

Dynamics of Development and Change in Rural Bihar 1981-2011

A Study Sponsored by NABARD



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Executive Summary

Introduction

Bihar in its present form was created on November 15, 2000, after Jharkhand was carved out of erstwhile Bihar as a separate state. With only 54 percent of its original undivided land, which accommodated 75 percent of its original population, Bihar today faces demographic pressure and resource shortage. The 21st century Bihar is grossly deprived of mineral-rich area, and forest resources, and the agricultural sector is now the fulcrum of the entire economy. At present the state is predominantly rural with 88.6 percent of its population residing in rural areas. Bihar has a sizeable SC and Muslim population at around 16 percent each, while the ST population has dwindled to just 1.3 percent following the bifurcation.

Agriculture being the mainstay of the state at present, it is of interest to trace the dynamics of development in the agrarian sector. The present study has attempted to trace this trajectory for the last three decades based on three surveys conducted earlier. In this context, cognizance has been taken of various processes that have been taking place in rural Bihar since the 1970s. These include the process of fragmentation of land due to population growth, land reforms which were brought about as a result of social movements, rise of the 'middle castes' (Kurmi, Koeri and Yadav trio) who emerged as middle peasants, and to some extent, rich peasants by the 1980s with their considerable land purchase facilitated by the distress land-sale on the part of the landlords. Some external developments which impacted the rural Bihar economy were introduction of modern agricultural technology and increasing mechanization. The gradual expansion of market, institutional credit and, more recently, increasing migration are other factors of importance. The analysis has been carried out in this contextual backdrop.

Objectives and Methodology of Study

The overall objective is to develop an understanding of the changing agrarian structure and of the evolving agrarian relations over the last three decades. An associated objective is to locate the incidence and determinants of poverty in rural Bihar. Another objective is to assess the impact of state-sponsored programmes which aim to promote inclusive growth in the state. The study also explores the role of institutional credit in poverty alleviation. In this context, the study attempts to generate detailed information on the development experience of individual households and population groups in terms of

growth in income and asset, employment, incidence and impact of poverty, occupational mobility and social change over the last three decades.

Three empirical studies carried out at three points of time – during 1981-82, 1998-99 and 2009-11 form the basis of the present report. The first study was conducted in the early 1980s jointly by the International Labour Organisation, Geneva and the A N Sinha Institute of Social Studies, Patna. The second study was conducted jointly by the Institute for Human Development, NABARD and Action Aid during 1998-99. The third study was conducted by IHD during 2009-11.

The ILO-ANSISS Study encompassed 24 districts across six regions of undivided (Rural) Bihar. Seven variables were used for analysis– population growth, urbanization, use of HYV varieties of paddy, extent of tenancy, and extent of tube-well irrigation provision, rural population density and cropping intensity. A census of 2,533 households in 12 sample villages was undertaken as part of the household survey during August-October 1981. Subsequently, detailed surveys of around 600 households from these twelve villages were conducted during 1981-82. Altogether seven class categories were identified for this study.

The second study in 1998-99 used a large database collected from the same 12 villages of Bihar. Since the main objective of this study was to explore the longitudinal changes in rural poverty and employment scenario over two decades the same villages as covered in the first study were revisited. The methodology adopted for the second study was similar to that used in the first ILO-ANSISS study. In addition to household survey, a community survey provided information on population-size, growth and to some extent, demographic structure (caste, literacy); infrastructure facilities and their distribution across all village groups.

The third study revisited the set of households, surveyed in Round II of the second study. While some households selected in 1998 were either found missing or displaced, some others were found naturally divided under demographic pressure, leading to natural fragmentation of the agricultural plots as well. Therefore, between 2009 and 2011 all the existing households along with divided households were surveyed. During this phase of study, the Community level information was also obtained. The basic issues captured in community survey remained similar as they were in 1998-99.

Bihar and India: A comparative picture of Development

Bihar has recently experienced high rates of economic growth vis-à-vis the all-India level, but in absolute terms it continues to lag considerably behind the national average. Broadly the pattern of structural change in Bihar has mirrored that at the all-India level.

Both have witnessed a gradual decline in the share of agriculture sector and considerable gain in the share of services. Over the last decade, growth and development in Bihar has largely been driven by the secondary and tertiary sectors, represented by construction, in the former; and services, trade, hotels and restaurants, in the latter. Agriculture has grown at sluggish rates for most of the years since the 1990s.

The changing economic structure of the state is reflected in the contribution of agriculture to GSDP which fell from 40.9 percent in 1993-94 to 20.8 percent in 2009-10. There was also a reduction in the proportion of workers in the primary sector in the same period from 80 percent to 60.7 percent. The quality of employment is also poor. On an average, informal workers constitute about 92 per cent of all workers in the country, and Bihar far exceeds this with 97.5 per cent share. In terms of rural non-farm employment, however, Bihar witnessed higher growth than the national average during 1999-2000 to 2009-10, more than doubling its share in overall rural employment from 16.82 to 33.07 percent. There has also been an increase in real rural wages after 2004-05.

Large scale increase in migration has occurred over the last decade, leading to considerable remittance from the same. The proportion of rural households receiving remittances from domestic sources in 2007-08 was 18.62 per cent, next only to Himachal Pradesh (22.97 percent) and Uttarakhand (21.18 percent). Gross out-migration, especially to other states is very high in Bihar, while out-migration abroad is insignificant. Incidence of temporary migration is one of the highest among all states and migration is more among the poor. Migration has not only contributed to earnings, but also led to a tightening of the labour market in Bihar, following which rural wages have increased.

Agrarian Changes

Agrarian structure in Bihar underwent substantial change during the last three decades. Changes in land-holding pattern, tenancy, and the changes brought in with new technology as well as greater play of market forces propelled the process of development in the state towards a more inclusive one. This positive development took place in spite of an overall rise in landlessness in the rural areas. There was a gradual change in the credit landscape following these changes in agrarian structure and production relations, and also due to expansion of financial infrastructure throughout the state. Migration and concomitant remittances brought in their wake forces for redressing the balance in favour of the landless segments of the population.

Land Ownership and Operational Holding

Historically the semi-feudal relations based on attached labour, tenancy and indebtedness characterized the rural areas of Bihar and these have been greatly responsible for the

persistent poverty and deprivation in Bihar. But information from the three surveys spanning three decades show that these semi-feudal relations have practically disappeared now. There has also been erosion of power of the landlord/supervisor class as well as some forward castes, accompanied by the rise of the middle castes such as Kurmi, Yadav and Koeri.

Land fragmentation increased due to population growth and the share of landless increased steadily over time, along with decline in share of large-sized landholdings. During the reference period in the study, the share of landless in total surveyed households increased from around 40 percent in 1981 to 51.4 percent in 2011. Landlessness was found to have increased in the last decade in all the six districts surveyed. At the same time the proliferation of smaller land-holdings was reflected in the share of households with land-holdings equal to or above 5 acres declining from 13 percent in 1981 to just 3.2 percent in 2011. The non-agricultural labouring class increased its presence in the economy with the help of remittances from migration and their conditions improved with rising wages. Considering class-divisions, the proportion of landholder households consisting of middle and rich peasant classes is also found to be on the decline. This suggests that percentage of marginal and small peasant classes is expanding.

The caste-wise disaggregated data indicate that Scheduled Castes, BC-I and Lower Muslims account for bulk of the landless among all the socio-religious categories. The Yadavs have improved their landholding over time while the landholding of the Koeri caste has eroded. But the middle castes have overall gained land relative to the forward castes, while among forward castes, erstwhile landlords diversified towards non-agricultural occupations. The BC-I, albeit with high share of landless, nonetheless penetrated the larger land-holdings over the three decades in focus. The SC and backward castes were the main beneficiaries from the end of the practice of bonded labour.

By 2011, non-agricultural labouring class had emerged clearly as two separate classes, i.e. non-agricultural wage employed and non-agricultural self-employed. This class was largely landless in 1981-82 and 1998-99, but by 2011, had significantly expanded its share into middle and upper middle peasantry. There was a corresponding decline in the share in landless category.

Some middle castes, such as Kurmi and Koeri, as well as Yadav and SCs have leased in land substantively from the Brahmin and Kayastha castes. It is also observed that the class-pattern is now flattened as peasant classes are also less-skewed in terms of holding-pattern with reduced holding-sizes and changed condition of tenancy-pattern.

Agrarian Structure, Tenancy and Cropping Pattern

Operational holdings are important from the point of view of production. The process of leasing out of land for farming, without surrendering the property rights assumes importance in the context of utilizing land for production purposes, i.e. in the context of operational land. The share of leased-in area to total cultivated land records consistent increase from 24 percent to 38.7 percent over three decades, and the percentage of cultivating households who leased in land have hovered around fifty percent for the same period. This indicates growing tendency of leasing-in. It appears that both self-cultivation and tenancy might have been on the rise in the reference period.

District-wise, the relatively poorer districts of Madhubani and Purnea, along with Nalanda followed the average trend of rising tenancy over the three decades, while the rest showed an opposite trend. The percentage of cultivator households which leased in land showed a decline for the forward castes in the last decade, but increased substantially for middle castes such as Yadav and Koeri as well as for the backward castes and SCs. For these middle castes, SCs and backward castes, the proportion of leased in area to cultivated area increased over time, while the reverse was true for the forward castes.

New forms and types of tenancies have also facilitated the process of inclusive growth. While the modern form of tenancy (fixed rent) is now exceeding traditional form of tenancy (crop-share), the overall tenancy pattern maintains a pyramid type structure, at the base of which is landless and marginal peasants with tiny plots. The reverse tenancy appears to exist at very moderate level. In four of the surveyed districts the traditional system of tenancy (crop-share) is still dominant. At present labour-service is completely eliminated as a form of tenancy.

Cropping intensity is an indicator for agrarian change. The incidence of multiple cropping has increased in rural Bihar over the last decade for all land-categories barring land-size of 5 acres and above, and for most land-size categories, it was in the region of 180-200 percent in 2011. Yield rates have improved over time. While yield rates for paddy and wheat have witnessed slight improvements over the last decade, the yield for maize has nearly doubled. District-wise, Gopalganj is the best performer in 1998-99 and 2011 for Paddy, Wheat and Maize. Maize yield rate is high in both Madhubani and Purnea.

New Technology, Market and Income

Introduction of new technology, primarily in the form of HYV seeds and mechanization marked a departure in the agricultural practices in rural Bihar. With greater use of HYV

seeds and chemical fertilizers, came greater need for irrigation and the role of private irrigation increased in scope in the state. Mechanization was characterized by use of tractors, threshers, tillers, etc. With increased mechanization and private irrigation via pump-sets, the market in inputs to agricultural production expanded considerably. These developments and other factors also brought in their wake a change in the credit pattern in rural Bihar.

While adoption of new technology was usually found to be higher with higher land-size categories, even small farm-sizes adopted the new technology. Over the reference period of three decades, there has generally been an expansion in the use of mechanization, especially in the use of pump-sets for irrigation, and in the use of tractors for large land-holdings. Yet overall adoption of new techniques remains low in the state, with only 21.7 percent households surveyed adopting any kind of modern technology in 2011.

A positive development was that market in factors of production did enable those with less land resources to access the services associated with production and divorced use of these factors from the concept of 'ownership of resource'. Here the market has acted as a powerful catalyst for bringing about this change, which has indirectly facilitated the process of inclusive growth.

The market in land in the state did not undergo a significant change between 1998-99 and 2011, according to the survey data. In 1998 around 10.71 percent of the surveyed households reported selling land during the last ten years, and the corresponding share declined marginally to 9.38 percent in 2011. The percentage of households who reported buying land during the last ten years was similar in the two years at a little over 7 percent. The average size sold/purchased declined over the decade from around 0.8 acres to 0.5 acres.

But there were considerable caste dynamics. The forward castes and Kurmi were major sellers of land in 1998-99, followed by Muslims. In contrast to the other two caste groups, the proportion of Muslim households selling land reduced significantly by 2011. Kurmis were also major buyers of land in 1998-99, but were replaced by Yadavs to a great extent in 2011. While Bhumihar and Rajputs also became more active in purchasing land in 2011, a much lower percentage of Muslim households bought land in 2011 vis-a-vis 1998-99.

The last few decades saw remarkable changes in income structure along with changes in occupational structure. Income from agricultural own production was the most important component of agricultural income for households, followed by income from livestock and casual wage in agriculture. Those who mainly rely on farming activities for their

sustenance, have to supplement income through non-farm income-generating activities and also in order to spend / invest more in farming as modern farming with high tech production inputs and processes is much more expensive than traditional mode of farming. The share of income from different types of local labouring opportunities in agriculture is about 50 percent and below for two labouring classes in rural Bihar. Other classes are almost absent in this income-generating sector. Remittance constitutes a major source of income in rural Bihar.

The data for institutional and non-institutional credit taken for agricultural purposes shows a great deal of expansion in access to institutional credit over time. This is deemed to be a welcome feature since non-institutional credit usually comes at high rates of interest and tends to be exploitative. Modern farming techniques involve use of relatively more costly inputs for agricultural production which necessitates farmers taking recourse to credit. Institutional / formal sources are better open to the households with better resource-income-profile, while lower classes (some backward castes as well) heavily rely on non-institutional, informal and local sources.

A changing credit environment that encourages access to institutional loan and growing awareness about avenues of institutional sources of loan has contributed to increase in agricultural credit accessed from institutional sources.

Investment, Indebtedness and Credit structure

Investment

Of the total households surveyed in 2011 only 16 percent reported that they have made any investment in the last five years. Households invest in productive assets which include purchase of agricultural land, farm and non-farm implements and livestock. Some households invest in small business and some others, in construction and repair of house, purchase of solar light and other equipment of personal use.

In the 2011 survey, from investment viewpoint, construction and repair of house and purchase of livestock were found to be the most important areas. Construction & repair activity was most important for Koeri, OBC I, Bhumihaar & Rajput castes while livestock was relatively important for Yadav, Muslims, Brahmin & Kayasthas. Forward castes usually invested more in agricultural implements. Class-wise, landlords' investment was concentrated in agriculture (partly in land purchase), while other classes showed more diversified investment.

Households with the land-size of between 1 and 2.49 acres show the highest proportion of investment in land, while the lowest proportions were found to be for the land-size owned category of 0.01 and 0.99 acres. Those who own above 10 acres mainly invest in agriculture and allied activities. Those with relatively smaller size of land owned invest in non-farm activities as well.

The average size of investment per household made over the last five years is about 89 thousand rupees as reported for 2011. Investment amount has mostly declined with decrease of the size of landholding, the exception being the households owning land of 1-2.49 acres. The highest amount was invested by Bhumihaar and Rajput castes followed by the Lower Muslims. The declining strength of the Brahmin and Kayastha category is reflected in lower investment levels similar to those by the middle castes of Yadav and Kurmi. The OBC-I and SC are among the lowest investors, but the Koeri caste is at the bottom of the list. While the average investment of landlords is Rs. 3 lakh 75 thousand, the investment by agricultural labourers (tied) over the last five years has only been Rs. 24 thousand.

On an average, 37 per cent households took loans for investment. In Purnea, Gopalganj and Madhubani districts, almost half of the investor households took loan, but the corresponding share was much lower in the rest of the surveyed districts. A high share of economically better off households took loan compared to economically weaker ones and a high percentage of the forward caste households took loan for investment compared to the OBCs and / or SCs.

The money lender is a dominant source of credit for those who took loan for investment, accounting for 41 percent of the households. The nationalised banks (19 percent) and regional rural banks (RRBs) (15 percent) are two important institutional sources. Friends and relatives, accounting for 11 percent households, are still an important source of credit. Cooperative Credit Societies, earlier an important source for rural credit, seems to have lost its importance and SHGs, are a relatively new source of credit, but are yet to make a major dent.

The loans for investment purposes came from formal/institutional or informal/non-institutional sources. On an average, about 42 percent of the households took loan from formal and 58 percent from informal sources for investment. Due to low density of bank branches the dependence on informal loan is high in Bihar. It is observed that better off households normally get credit from formal sources, while poorer households have to opt for informal sources for investment. Those who invested without taking loan have mostly (94 percent) funded their investment from their own savings.

Indebtedness

Indebtedness has been a persistent feature of rural Bihar for long. This is reflected in the high share of nearly three-fourth (72.5 percent) of surveyed households taking loans in 1998-99. But indebtedness has shown a decline over time, as seen in the much lower share of households which took a loan in 2011, at 51.8 percent. The Non-institutional sources of loan, due to their informal arrangements and relative ease of availability, have always remained more pervasive than the Institutional sources in the study area. Even while on a declining trend, the share of total surveyed households which accessed only non-institutional loans in 2011 stood at 37 percent. The share of households that took loans from only formal sources doubled during the last decade from around 4 to 8 percent of total households surveyed.

In 1998-99, sourcing from only formal loans, while low on an average, was highest for the forward castes, but penetrated considerably into various segments of the society by 2011. Most households, across all socio-religious groups, accessed only informal loans in 1998-99, with highest shares were for Lower Muslims and backward castes. By 2011, although Lower Muslim still had the highest share, followed by SC/ST, OBC I and Yadav, it had declined for all socio-religious categories.

Credit Structure

The importance of informal source of credit in the rural Bihar economy is also underscored by the distribution of total amount of loans sourced from formal and informal sources over the three decades from 1981-82 to 2011. For all three reference years, the share of informal loans has been higher than three-fourth. This share was about 77 percent in 1981-82, which increased to about 90 percent during 1998-99. Although by 2011, the institutional sources improved their coverage to 18 percent, despite this expansion, 82 percent of the loans were still accessed from informal sources. Among the informal sources, moneylenders are the major source of credit. In 1981-82 and 2011 about half of the total debt was from moneylenders. However, in 1998-99 the dependence of moneylender was down to 28 percent.

The forward castes Bhumihar and kayastha (53.8 percent) and middle caste Kurmi (57.8 percent) households took a high percentage of loans from institutional sources during 1981-82. The corresponding figures for 1998-99 show a drastic decline to the extent of above 40 percentage points for both the castes. A corresponding increase can also be seen for percentage of loans taken from traditional sources during 1998-99, which is for all castes more than 80 percent of their total loans.

In 2011, although there was a slight decline in share of loans from traditional sources for the forward castes, for Yadavs, OBCs I, SCs and even for the Muslim community this percentage has remained same. In 1981-82, the share of institutional loans was by and large, less than that taken from the moneylenders (dominant informal source). In 1998-99, a decline was observed in the percentage of institutional loans and that taken from the moneylenders across all the categories; but there is a significant increase in the percentage of loans taken from the traditional sources. The incidence of indebtedness through non-institutional sources of loan has reached highest by the end of the century and reduced by the end of the present decade, but still remains at higher level than it was during early 1980s.

The proportion of households dependent on formal credit increases with increase in size of land holding. In 1981-82, among landless households only 4 percent of credit was from formal sources and 96 percent was informal credit. On the other hand, households having more than 20 acre of land depended largely on formal credit.

The average level of debt increased steeply over the reference period, especially between the years 1998-99 to 2011. It rose from Rs 1325 in 1981-82 to Rs 4511 in 1998-99 to Rs 25,099 in 2011. The economically better off castes have higher mean level of debts from various sources than economically and socially weaker castes. In 2011 all castes have fairly high levels of average debt from traditional sources, but in relation to credit from institutional sources, only forward castes and some middle castes have a high mean level of debt. With the exception of Brahmin and Kayastha caste households, other castes are indebted to the Land Development Banks. The mean level of debt for the agricultural labourer classes reveal noticeable increase in the year 1998-99 as compared to that in 1981-82. However, the figures remain more or less similar for these classes in the year 2011.

Gopalganj and Rohtas districts recorded the highest debt and Madhubani the lowest in 1981-82 and 1998-99 surveys but in 2011 the highest was for Gopalganj and the lowest for Nalanda district. The mean level of debt from the traditional sources is high across all the districts.

Purpose of Loan

Agricultural operation, current consumption expenditure and exceptional social expenditure were the three major heads for which loans were taken in 1981-82. In 1998-99, there was a change in pattern with marriage, medical expenses and business constituting the major proportions of purpose of loan utilization. Consumption and cultivation accounted for relatively smaller shares. The decline in loans for current consumption reflects an improvement in the economic status of the poorer segments of

the population. In the 2011 survey, marriage & dowry and health expenses continued to account for a substantial portion of the loan on an average. While the share of business was much lower, agriculture had a relatively high share. For all the socio-religious categories, the percentage of loan taken for current consumption was below 5 percent in 2011.

Terms and Conditions against Loan

Terms and conditions against loans may refer to interest, mortgage, labour service, share of farm products etc. While institutional loan arrangements involve similar conditions to all, informal and traditional arrangements vary by many local factors. The overall structure of terms and conditions associated with and imposed against loans has undergone remarkable change over last three decades.

In 1981-82, in Purnea, four types of informal sources for credit imposed altogether five kinds of terms and conditions upon the loanee. These conditions included Interest, labour service, land mortgage and repayment of monetary loan in terms of grains after harvest. By 2011 it is seen that ‘interest’ prevails as the most important form of terms against loan in all the districts, implying expansion in formalisation of the credit structure. Mortgage of land and home are the other two conditions. District-wise variation is highlighted by the prevalence of ‘interest’ as the single condition against loan in Gopalganj and Gaya districts, and prevalence of all forms of conditions against loan in Purnea, where the overall situation indicates least change since 1998-99.

Loan Utilization

The overall situation in 2011 indicated that utilization of institutional loan for agricultural operations are better than 1998-99 across all variables, viz., caste, class, land ownership and district. The utilization of institutional loan by and large remained highest for agricultural operations. The forward castes and OBC I who in 1981-82 and in 2011 used such loans mainly for agricultural purposes, diversified into business and livestock during 1998-99. The middle castes including Koeri and Yadav used high share of institutional loans for agriculture while the SCs used these more for business. In terms of landholding and class, the landless and the workforce employed in non-farm sector used above 70 percent of the institutional loan in capital goods. Almost all other categories used the loan mainly for agricultural operations.

In 1981-82, the highest proportion of traditional loan was utilized for current consumption and second highest for ‘exceptional social expenditure’. Utilization for agricultural operations was the lowest for Backward I and the highest for Brahmin across castes. In 1998-99, a high share of traditional loan across all socio-religious categories

was spent for medical expenses and this focus continued into 2011. Marriage and dowry expenses were another important destination for non-institutional loans and while this was more important for forward castes in 1998-99, the importance grew for backward castes, SCs and some middle castes by 2011.

Loans can be used for productive or unproductive purposes. Although formal institutions mostly give loan for productive purposes, sometimes borrowers use the funds for unproductive purposes. Hence the purpose for which the households borrow money may differ from the utilization of the same. The 2011 survey shows that of total households that have taken formal loan, 34 percent have used the loans for unproductive purposes, indicating a need for closer monitoring of the utilization of institutional credit.

Rate of Interest on Different types of Loans

Traditional loan attracts very high rate of interest in rural Bihar and this has remained the prime reason for heavy indebtedness of the economically weaker and landless classes, in particular. High incidence of indebtedness has been one of the reasons for migration and augmentation of sources of income. The level of indebtedness is so high that a significant part of the remittances earned by the poor is initially utilized for loan repayment. In contrast, the rate of interest associated with formal / institutional loan is much lower and usually involves identical rate of interest for all, as well as some concessions for the poor. The stark contrast between the rates of interest for loans from the institutional and non-institutional sources can be seen from the fact that while the former has been around 11.4-13.4 percent during the last two decades, the latter has been as high as 59 percent, with no signs of decline over time.

Money lenders are one of the major sources of non-institutional or traditional loans in rural Bihar. The rates of interest charged for households by landholding size-class indicates the sharp contrast between the high rates charged by the money-lenders to households with disadvantaged socio-economic backgrounds such as the landless class and the relatively lower rates charged for the households with larger land-size. District-wise data show in 2011, Rohtas faced the highest average rate of interest for sourcing traditional loans at 77 percent, followed by Purnea at 61 percent. All the other districts faced rates above 50 percent, the least being for Nalanda at 50 percent.

The average rate of interest for unproductive loans from traditional sources was as high as 60.1 percent in 2011, but even for productive loans the rate was found to be high at 46.6 percent. The institutional sources, on the other hand charge much lower rates, although the rate charged for unproductive loans is higher than that for productive loans. Thus productive loans must primarily be sourced from institutional sources, to keep costs in check and thereby promote efficiency in production.

Poverty

Bihar has 53.5 percent of its population living below the poverty line in 2009-10 compared to the national average at 29.8 percent. What is more, between 2004-05 and 2009-10 poverty in the state declined by only 0.9 percentage point. About 51.4 percent households were landless as of 2011, according to survey data. The landlessness has consistently increased and this rise is steeper between 1981-82 and 1998-99 than between 1998-2011.

The total value of assets per household is high for the forward caste groups (Brahmin, Bhumihar, Rajput and Kayastha) and Kurmi households show the highest value of asset per household. SC and OBC I have gained in terms of asset value over time due to government schemes such as for housing. The Tied agricultural labour group recorded the lowest increase in overall asset position mainly due to lack of increase in land ownership. In fact, this class group has been vanishing over time.

Overall, general caste, other OBC II, and Upper Caste Muslim have high shares of middle and rich income groups at 51.6 percent, 46.2 percent and 38.9 percent respectively. Scheduled Caste group has improved their economic position between 1998-99 and 2011. Both segments of Muslim households reveal sharp upward mobility in their income-status over the last decade. The change within the OBC-I community reveals consistent upward mobility, while for OBC-II it reveals sharp class polarisation.

Agricultural labour class and Small peasant class have elevated their economic position between 1998-99 and 2011. Medium and large peasant classes revealed a downward mobility in terms of their economic position, while large peasants experienced some reconsolidation in their economic position. Non-agricultural classes had above 50 percent presence in 'poor' income group during 1998-99. In 2011 they constitute this percentage in 'poor' and 'near poor' taken together and record a fair presence in 'middle' and 'rich' income groups as well.

Migration has contributed to income of the surveyed households. The percentage of all types of migrants was 31.2 percent during 2011. Men constituted 93.1 percent of all migrants in 2011. There are more women migrants in the better-off households. Structure and dynamics of female migration along caste, class and land-holding categories clearly suggest that they do not belong to labouring classes. The incidence of poverty is much higher in non-migrant households. While non-migrant households constitute about 41 percent of the total, these are 75 per cent of the poorest households.

The average percentage of income sent as remittance is 41.1. Purnea district records highest percentage of remittance (above 58) and Gaya records lowest (30). Income and

remittance varies by work status and types. This is highest for salaried workers and lowest for contract/piece rate. However, the highest percentage of remittance is sent by 'contract workers' and 'daily wage workers'.

Employment opportunity is the most important non-income indicator of poverty. It has improved significantly during 1999-2011 for all castes and the improvement was highest for 'lower Muslim' followed by SC and OBC-I, and the lowest for 'general' category. Another important non-income indicator for the poor is housing. Even in 2009 nearly 36 percent of the surveyed households had to accommodate their family in the 'Kutchha' house and only about 17 per cent households had 'Pucca' house to live in. Other OBC II group has the highest percentage of 'Pucca' houses, followed by 'general' category and SC. The reasons are likely to be that while well off sections of the forward caste Hindu households can afford cemented houses, the disadvantaged social groups are facilitated by the government sponsored housing schemes. Indira Awas Yojana has particularly contributed to this status enhancement for housing facility.

Most non-income indicators speak in favour of positive change over the last decade along with enhancement in overall living status. But the situation is alarming for two crucial indices for basic amenities: namely, access to toilet facilities and access to electricity. Only about 15 percent of the surveyed households had toilet facility and around 21 percent had electricity connection in 2009.

For assessing the gender situation in the context of poverty, Female Work Participation Rate (WPR) is an important indicator. This increased by 40 percent over the last decade (1998-99 to 2011) in the state. The most important factor responsible for this substantial increase is increased volume of out-migration of the male labour force to better-earning destinations. Although migration of male labour created a situation best explained in terms of 'feminisation' of poverty, in rural Bihar, it is 'shortage' of male labour that forced female labour to join the labour market, though at lower wage rates, administered at local level.

A comparative study of the WPR over the last decade indicates that it has increased sharply for all age groups except for the 5-14 year age-group for which is slightly lower. The highest point of WPR (70) is seen for the 30-49 age group. The lowering of WPR in the 5-14 age-group indicates that girls are increasingly attending school. Similarly, the rise in WPR during 60+ ages possibly reflects an increase in life-expectancy and working stamina of women.

State interventions and Inclusive Growth

Most of the schemes and programmes envisaged to promote inclusive growth were introduced in the state during late 1990s and afterwards. Caste and gender have remained

the traditional axes of exclusion in Bihar, encompassing within them educational and land-based exclusions as well. Development of a market-based economy has changed the nature of these exclusions. Deprivation of women with regard to education and health are borne out by data from the field surveys in the context of multi-dimensional poverty. In terms of social exclusion, both *dalits* and OBC-I are largely landless and working mainly as agricultural and non-agricultural labourers. Their old caste-based professions are slowly changing and wage relations are taking over. The growing market for tenancy provisions in agricultural land has changed the 'exclusion' scenario. The leasing in of land has helped to reduce inequality in access to land to some extent. Shift to non-farm labour and, even more so, migration have been considered to be important avenues of poverty reduction and reducing exclusion, thereby.

Sarva Shiksha Abhiyan (SSA) is the main umbrella programme in the area of elementary education. It has impacted enrolment and retention has also improved over time. But the drop-out rates at primary and elementary levels still remain quite high in Bihar and are much higher than corresponding all-India averages. The situation is considerably worse at the secondary level with 62.2 percent drop-out rate for Class I-X. The drop-out rates for SC were mostly higher compared to the average rates for Bihar in 2004-05, but these have fallen sharply afterwards, showing greater inclusion over time. At the secondary level, however, drop-out rates for SC students are far higher than all-Bihar average throughout the period considered, indicating that inclusive schemes have made more of an impact till the elementary stage, but not as much beyond.

Secondary data indicate that the PTR for Bihar schools (at the elementary level) is also found to be much higher than the all-India averages. Among infrastructural facilities, the position is satisfactory with regard to drinking water facilities, but is extremely poor in terms of electricity availability and dissatisfactory in terms of toilet availability. The Mid Day Meal has been functioning in the state, but still falls short of all-India average indicators.

Between 1998 and 2011, there was about 21 percent decline in illiteracy for women and 13 percent for men, according to survey findings. The gender-gap is fairly reduced over the last decade and female literacy percentage has improved remarkably. Muslim women were found as the most numerous illiterate. Madhubani, Nalanda and Purnea recorded the highest percentage of illiterate women during 1998 but by 2011 the situation changed for Nalanda, although it did not improve for Madhubani and Purnea.

During 1998-2009, a dramatic 40 per cent increase in the percentage of school-going children (5-14 age group) was observed from the survey data. Utilization of uniform and cycle scheme for students was found to be higher than a scheme for providing

scholarships. While the coverage of MDM scheme was fairly satisfactory, many irregularities were reported regarding execution. Survey data indicated satisfactory drinking water facilities in schools, but Purnea, Rohtas and Nalanda were lagging behind in terms of provision of toilet facilities.

NRHM and RSBY have been the major public health programmes. Mortality rates on an average has gone down by 10-28 per 1000 for neo-natal, infant, child and 'under five age group' between 1998-99 and 2005-06. However, NFHS data indicate that when compared to other states, the performance of Bihar is found to be lagging. The Immunization status shows an upward trend over five year period between 2002-04 and 2007-08, but, in absolute terms, Bihar is far behind the national average. Trends in indicators relating to maternal-care mostly indicate an improving situation over time.

The survey data for 1998-99 point at a deficit in public provision of health facilities in the districts surveyed. With only 8.4 percent of the households opting for state-run health centres, the share of households accessing private treatment was 61 percent. The 2009 survey data relating to doctors' visits imply that the situation had not improved substantially by then. No visits were made in Gopalganj and Madhubani districts and partly, in Gaya, where doctor's visit is recorded in 66.7 per cent villages 'only during campaign'. The situation was better for the ANM's visits. In terms of delivery, in 2009, around 56.6 per cent households were found to still opt for non-institutional provisions for delivery of babies.

In the area of livelihood promotion, the government of Bihar launched Jeevika in 2007 initially in six districts with a focus on building a network of women's self-help groups; the eventual aim was income enhancement through sustainable livelihoods in farm and non-farm activities. By March 2011, about 2000 villages were covered under Jeevika and over 30,000 SHGs were formed. It is too early to have an impact evaluation of the programme.

In Bihar, the impact of MGNREGS on employment, income and poverty reduction as well as on the asset creation, has been found to be far from satisfactory as compared to other states. But while generation of employment days has been low, the rise in wages has been a positive development. A positive fall-out has been that female workers under MGNREGS highlighted that there was some dignity in work provided under this scheme and 'gender parity' was most important as realized in wage payment. The impact on strengthening rural infrastructure has not been satisfactory.

In terms of gender-specific schemes implemented in Bihar, the survey has explored Kanya Vivah Yojana which aims to help parents get their daughters married, as well as Auzaar and Hunar Yojana which aim to help young women learn skills to get

employment. These have by and large found few takers. Maternity benefit scheme was much more successful. ICDS has been operational in the state for many years, but survey findings suggest that only 31.7 percent of eligible households received benefits. SHGs have gained importance in present times as a tool for women's empowerment but the average percentage of households with women as members of SHGs was just 7.6 for all surveyed districts in 2011.

Regarding cash transfer programmes, the data from the second field survey during 1998-99 show a dismal performance of different programmes aimed at poverty alleviation such as homestead land transfer to landless poor and loan assistance under Integrated Dairy Development Programme. Under Integrated Dairy Development Programme (IDDP), only 4.2 percent of the total households received loan assistance. The performance of Indira Awas Yojana (IAY) improved between 1998-99 and 2011. Apart from increase in number of beneficiaries, the housing assistance amount increased manifold from an average of Rs 596 to Rs 29592 between 1998-99 and 2011. The highest percentage of beneficiary households is recorded in Nalanda and Gaya districts. The performance of Old-age Pension Scheme improved between 1998 and 2009, as ascertained from number and percentage of beneficiaries who earned income through this scheme.

Survey data for Public Distribution System during 2011 reveals that 45.4 percent of the total surveyed households are beneficiary and each household gets 149 kilogram of grains (rice / wheat) per annum under PDS. This performance also needs to be seen against the backdrop of total collapse of the PDS for protracted years in the state. However, it has been observed from survey data that very low fraction of the income of the poorest social groups comes from government employment programmes (MGNREGS) and subsidized food (PDS).

Conclusions and Recommendations

Overall, it would appear that despite more than half of the inhabitants living below the poverty line, as per official statistics, the survey findings indicate more reasons for optimism. Although the share of landless has increased over time in the state, the landless as well as the disadvantaged segments of the population have used migration and non-farm employment as strategies to fight their way out of poverty. Migration has been one of the factors that have led to increase in wages in the state. Some of the backward castes and SC have also penetrated into landholding categories, while the Muslim community has experienced upward mobility in their income-status in the last decade. It is evident that agriculture in its present state cannot support the livelihood of the steadily burgeoning population, but again strategies of opting for livestock rearing, diversification to cash crops, etc. are indicated by the survey data.

While there is evidence of expansion of market forces in rural Bihar, the expansion in institutional credit is far less than required. A shift away from high-interest and discriminatory informal loans towards uniform and low interest formal loans would really contribute towards unshackling the rural people from indebtedness and poverty as well as unleash their potential for productive purposes.

Governance issue is another area where much more focus is needed to redress the balance between the haves and have-nots, by making poverty alleviation schemes more effective, and thereby, making the development process more inclusive. Overall public investment in human development areas such as education, health, livelihood creation and access to basic amenities like electricity and water & sanitation, must be stepped up urgently.

Macro Recommendations

(i) Public provision in irrigation now requires effective water-resource management, in face of recurrent floods and draughts. Traditional system of community-management may be revived with modern techniques.

(ii) Power-generation along with distribution of power to rural areas is crucial for agricultural growth in the face of fairly expanded mechanisation in farm-production, processing of the produce and tube-well fed irrigation practice.

(iii) There is an urgent need to improve governance in all sectors of rural Bihar. Regulation of market in productive regime and elimination of 'middle-men' through effective public distribution system in seed and fertilizer supply is an illustrative example.

(iv) Public provisioning for institutional credit must be expanded quickly to lift various segments of the rural society out of indebtedness, especially the weaker socio-economic groups such as the landless. Provision of loans at low institutional rates is expected to be of great help for efficient farmers, in particular, and tap their potential to enhance production.

(v) A set of government initiatives for non-food items in the farm sector, similar to the ones for food items such as vegetables and fruits may help unfold a different kind of growth story and also offer feedback to improve them. Therefore, such a study is recommended to be taken up.

Issue-based Recommendations

(i) The coverage of the public intervention programmes for the excluded sections needs to be expanded, so that poorer segments are adequately benefited. This issue needs to be taken care of at both policy-making and execution levels;

(ii) Cash Transfer as a delivery mechanism is not appreciated for all schemes. For instance, there is growing demand for direct distribution of Cycles to students instead of reimbursement of cash against purchase. Therefore, a proper scrutiny is required for all schemes in order to make appropriate choice about cash transfer;

(iii) There is an urgent need to improve both toilet and electricity connection facilities to cover all schools across all districts in the state;

(iv) The coverage of educational and health related programmes, in particular, need to be expanded and extended to all targeted beneficiaries;

(v) The realization of the full transformational potential of MGNREGS in Bihar lies in its effective implementation. Even though weakly implemented, this scheme has contributed to increase in employment, incomes and 'sense of dignity' for (female) workers. Special focus on effective implementation of MGNREGS is strongly recommended.

(vi) Mid-day Meal scheme requires overhauling in terms of the execution aspect in view of recent tragedy of 'food contamination' in MDM in Bihar. Water contamination is another issue for serious concern.

(vii) Women have to face severe problems within family and society in the matter of taking up job opportunities and the women-centric skill development schemes introduced in rural Bihar seem to be marked by their failure to take off. Therefore special efforts for social empowerment of women are needed in a parallel manner, without which such schemes are unlikely to be successful.

(viii) Decision-making power of poor women is slowly increasing with their engagement with the SHGs. The innovative programmes, such as JEEVIKA have the potential to transform the energy of women into 'development agents'. Expansion of such programmes is recommended through other women-specific agencies as well.