young men work as agricultural labourers, a cobbler, tailors, painters, hawkers, embroiderer, welder, casual labourers in factories, scrap dealer, as a tractor driver, a rickshaw puller, a carpenter and a cloth and carpet weaver. Though migration has failed to take off in a big way and returns are unstable and low, it is an important source of income for households with migrant members. In terms of destination, work type and duration, dalit classes of labour are highly 'footloose'. In some cases, migration was linked to debt and migrants complained of delayed payment of part wages, low paid overtime, long shifts, over-crowded and expensive accommodation

facilities. Returning dalit migrant workers are extensively involved in wage labour when in village.

Public employment is very rare among classes of labour, the only example being that of a man in Indian Railways.

Socio-cultural traditions are observed by women from classes of labour as well, with nuanced differences between dalits and non-dalits. Overall, women from labouring households bear a greater responsibility of providing for the household and this is true especially among dalits. Dalit women from classes of labour households start doing wage labour from an early age and their wage labour participation is not circumscribed by considerations of family honour, location of work, caste of employer etc. Rather, it is imperative that they sell or exploit their labour every day so that the household's sustenance is ensured. This is critically important in nuclear households where men are migrant workers and not present in the village for long periods. It is Dalit women who provide unpaid labour services since these serve as a minimum food security guarantee and insurance in emergencies. They are also extensively involved in livelihood activities. Dalit women are organised in work groups and the leading members of these groups or female contractors voice and negotiate wage demands with employers. Non-dalit women from labouring households may be part of these groups but they are not assertively vocal since this behaviour is not in keeping with their caste norms. Dalit women show significant independence, initiative and organisational capabilities in organising work groups, negotiating terms and conditions of work, on accepting or declining work, holding social and religious functions, travelling long distances alone or in the company of other village women etc. Seclusion is not seen among classes of labour. However, unlike upper and middle caste women from labouring households, dalit women do not meekly accept or submit to male dominance. They are loud, assertive and express their anger and challenge oppressors directly or indirectly, for example, by refusing to do domestic chores and not taking food, criticising employers or male relatives, declining very low paid work and asking other labourers to also refrain from doing that work, procrastination etc.

5. Conclusion

This caste and gender based descriptive illustration of petty commodity producers or small farmers' clearly brings out the new ground reality which old frameworks of rural class differentiation do not capture. Even though this is a static profile, several trends are undoubtedly established.

Caste and class coincide to a significant extent. At the same time, this should not be read to mean the absence of internal variation within castes. Social, economic and political power coincide to a large extent with upper caste-class status, though the upper caste-class no longer has a monopoly over such power.

Village labour markets are segregated along gender and caste lines. In addition, a sexual division of labour exists as seen in agriculture. Women weed, sow, transplant paddy and manually harvest and thresh crops other than sugarcane. Men undertake all other operations

like applying fertilisers, preparing the field for cultivation, cutting sugarcane and all spade work etc. This division of labour is characterised by a gender wage gap. Movement out of agriculture is confined to men. As such, it is indeed the case that rural or agricultural labour is best understood as just labour circulating between various work sites (Lerche, 2010). Similarly, as specified by Rigg (2006), trends such as labour mobility and delinking of employment and income from village and agriculture, have to be gendered. It follows then that, for women, agriculture is still an important component of their livelihood structure, dependent as they are on own cultivation and agricultural wage labour for food security and daily living expenses and more so in the absence of migrant men.

A disaggregated picture such as the one presented here also highlights a gendered caste-class hierarchy in the local occupational structure. This is evident in the types of self-employment and migrant work and the extent of local wage labour undertaken. At the top, these represent a better resource and asset structure, high educational and skill levels, and investment of surplus into prestigious, regular and better paying employment and businesses. At the bottom, classes of labour are extensively dependent on low paid, most stigmatised, irregular, tedious and exploitative forms of wage labour which are often linked with debt and unfree labour. Same with their self-employment and migrant work patterns which come across as desperate survival attempts directed to maximise income and spread risk associated with agriculture. In petty capitalists and to a lesser extent in petty producers, economic diversification denotes prosperity, social prestige and power. In classes of labour, it is distress driven and at best it can be interpreted as attempts to escape the humiliating relations of domination and subjugation characteristic of agrarian village economies. In this case, male freedom is achieved at the cost of female unfreedom as women are left behind in the village to take care of own agriculture, the elderly and the young in the family, to ensure daily household reproduction and maintain exploitative patron-client relations. So, it is not only that dalits are disproportionately classes of labour, but also that dalit women are the worst off (see also, Guerin & Venkatasubramanian, 2009; Guerin et al., 2012; Lerche, 2010; Chen, 2008).

It is clear from the mapping exercise that gender and caste influences individual development trajectories, even within the same class. Moreover, labourers show fluidity across class spaces as household circumstances change. For example, a household moves from classes of labour to the petty producer rank or is better placed among petty producers, with high and relatively stable remittances or as a member comes into regular and better paid employment. On the other hand, not so well off petty producers may slip into the category of classes of labour with the breakdown of an income generating asset, with the death or sickness of a productively employed member, loss of land on failure to repay debt etc. Logically then, this fluidity means that the interests and concerns of individuals/households from different positions is different and moreover these are not static. This, in addition to the divisions of caste, locality, gender etc, precludes the formation of a cohesive class of small farmers, let alone the variants within this category, with common interests.

Till date Henry Bernstein's framework of differentiation in petty commodity production has not been tried in an Indian context, though his notion of classes of labour has been used

to interpret the labouring masses in the present (for example, Mezzadri, 2009; Lerche, 2010; Pattenden, 2011). With the hindsight of the evidence presented above, one cannot deny the analytical strength and utility of Bernstein's framework. Though this is not elaborated here, theoretically its use is more suitable because Bernstein relates what is happening to agriculture and those dependent on it with the changing nature of capitalism. The commodification of subsistence definitively comes across. It helps us to understand the complex variation within small farmers, their class locations and how this is mediated by caste and gender. It rightly incorporates an understanding of relations outside the immediate production process and interprets class as a dynamic social relation, inclusive of contradictory elements of capital and labour. It is able to capture how some small farmers like the petty producers may be the exploiters and exploited. Importantly, Bernstein's theorisation is amenable to the Indian context where class, caste, gender identities are strongly interconnected and any theoretically informed empirical analysis considering one without the other is at best a partial representation of the ground reality.

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The IFFCO Foundation *Bulletin*: Information for Contributors

One of the key areas of work identified by the IFFCO Foundation is the research and analysis of agrarian and more broadly, rural developments in the Indian context. One way of doing this is by being a print forum for critical theoretical deliberation and field based scholarship. This is also an important way of responding to the challenges facing rural India. By incorporating the voices of researchers, policy-makers and grass-roots organizations, a dialogue can be initiated and possibly outcomes be influenced. In line with the Foundation's objectives, the *Bulletin* would be a medium for original work that can help us understand emerging trends in specific contexts; provide important insights relating to structures of hierarchy and governance in rural India; and more generally, contribute to and question existing knowledge bank and policy debates and identify alternatives. In particular, it would attempt to promote young, upcoming researchers who, through their articulation, give voice to the marginalised sections of the Indian society.

The IFFCO Foundation has identified certain broad areas of work such as agriculture, producer/farmer organisations, rural development, environment, micro-enterprises and skill development, gender, art and culture, governance. Each of these can be deconstructed into a multitude of specific topics. For example, agriculture could relate to its technological aspects, land relations, debates on models of farming, impact on farmers of government policies such as liberalisation of the trade regime and decontrolling prices and related global trends. Similarly, relating to gender, prospective studies could be on labour market organisation, impact on female farmers of increasing costs of cultivation and instability of earnings and more so in the face of male out-migration, how gender and other social identities intersect and relate to local power matrices, women's participation in local governance and institutions, improving their access to and effective ownership of critical assets etc. Rural development could relate to agrarian relations, poverty, food insecurity, health conditions, social protection, labour migration, agricultural technology etc.

Submissions from prospective contributors can take several forms:

- i) Commentary on a topical issue or policy review (for example, cash transfers)
- ii) Analysis of models, mobilizations (for example, small holder farming model, farmers' movements)
- iii) Theoretical/conceptual explorations (for example, the relevance or not of the 'peasantry')
- iv) Field based research (qualitative and/or quantitative)

The above are only indicative and the *Bulletin* would welcome other enterprising studies as well. Though the articles would be India specific, a comparative analysis drawing on evidence from other countries in the process of analysing implications for India, would be welcomed. The *Bulletin* will be published in three issues per year, comprising four to five articles of not more than twelve thousand words each. Authors are encouraged to use simple and precise writing style so that it can be easily understood by non-academic readers as well. Diverse analytical styles are welcomed. Selected submissions will be reviewed internally and externally. Articles should be emailed to: mehrotraishita@yahoo.com