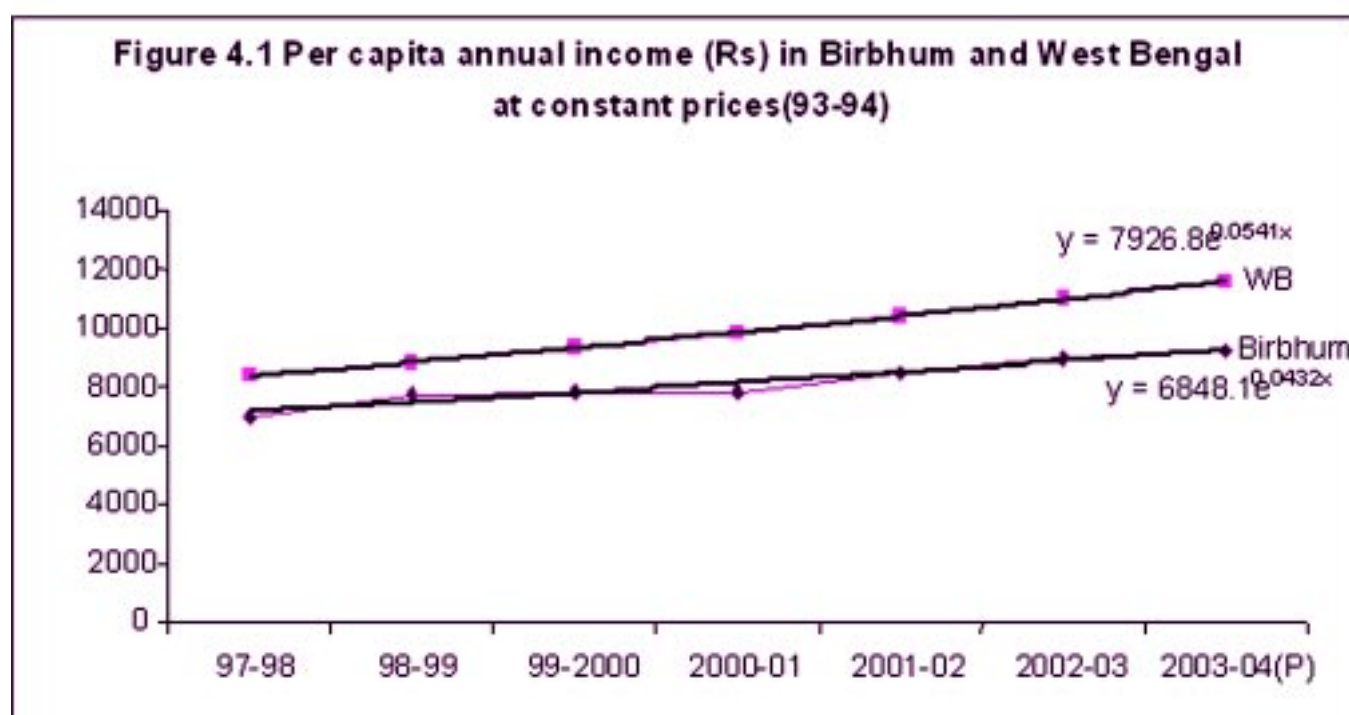


Chapter IV : Economic opportunities and security of livelihood

4.1 Structure of district income

Per capita district income in Birbhum has been lower than that of West Bengal for long. This is what one would expect given the limited range of modern sector activities in the district in comparison with several other districts and of course with Kolkata. But what is of particular interest is that how it has been growing vis-à-vis the state as a whole in the recent period. Figure 4.1 shows that between 1997-98 and 2003-04 per capita income in the state has grown faster than that of the district, and as a result the gap between the two has widened in the recent years. While the compound growth rate in per capita income in the district is 4.3 per cent per year, it is 5.4 per cent per year for West Bengal as a whole in the reference period mentioned above.



Source: Statistical Abstract, GoWB; P stands for 'Provisional'

As mentioned earlier, Birbhum is predominantly an agricultural district. Table 4.1 shows that the share of primary production in net district domestic product is 38.51 per cent in 2003-04 (provisional), which is much higher than the corresponding figure for West Bengal. Although this share has been declining in both Birbhum and West Bengal, it is not matched by a corresponding increase

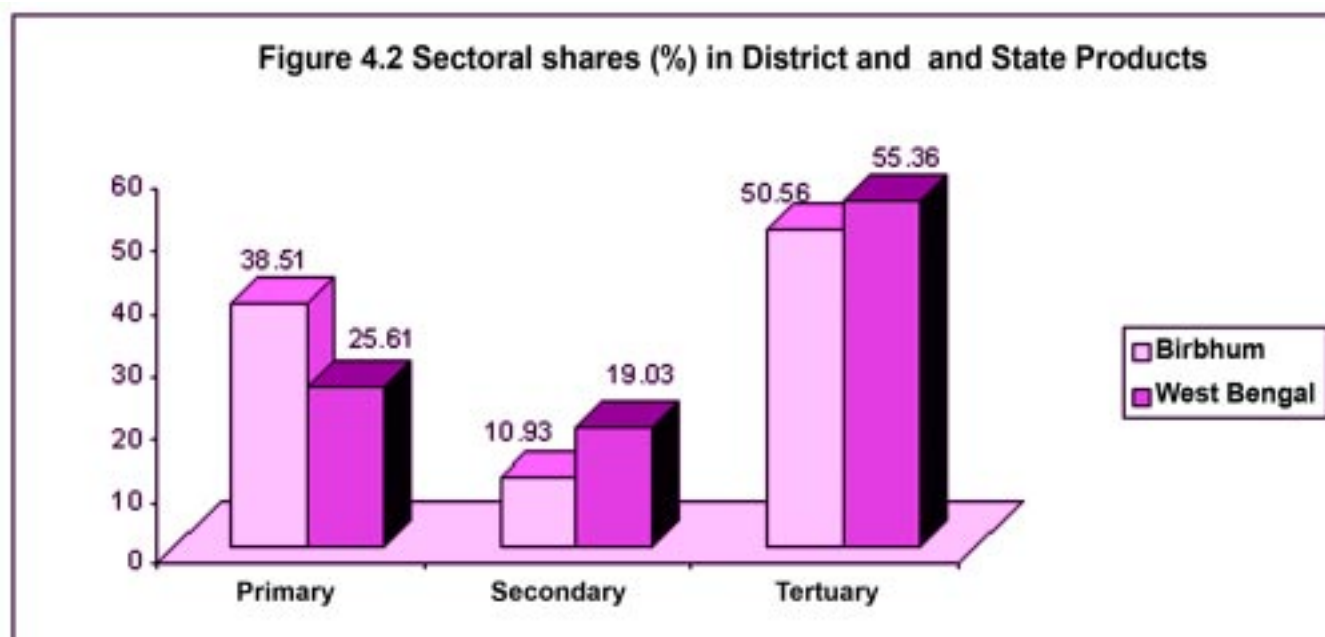
in the share of the secondary sector. It is the tertiary sector that has been growing fast all over West Bengal so that its share in total district or state income has been steadily increasing. In the case of Birbhum, roughly one-half of the district income can currently be attributed to the tertiary sector.

Table 4.1 Sectoral shares (%) in Net District Domestic Product of Birbhum and Net State Domestic Product of West Bengal at constant prices

Year	Birbhum			WB		
	Primary	Secondary	Tertiary	Primary	Secondary	Tertiary
1999-00	45.08	10.86	44.06	29.75	21.29	48.96
2000-01	40.87	12.07	47.06	28.73	20.51	50.76
2001-02	43.75	11.51	44.74	29.62	20.00	50.38
2002-03	40.41	11.11	48.48	26.44	19.65	53.91
2003-04(P)	38.51	10.93	50.56	25.61	19.03	55.36

Source: Statistical Abstract 2005, GoWB

Given the low share of the secondary sector in district income, which means the production base for manufacturing is rather thin, it is more difficult for Birbhum to make a steady expansion of the secondary sector. This is for the economic logic of positive externality that feeds into the process of industrialization. The fact that there are very few industries in Birbhum feeds into the perceived notion that there must be district-specific factors less favourable to investment. This might have made it more difficult to attract investors to the district.



4.2 Structure of employment

According to Census 2001, the share of workers in total population was 37.4 per cent in Birbhum, which was marginally higher than the state average of 36.8 per cent. Between the two census years (viz.1991 and 2001) the district had experienced 4 percentage point increase in work participation rate (from 33.2 per cent to 37.4 per cent). Like in other districts, in Birbhum too the work participation rate is higher for males compared to females. While the share of male workers in total male population was 54 per cent, that of female workers was only 20 per cent in 2001. However, the female work participation rate increased from 13 per cent in 1991 to 20 per cent in 2001 (Table 4.2)¹. The overall increase in work participation is also reflected in the falling dependency ratio (expressed as a ratio of non-working population to working population) between the two latest census years. In Birbhum the dependency ratio came down from 2 in 1991 to 1.7 in 2001.

Table 4.2 Work participation rates in Birbhum and West Bengal

	Percentage of workers in total population	1991			2001		
		Person	Male	Female	Person	Male	Female
Birbhum	Main + Marginal	33.2	52.2	12.8	37.4	54.3	19.7
	Main	30.4	51.6	8.1	27.6	46.1	8.1
West Bengal	Main + Marginal	32.2	51.4	11.3	36.8	54.0	18.3
	Main	30.2	50.7	8.0	28.7	47.0	9.1

Source: Census 1991, 2001.

However, it is important to note that in Birbhum, increasing overall work participation has been associated with an increasing share of marginal workers in total work force. By census definition marginal workers are those who do not work for major part of the year, which could either be due to lack of opportunity or other reasons. Between the last two censuses the decadal growth in the number of main workers in the district was 7 per cent, whereas in the same period the number of marginal workers grew by an astonishing 326 per cent. As a result the share of marginal workers in total work force in the district increased from 8.2 per cent in 1991 to 26.3 per cent in 2001.

¹ A detailed analysis of women's work participation in Birbhum is presented in Chapter VII.

The number of workers engaged in agriculture (which includes both ‘cultivators’ and ‘agricultural workers’ – two census categories) as a percentage of total workers has decreased from 72 per cent in 1991 to 60 per cent in 2001. This corresponds to the overall common perception that more people are now engaged in non-agricultural activities, such as fishing², retail sales, vegetable vending, selling milk, and so on. As all these activities are at the lower end of the spectrum of marketable skills, it remains doubtful if these activities generate enough return for their family’s sustenance.

Table 4.3 Percentages of different categories of workers to total workers in Birbhum

Categories of workers	1991			2001		
	Person	Male	Female	Person	Male	Female
Cultivators	34.1	37.7	18.4	23.1	27.5	10.4
Agricultural workers	38.3	34.0	57.1	36.9	33.5	47.1
Household industry workers	4.1	3.0	8.8	6.5	3.2	16.0
Other workers	23.5	25.3	15.7	33.5	35.8	26.5

Source: Census 2001

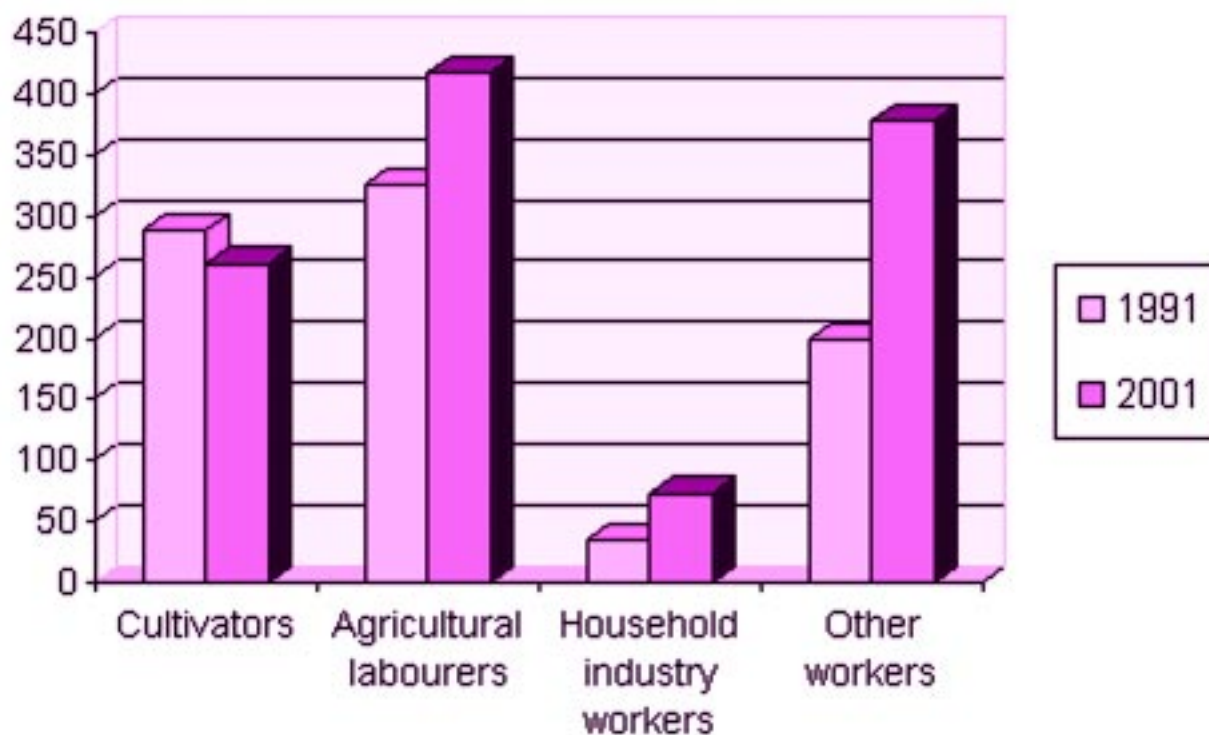
Although a falling agricultural workforce is an expected and desirable change as an economy progresses, it has not been an unmixed good in our context. The share of agricultural labour in total workers engaged in agriculture increased over the Census decade (53 per cent in 1991 to 62 per cent in 2001). As a matter of fact, between 1991 and 2001, the absolute number of cultivators in Birbhum came down from 289155 to 260955 indicating a 10 per cent decennial fall, while during the same period, the number of agricultural labourers increased from 324701 to 416949 indicating a decennial growth rate of 28 per cent (Figure 4.3). In other words, while the overall dependency on agriculture has been coming down, an increasing number of landless in rural areas join wage work in agriculture as a major activity.

If overall the percentage of working population engaged in agriculture is coming down, then it must be the case that people are joining non-farm activities in increasing number. Census classifies non-farm employment into two categories: ‘household industry workers’ and ‘other workers’. In Birbhum the share of non-agricultural employment has increased from 28 per cent in 1991 to 40 per cent in 2001. What is remarkable is that even in rural Birbhum the share of non-agricultural employment

² Fishing is included in the broader definition of ‘agriculture’, but here we refer to agriculture proper that excludes fishing.

increased from 23 per cent in 1991 to 35 per cent 2001. In 2001, 19 per cent of non-agricultural employment belonged to the household industry category and the rest belonged to 'other workers'. The share of household industry in non-agricultural employment does not seem to have changed over time.

Figure 4.3 Number of workers in different categories in Birbhum (in thousand)



We now look at inter-block variation in work participation. According to Census 2001, all blocks in Birbhum have more than 30 per cent of their population in the work force. However, there are five blocks (Rampurhat-I, Rajnagar, Suri-I, Suri-II and Bolpur-Sriniketan) in which the work participation rate is more than 40 per cent (Table 4.4). Out of these five blocks, in two blocks Rajnagar and Suri-II higher work participation is due to higher share of marginal workers. Except Mayureswar-II and Nanoor, all the blocks show a decline in the percentage of main workers in total population between 1991 and 2001, and the overall increase in work participation in rural areas is entirely due to significant increase in marginal workers in all the blocks. In all the municipalities except Dubrajpur the percentage of main workers increased between 1991 and 2001. In the urban areas in general the percentage of marginal workers in total workers is much lower compared to the rural areas. Higher work participation might be either due to expanding employment opportunities that acted as the 'pull

factor' or due to economic hardship that compelled people to accept any kind of job, or some combination of both.

Table 4.4 Percentage of workers (Main+Marginal) in total population and of cultivators and agricultural workers in total workers across blocks of Birbhum, 2001

Blocks/ Municipalities	Percentage of workers in total population	Percentage of marginal workers in total workers	Percentage of cultivators in total workers	Percentage of agricultural labourers in total workers
Murarai - I	32.7	24.2	14.7	35.1
Murarai-II	32.4	19.9	20.1	38.5
Nalhati-I	35.2	25.1	21.7	38.0
Nalhati-II	33.3	24.5	23.5	40.6
Rampurhat-I	44.3	28.7	25.9	38.4
Rampurhat-II	35.0	24.8	22.0	39.4
Mayureswar-I	38.4	30.3	28.7	44.0
Mayureswar-II	38.1	18.2	34.1	39.2
Md. Bazar	37.6	27.8	20.7	40.6
Rajnagar	45.8	39.4	22.8	34.0
Suri-I	42.8	28.8	15.4	28.0
Suri-II	49.4	45.9	27.7	40.3
Sainthia	38.4	30.3	26.7	46.8
Labhpur	35.4	24.7	33.1	38.8
Nanoor	36.9	19.6	30.1	40.1
Bolpur-Sriniketan	43.7	28.8	21.0	43.9
Illambazar	36.5	29.3	27.2	44.2
Dubrajpur	39.8	29.7	27.6	40.2
Khoyrasole	35.1	35.4	26.5	34.3
Rampurhat (M)	29.9	7.7	-	-
Sainthia (M)	33.1	8.2	-	-
Suri (M)	32.4	7.2	-	-
Dubrajpur (M)	33.7	18.4	-	-
Bolpur (M)	33.8	9.4	-	-

Source: Census 2001

Figure 4.4 Percentage of workers in total population across blocks of Birbhum, 2001

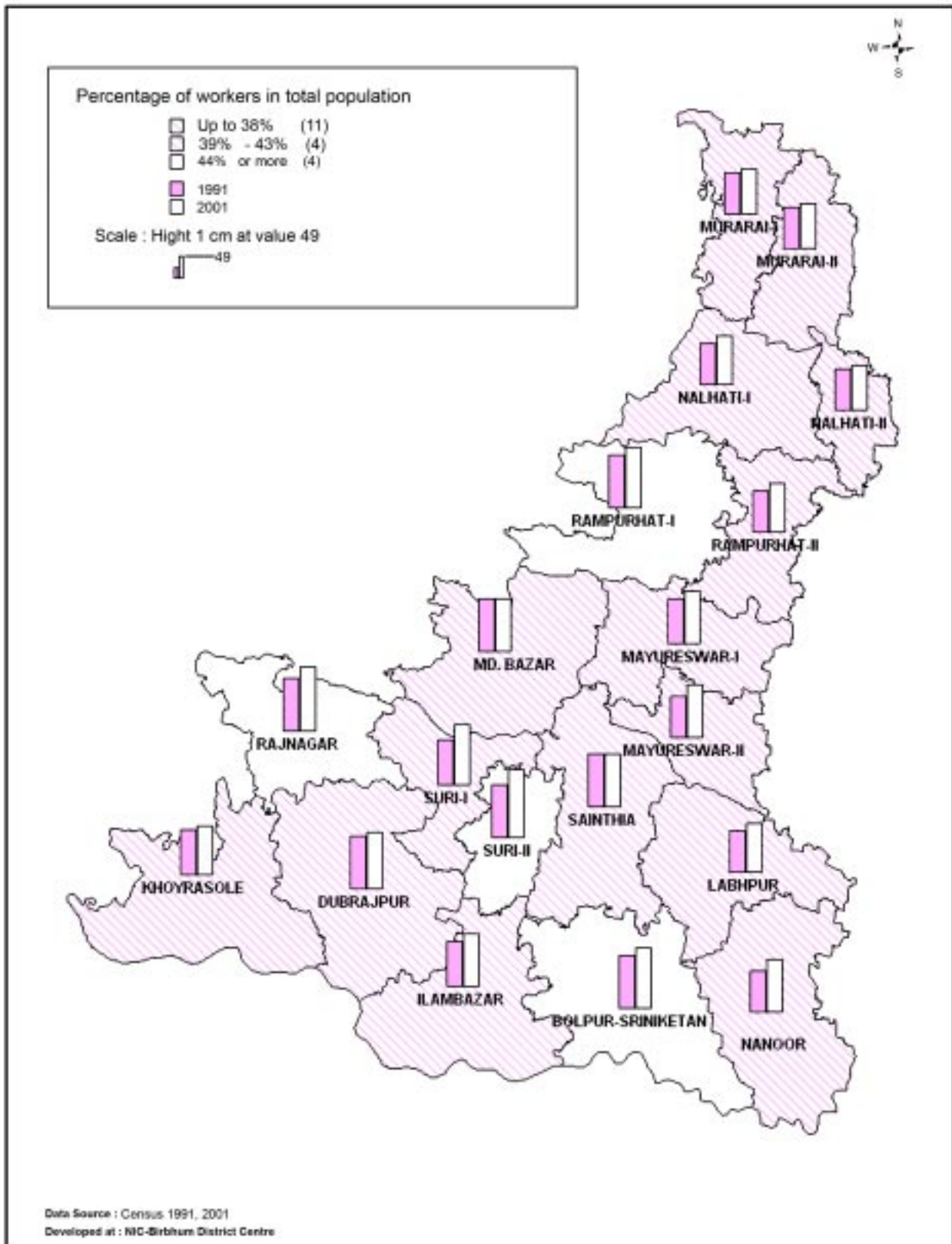
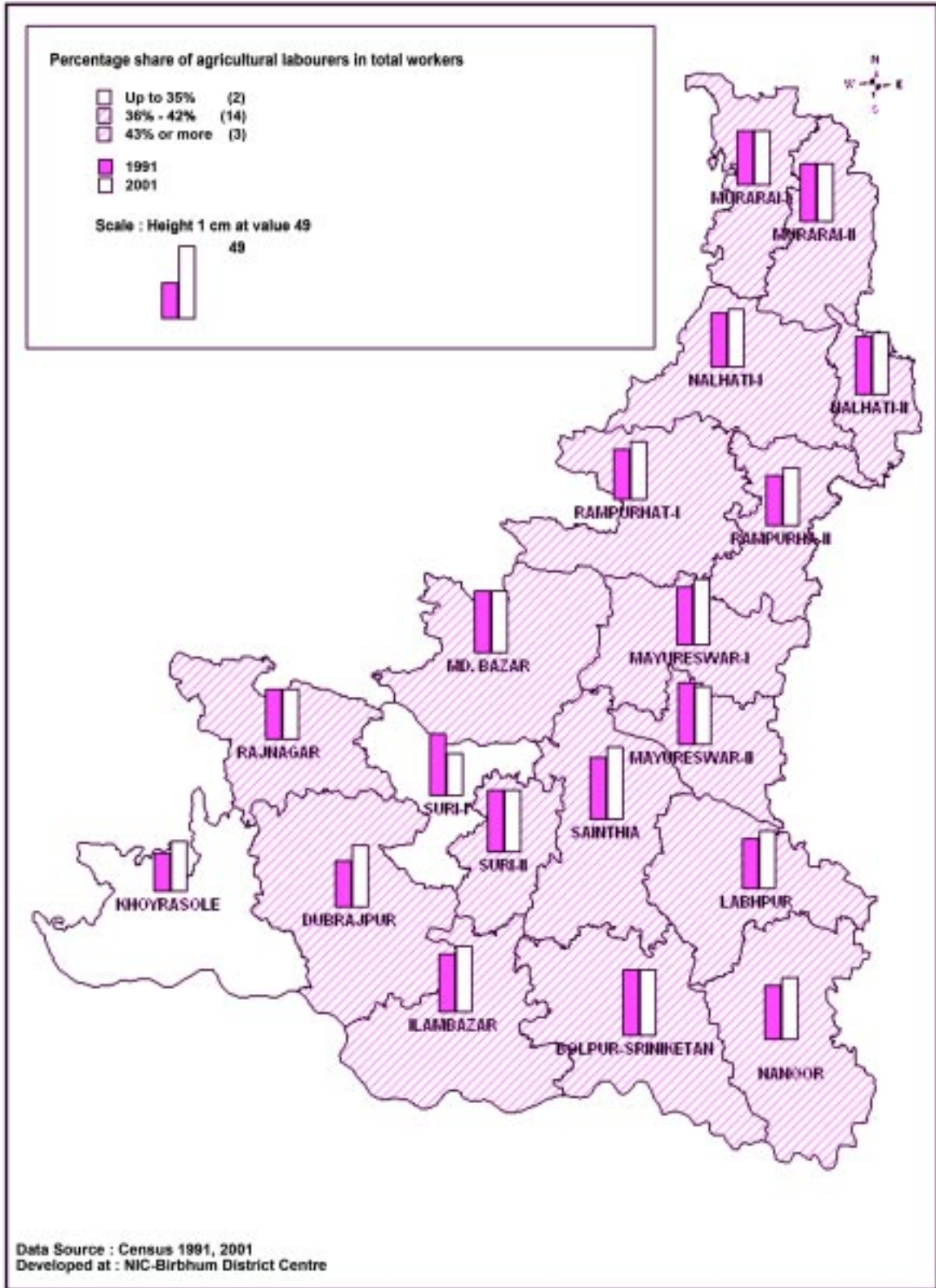


Figure 4.5 Percentage of agricultural labourers in total workers across blocks of Birbhumi, 2001

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Although a fall in agriculture-based workforce is considered as a positive change from development point of view, not all blocks of Birbhum have experienced such positive changes to a significant level. For example, there are still 6 blocks (Mayureswar-I and Mayureswar-II, Sainthia, Labhpur, Nanoor and, Illambazar) where the percentage of workers dependant on agriculture is 70 per cent or more. It is also observed that in those blocks where a high percentage of people are engaged in agriculture, it is mostly due to higher share of agricultural labourers and not for higher shares of cultivators. There are seven blocks where the percentage of agricultural labourers is 40 or more (Table 4.4). These blocks are Nalhati-II, Mayureswar-I, Md Bazar, Suri-II, Sainthia, Nanoor, Bolpur-Sriniketan, Illambazar and Dubrajpur. High dependence of workers on agriculture implies that they are subject to seasonal variations in income. It is obvious that in those blocks where the percentage of marginal workers or agricultural labourers is higher, the households' incomes are subject to seasonal fluctuations that make them vulnerable. Therefore, NREGS need to be strengthened in those blocks. We shall come back to this point later.

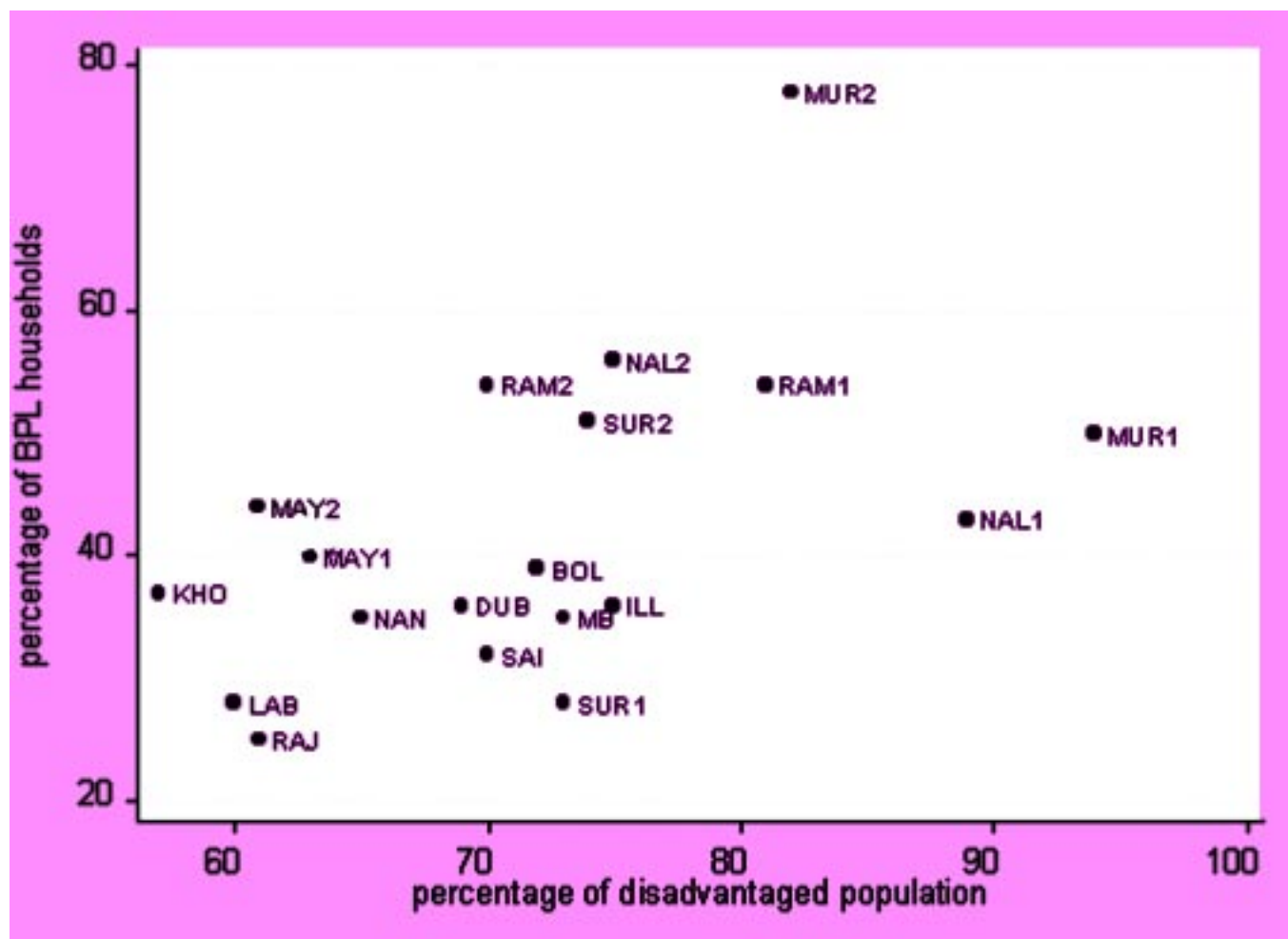
We now look at the incidence of rural poverty and its connection with the composition of employment across blocks. The BPL household survey carried out in 2005 provides information on total number of families and families below the poverty line at a highly disaggregated level (viz. the *Sansad* level). Despite the controversies surrounding the BPL survey and reliability of the data, the figures can highlight certain important aspects of the spatial distribution of the poor people if we assume that the alleged upward bias is more-or-less evenly distributed across blocks. The percentage of BPL families across blocks is presented in Table 4.5. The table shows that the percentage of BPL households is the lowest in Rajangar (25.3 per cent) and highest in Murarai II (78 per cent). There are only three blocks where the percentage of BPL households is less than 30 per cent (Rajnagar, Suri I and Labhpur). There are five blocks where percentage of BPL households is more than 50 per cent. These blocks are Suri-II, Rampurhat-I, Rampurhat-II, Nalhati-II and Murarai-II.

Table 4.5 Number and percentage of BPL households, 2005

Block	Number of total households	Number of BPL households	Percentage of BPL households
Murarai-II	42079	32812	78.0
Nalhati-II	25180	14165	56.3
Rampurhat-II	37954	20389	53.7
Rampurhat-I	39665	21393	53.9
Suri-II	21502	10881	50.6
Murarai-I	33854	16995	50.2
Nalhati-I	44356	19002	42.8
Mayureswar-II	28220	11461	40.6
Mayureswar-I	26449	10526	39.8
Bolpur-Sriniketan	41308	15965	38.6
Khoyrasole	28274	10424	36.9
Illambazar	37912	13514	35.6
Dubrajpur	38749	13764	35.5
Md. Bazar	32398	11444	35.3
Nanoor	48251	16746	34.7
Sainthia	46677	14876	31.9
Labhpur	45293	12798	28.3
Suri-I	20462	5775	28.2
Rajnagar	15343	3879	25.3
Birbhum	653926	276809	42.3

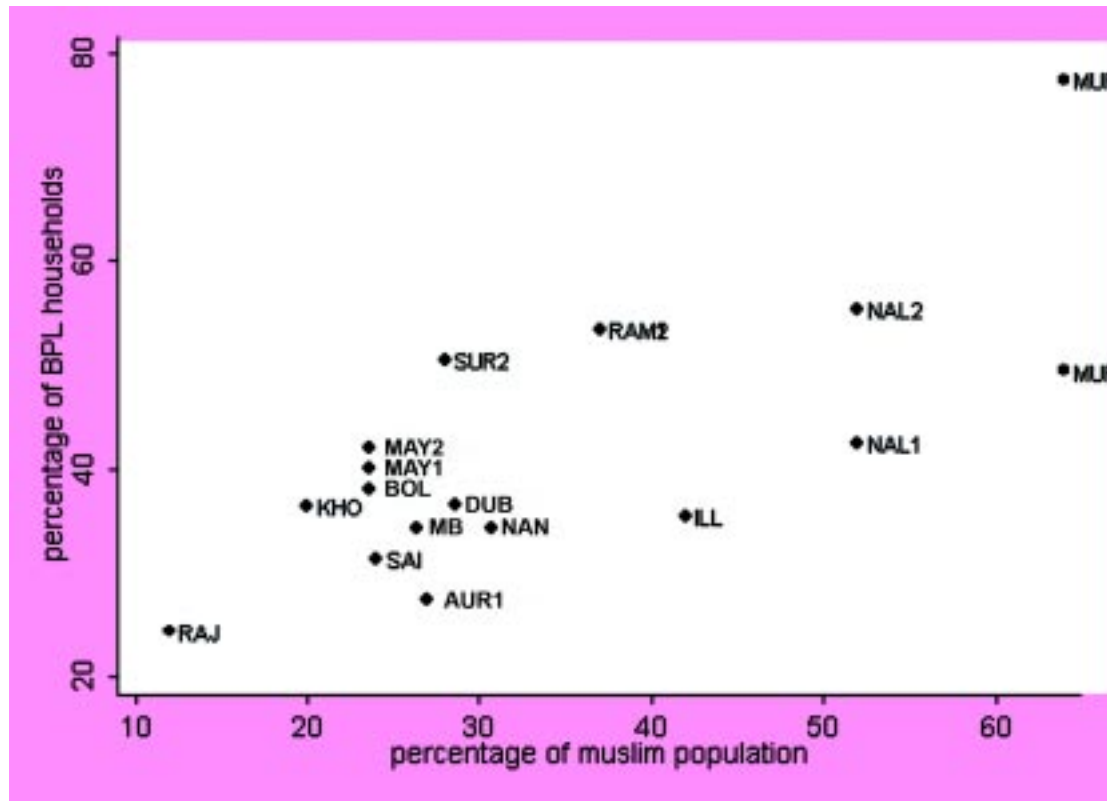
Although there is no indication that the share of BPL households is more in blocks with higher share of agricultural labourer, there is a clear pattern that the share of BPL households is more in blocks with disadvantaged population in general and Muslim population in particular. To examine this correlation graphically, we have plotted the percentage of BPL households across blocks against the percentage of disadvantaged population, viz. SCs, STs and Muslims (Figure 4.6).

Figure 4.6 Correlation between percentages of BPL households (2005) and disadvantaged population (2001) at block level in Birbhum



It seems that the percentage of BPL households is closely associated with the percentage of disadvantaged population in general and the percentage of Muslim population in particular (Figure 4.7). While the percentage of BPL households shows a correlation coefficient value of 0.54 with percentage of disadvantaged population, with the percentage of Muslim population it shows a much stronger association (0.73). This indicates that, even though there is much scepticism about identification procedure of BPL households, by and large the data conform to our expectation that the socially disadvantaged groups be identified as BPL so that the benefits of targeted poverty alleviation schemes and programmes reach them.

Figure 4.7 Correlation between percentages of BPL households (2005) and Muslim population (2001) at block level in Birbhum



4.3 National Rural Employment Guarantee Scheme (NREGS) in Birbhum

One of the major causes of rural poverty is believed to be lack of employment opportunities or regular employment opportunities. However, it has been found in many contexts that the incidence of poverty is higher in the households with predominantly non-working population (children, elderly, ill and disabled) rather than the working population. The National Rural Employment Guarantee Scheme (which later became an Act) has been introduced with the objective to enhance the livelihood security in rural areas by providing 100 days of guaranteed wage employment per household in a financial year. One can expect that the demand for NREGS work will be more in places with higher share of disadvantaged population or agricultural labourer. We have already established that the incidence of poverty is higher among the disadvantaged population, who are also generally over-represented in the class of agricultural labourers.

According to the latest NREGS statistics available on the official website (www.nrega.nic.in), the number of households provided employment under NREGS is slightly more than 3.85 lakhs in Birbhum district. This is 10.4 per cent of the number of households provided such employment in West Bengal, and looks rather good if we consider the fact that Birbhum has only 4.8 per cent of West Bengal's total rural population.

Table 4.6: Average number of person-days created per household and utilisation of NREGS funds across blocks of Birbhum (2006-07)

Block	Person-days per household			% Utilization of NREGS funds		
	Min	Max	average	Min	Max	average
Suri I	10	32	27	54	87	78
Suri II	18	43	27	78	99	86
Md Bazar	6	48	25	74	100	95
Saithia	12	35	20	68	93	82
Rajnagar	20	38	28	83	97	92
Dubrajpur	10	23	14	70	98	88
Khoyrashole	13	66	30	72	92	84
Bolpur-Sriniketan	18	57	33	94	100	97
Illambazar	11	28	17	82	100	93
Labpur	15	54	24	53	100	84
Nanoor	9	38	19	92	80	87
Rampurhat I	7	35	14	74	100	90
Rampurhat II	6	27	12	73	100	87
Mayureswar I	11	16	14	87	97	93
Mayureswar II	11	32	20	72	100	89
Murarai I	9	18	11	70	100	90
Murarai II	6	27	13	79	100	91
Nalhati I	9	25	17	71	100	89
Nalhati II	8	11	10	62	100	85

Note: Min (or max) shows the minimum (or maximum) value of person days/utilisation of available NREGS funds for the GPs under the block.

Source: Calculated from data provided by NREGS Cell, Birbhum district

According to the latest available figures NREGS fund utilisation in Birbhum is 68 per cent which is much higher than the state average of 39 per cent.³ It is observed from the data that not

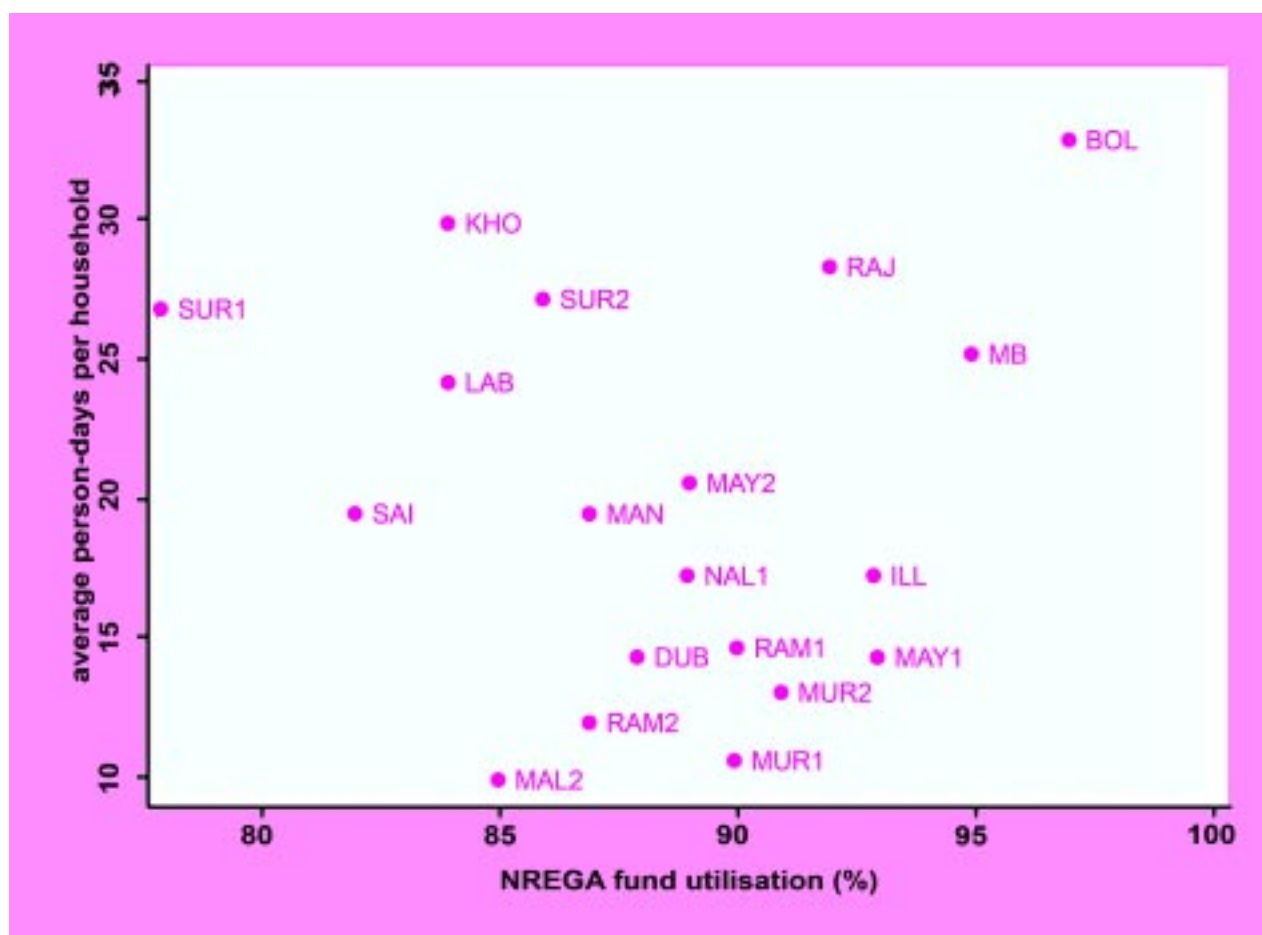
³ According to data provided by District NREGS Cell, the fund utilisation rates for the year 2005-06, 2006-07 and 2007-08 (till October) are 43 per cent, 77 per cent and 78 per cent respectively, which are rather good.

all households which had applied for the job card finally demanded work against their job cards. For example, during the financial year 2006-07, only 85 per cent of the households holding job card finally demanded employment. In Birbhum there is no difference between the number of households which demanded work and were provided with work, though such difference exists for rural West Bengal as a whole.

However, in terms of the average man-days created per household the district's performance does not look so good. Table 4.6 shows block-wise figures on average person-days created per household and percentage utilisation of NREGS funds. The same table also shows minimum and maximum average person-days per household and utilisation of funds at the GP level under each block. There is a considerable variation across blocks in terms of average person-days per household. Out of 19 blocks in Birbhum, only 6 blocks could provide 25 or more days of work on an average. Performance of NREGS in terms of person-days per household is extremely poor in 7 blocks of Birbhum with average person-days less than 15. The blocks which performed better also showed considerable intra-block differences.

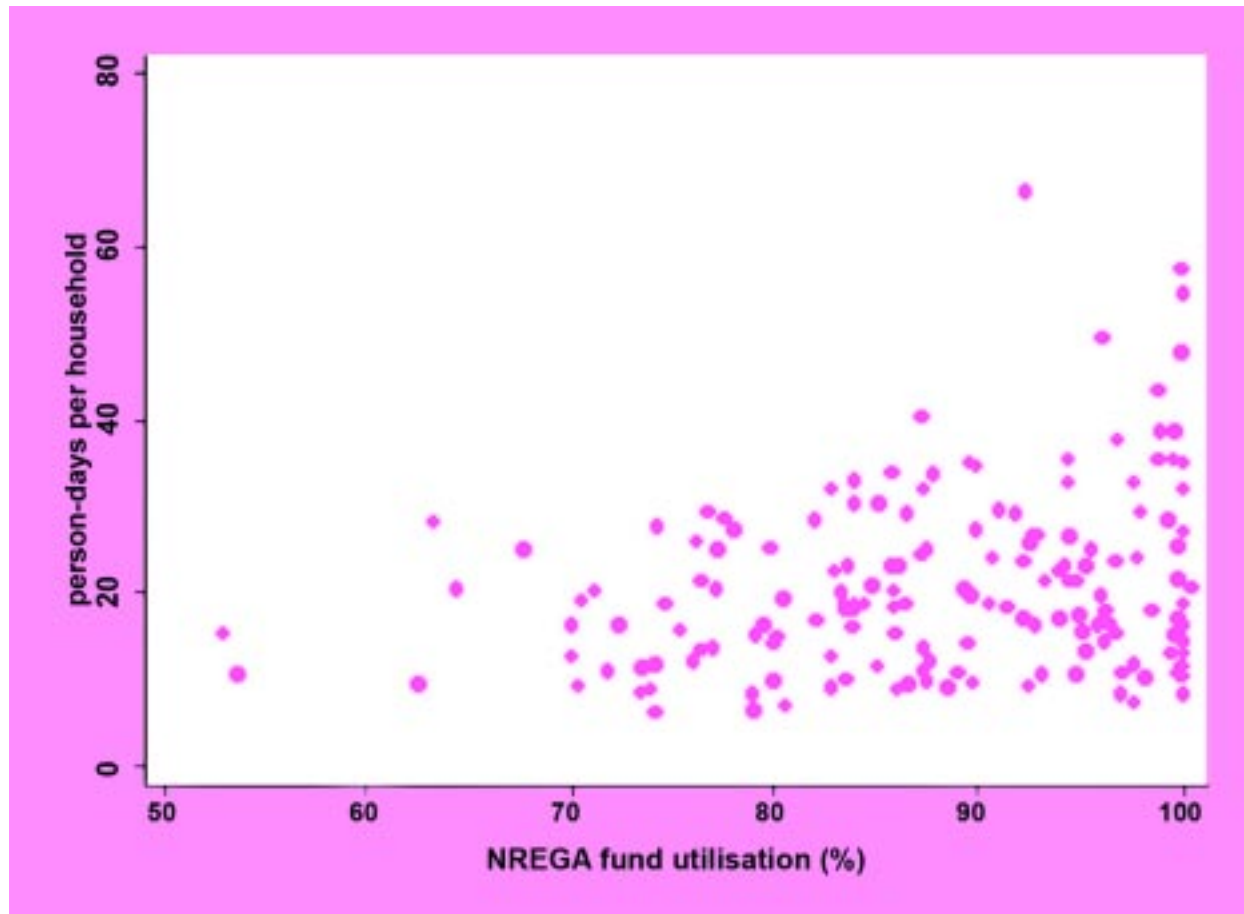
Most of the blocks perform well in terms of utilisation of NREGS funds, even though inter-block differences are observed. On the one hand there are blocks like Bolpur-Sriniketan which had spent nearly 97 per cent of the available funds, on the other hand blocks like Suri-I could spend only 78 per cent of the available funds during the financial year 2006-07. Out of 19 blocks, 6 blocks could spend more than 90 per cent of the available funds under NREGA. There is an apparent puzzle here. The performance of NREGS in Birbhum looks good if one looks at the percentage of funds utilised, but on the contrary, if one looks at the average person-days created per household the picture turns out to be rather dismal. It requires further scrutiny. Is there any positive relationship between utilisation of available NREGS funds and average person-days created at the block level? In other words, did those blocks which finished most of the available funds under NREGS create higher average person-days? We explore this relationship graphically at the block level (see Figure 4.8).

Figure 4.8: Scatter diagram showing the association (at the block-level) between percentage utilisation of NREGA funds and average number of person days created per household



Apparently there is no clear relationship between utilisation of available funds and average person-days created. Given the divergent performance of GPs within a block, one may reasonably question the appropriateness of exploring this relationship at the block level. In Figure 4.9 we explore the same relationship at the GP level. The scatter again fails to support any relationship between average person-days per household and percentage utilisation of funds. What it however indicates is that a single block or GP may exhaust all its funds and still be unable to provide longer days of employment to households who are in need of employment.

Figure 4.9: Scatter diagram showing the association (at the GP-level) between percentage utilisation of NREGA funds and average number of person days created per household



The main reason for low average person-days at the block/GP level, according to some, is that GPs are not able to develop adequate number of schemes to absorb the labour who demand work under NREGS. Since NREGS is supposed to be a demand-driven programme (demand for funds should come from the Gram Panchayat), it is apparent that the GPs can hardly develop enough number of schemes to provide employment to all who demand employment.

What could be the possible reasons for the low average person-days per household? There is no way to know how many people needed work but did not get it. Since in the official records there is no difference between the total number of days demanded and the number of days of employment provided, one has no other option but to conclude that the demand for work is low. If people have the opportunity to work at higher wage rates or have more certain work at the same or even little

lower wage rate, they may not be interested in NREGS work. NREGS is expected to be better implemented in places with large number of agricultural labourers or large number of poor households, since working opportunities of the agricultural labourers or poor people are subject to seasonal variations.⁴ However there is no evidence in support of this argument (see Figure 4.10).

Figure 4.10: Scatter diagram showing association (at the block-level) between average number of person days per household and percentage of agricultural labourers in total workers



NREGS is also expected to create more number of days of work in places with higher concentration of poor people. In Figure 4.11 the average number of person-days per household is plotted against percentages of BPL households across blocks. Again, there is no correlation (0.08)⁵. If distribution of funds across PRIs is not strictly related to the number of households demanding

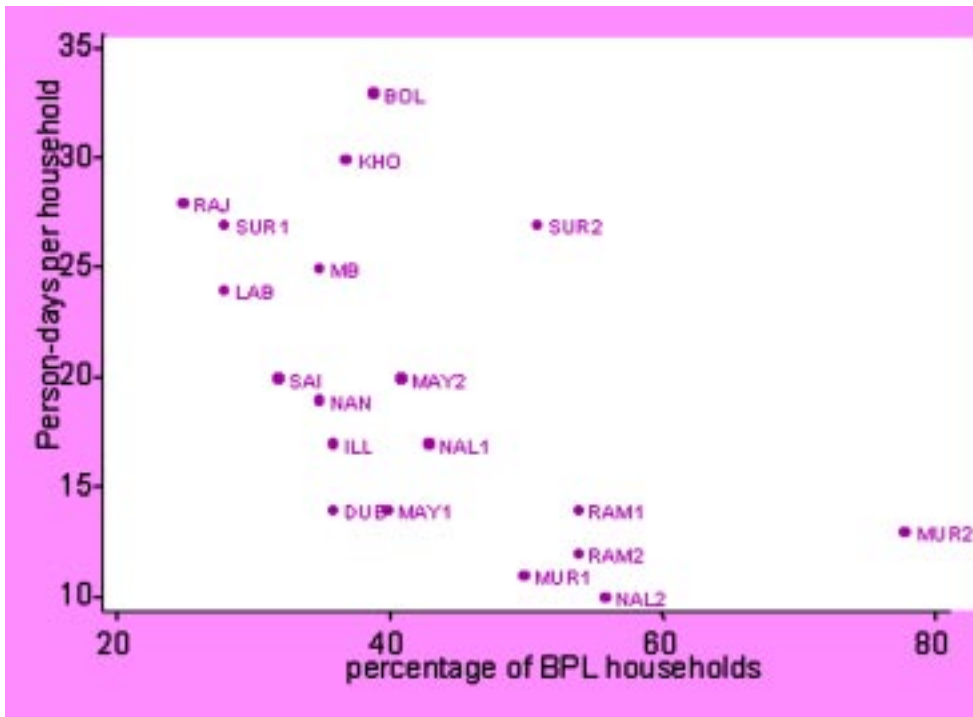
⁴ For example, the Action Plan section of the NREGA notes that for the purpose of identification of the quantum of work need to be created, estimation of the below poverty line population, number of marginal agricultural labourers, migration figures and other parameters may be required for each Gram Panchayat.

⁵ For various reasons it is believed that the percentage of BPL households in Murarai II block is too high to be reliable. However, if we exclude Murarai-II the value of the correlation coefficient slightly increases (0.14).

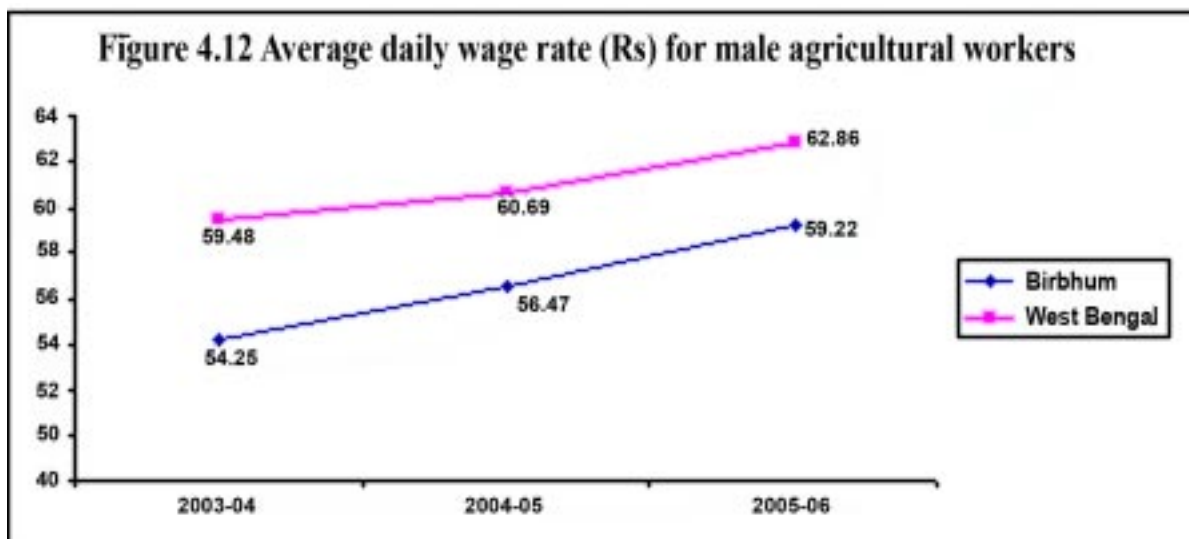
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employment under NREGA, areas with higher demand for work due to poverty are likely to end up with fewer days of work. Furthermore, poor people in poverty stricken areas may not be able to take advantage of NREGS because of the lack of physical capacity to work.

Figure 4.11: Scatter diagram showing the association (at the block-level) between percentage of BPL households and average number of person days per household.



To get some idea about the levels of living of the agricultural workers we look at the annual average wage rate of male agricultural field labourers in the district (Figure 4.12).



Limited opportunities in the non-farm sector seem to have worked against them, as the wage rate in the district has been lower than the average wage in West Bengal. However, it can be noted that the gap between the wage rate prevailing in Birbhum and the average wage for all districts has been narrowing, albeit slowly.

4.4 Opportunities in industries

Birbhum is one of the most backward districts in terms of industrial development. During the period between 1991 and 2005, 1220 new industrial projects were set up in West Bengal with a total investment of Rs 29101.8 crore. Only 1.23 percent of these projects came to Birbhum, the investment share being a meager 0.18 percent. In 2006, among the 173 new projects only one with an investment of Rs 5.86 crore was proposed in Birbhum.

According to the latest information available from the District Industries Centre, Birbhum, there is only one large scale industry in the district, four medium scale industries and approximately 4748 registered small-scale units. About 5000 people are engaged in the only large industry, viz. Bakreshwar Thermal Power Project, either as direct employees or as contract workers. Although this project is expected to generate successive rounds of economic activities in the downstream and upstream areas, they are yet to develop to a significant extent. Among the medium scale industries, the National Sugar Mill at Ahmedpur, which has been taken up by the Government of West Bengal, is unfortunately in a very bad shape. Although it can provide work for about 600 persons, it can run for only one or two months in a year because of shortage of raw material and other problems. A mini steel plant established at Suri in 1984 provides work for about 300 persons through direct and indirect employment.

The small-scale units are in the areas of rice-husking, oil-pressing, stone crushing, China clay washing, wheat grinding, wooden and steel furniture, printing, mould plastic wares, automobile servicing, readymade garments, cold storage, bakery, electrical transformer, and so on. The mineral processing units are mostly in Nalhati-Rampurhat-Md. Bazar area, as certain minerals like China clay, granite stone and fire clay are available in this area. There are about 400 stone crushing units of which only 100 are registered SSI units.

Table 4.7: The number of small scale industries in different areas

Sl no	Type of industry	Number of units	Nature of activity (product, or activity towards production)
1	Food products	1102	Rice mill, oil mill, chira, chanachur, noodles etc
2	Tobacco products	41	Bidi
3	Cotton textile	47	
4	Woolen and silk textile	35	
5	Hosiery and garments	93	
6	Wooden products	468	
7	Paper products & printing	99	Handmade paper, corrugated cotton box, printing press
8	Leather products	40	
9	Plastic products	12	Plastic toys, polythene bag, container etc.
10	Chemical products	42	Laundry soap, washing soap, phenyl, detergent, tooth powder, tooth powder
11	Coke and coal products	100	Soft coke, coal and coal briquette
12	Mineral products	191	Stone crushing, china clay powder etc
13	Metal products	920	Agricultural implements, gate grill, machinery parts, engineering job works
14	Cold storage and warehouse	15	Preservation of potatoes
15	Repairing and servicing	571	Cycle, motor cycle, car repairing; TV, tape recorder, radio repairing
16	Studio and Xerox	17	
17	DTP/Fax/Internet etc	8	
18	Cement products	1	PCC pole
19	Handicraft products	946	Kantha stitch, sola pith, cane, bamboo, batic printing, pottery, bell metal, woodcraft etc
Total		4748	

4.5 *Expansion of economic opportunities*

It is important to recognize the complementarity between expanding economic opportunities and the social conditions that facilitate the use of those opportunities (e.g. elementary education and

good health). There is evidence that the returns to educational expansion tend to increase with the expansion of market opportunities, and that can be a strong incentive for parents to educate their children. The options that a person has depend greatly on relations with others and on what the state and other institutions do. Opportunities are shaped by the interaction of social circumstances and public policy. The opportunities offered by expanding modern economic activities that require certain types of skills may be difficult to use when a person is handicapped by illiteracy or ill-health. On the other hand, a person with some education and good health may still be unable to use his or her abilities because of limited economic opportunities.

Graduation into the non-farm sector by the lower economic strata in rural areas generally follows a familiar trajectory in which an initial move towards diversification plays a crucial role. Some of the erstwhile landless households got access to land through patta or barga. Agricultural labor or vegetable selling combined with cultivation on patta or barga land however small reduces their propensity to shock, which leads to higher saving and investment in human capital accumulation, which in turn facilitates entry into non-farm activities – either through salaried job or through non-farm self-employment or small business through loan access and better marketing skills.

We have discussed the predominantly agricultural nature of the economy of Birbhum district, and the nature of agriculture is also predominantly rice based. To a limited extent wheat and other foodgrains are also cultivated. In both rice and wheat, productivity in Birbhum far exceeds the average for West Bengal. Yet, there is an urgent need for encouraging producers towards more diversified products, as the return from rice cultivation has been declining. One main reason for continuing rice production is the farmer's perception about the risk involved in venturing into new kinds of production. The risk perception may have real basis as the marketing channels and other infrastructural facilities that could support such diversification are poorly developed. For example, development of horticulture requires proper storage facilities without which it would not be possible to arrest the steep fall in the post-harvest prices. Without a cushioning mechanism to protect the poor farmers from widely fluctuating prices, horticulture, especially fruits and vegetable cultivation, will remain unattractive to farmers, even though it is observed to have grown moderately in recent period.. It has been envisaged

by district level functionaries that with the development of religious-cultural tourism circuit that they have planned there will be steady demand for flower within the district and therefore expansion of flower production can be sustained in future. In what follows we discuss in somewhat detail two areas that are likely to have some impact in future on expansion of economic opportunities among the people. They are horticulture and tourism development.

Development plan under National Horticulture Mission

Along with other states and union territories,⁶ National Horticulture Mission (NHM) is being implemented in West Bengal to promote comprehensive growth of the horticulture sector covering fruits, vegetables, roots & tuber crops, mushroom, spices, flowers, aromatic plants, cashew and cocoa. This is a centrally sponsored scheme in which the central government is providing 100 per cent assistance to West Bengal during the 10th Plan. During the 11th Plan period, central government is providing 85 per cent and the state government will have to provide the remaining 15 per cent.

The main objectives of the Mission are the following: (1) To provide holistic growth of the horticulture sector through area based regionally differentiated strategies which include research, technology promotion, extension, post harvest management, processing and marketing, in consonance with comparative advantage of each State/Region and its diverse agro-climatic features. (2) To enhance horticulture production, improved nutritional security and income supports to farm household. (3) To establish convergence and synergy among multiple on-going and planned programmes for horticulture development. (4) To promote, develop and disseminate technologies, through a seamless blend of traditional wisdom and modern scientific knowledge. (5) To create opportunities for employment generation for skilled and unskilled persons, specially unemployed youth.

As a response to the objectives set by the National Horticulture Mission, Government of West Bengal has created the West Bengal State Horticulture Development Society for implementation of the Mission programmes at the state and district levels. In Birbhum, the District Mission Committee

⁶ Except the North Eastern States, Himachal Pradesh, Jammu & Kashmir and Uttaranchal.

(DMC) has been formed. The DMC is chaired by Zilla Parishad Sabhadhipati. Apart from different district-level officials, the committee has got representation from Rathindra Krishi Vigyan Kendra (Visva Bharati University) and Regional Research Station (Sekhampur Campus, BCKV). A series of programmes have been designed to be implemented in Birbhum under National Horticulture Mission, which can be classified under the following headings:

A. Production of Planting Materials (Model Nursery):

The production and distribution of good quality seeds and planting materials is an important component of the mission. Birbhum district has a network of nurseries for producing planting material. Therefore to meet the requirement of planting material for bringing additional areas under improved varieties of horticultural crops, assistance would be provided for setting up new nurseries under the Public and Private sectors (Table 4.8).

Table 4.8: Nursery schemes for Birbhum, allotment and target

Name of scheme	Total allotment		Target
	Physical (no)	Financial (Rs. lakh)	
Model nursery for public sector (4 ha)	1	9	2,00,000 planting materials will be produced for a period of approximately 9 months.
Model nursery for private sector (4 ha)	1	9	2,00,000 planting materials will be produced for a period of approximately 9 months.
Model nursery for private sector (1 ha)	10	12	5,00,000 planting materials will be produced for a period of approximately 9 months.

B. Expansion of area under fruits:

Table 4.9 summarizes requirement of fruit, present level of production, shortfall in Birbhum district and how much new area has to be brought for fruit production.

Table 4.9: Requirement, level of production and shortfall of fruit production in Birbhum

Total population in Birbhum district	30,15,422
Requirement of fruits per head per day	80 g
Total requirements of fruits per year in Birbhum district	88050 MT
Total fruit production of the district per year	44980 MT
Shortfall per year	43070 MT
Area under fruits to be increased (approx.)	3500 hectare

The following strategies have been adopted to address the problem of shortfall in fruit production: (1) Utilization of wasteland for fruit cultivation. (2) Use of soil ameliorant e.g. *dolomite*. (3) Utilization of shallow rooted fruit plants due to hard rock in soil. (4) To access distant markets for less perishable species e.g. Sweet Orange, Ber etc. are promoted. (5) Cashew is also a promising crop if grown with full irrigation facilities and processing facility is provided. (6) Introduction of tissue cultured propagating materials. (7) Acidic soil and drought tolerant species. (8) Inter cropping with vegetables/ flowers/ legumes. (9) Establishment of model nursery for good quality planting materials. (10) Use of drip irrigation system. Central Micro Irrigation Scheme is bearing 50 per cent of the cost, and the rest may be obtained from the PUP fund.

To augment fruit production, orchards will be developed on cluster basis through LAMPS/ SHGs or unemployed youths or through individual beneficiary. An allocation of Rs 22.5 has been made to expand area under fruit production by 200 hectares. It is expected that 2500 persons will directly benefit from this scheme.

C. Creation of Water Sources:

Under the Mission, assistance would be provided for creating water sources through construction of community tanks, farm ponds/ reservoirs with plastic lining. This structure will help in storing water throughout the year. The assistance will be limited to Rs. 10.00 lakh per unit for an area of 10 ha (including catchment area) to be taken up on community basis. Maintenance of the water sources will be the responsibility of the community. In case of a district like Birbhum, this scheme will be ideal as there is scarcity of water in the district, mainly in the western part.

D. Post Harvest Management:

Post harvest management includes packaging, grading, transportation, curing and ripening and storage. These facilities are essential for increasing the marketability of the horticultural produce, adding value to the produce, increasing profitability and reducing losses. It is proposed to create a network of infrastructure facilities horticulture storages, transportation, marketing, packaging and grading and export. The existing schemes of the National Horticulture Board (NHB), Directorate of Marketing and Inspection (DMI) and National Cooperative Development Corporation (NCDC) will be made use of to the maximum possible extent. In this context, specific programmes which would be taken up under the NHM would include establishment of pack houses, ripening chambers, cold storage units, Controlled Atmosphere (CA) storage, supply of refrigerated vans and mobile processing units besides supports for marketing intelligence. All these projects will be entrepreneur driven through commercial ventures for which the Central Government assistance will be credit linked back-ended subsidy for 25 per cent of the total project cost.

Table 4.10: Schemes for post harvest management of fruits in Birbhum

Name of scheme	Total allotment	
	Physical (number)	Financial (Rs. lakh)
Multipurpose Cold Storage	3	150
Refrigerated Vans/ Container	3	18
Mobile Pre-cooling/ Processing Units	3	18
Functional Infrastructure for collection / Grading/ Storing Centers	12	72
Pack House	10	6

E. Creation of Market Infrastructure:

The main objectives of providing assistance under this component are: (1) to induce investments from private and cooperative sectors in the development of marketing infrastructure for horticulture commodities; (2) strengthen existing horticulture markets including wholesaler, rural haats; (3) focus on promotion of grading, standardization and quality certification of horticulture produce at farm/market level to enable farmers to realize better price; and (4) create general awareness among farmers,

consumers, entrepreneurs and market functionaries on market related agricultural practices including contract farming.

Table 4.11: Schemes for marketing of fruits in Birbhum

Name of scheme	Total allotment	
	Physical (number)	Financial (Rs. lakh)
Rural Mandi	6	22.5
Creation of infrastructure for rural mandi	6	22.5

Tourism

Birbhum has a rich heritage of cultural traditions. Apart from Shantiniketan, several *Shakti Peeths* scattered throughout the district attract a good number of tourists. If these tourist destinations and several other lesser known places could be developed with a comprehensive outlook they could bring in large numbers of visitors to the area and contribute significantly to the livelihood of the local people. With this possibility in mind the Zilla Parishad with the help of India Tourism Development Corporation and a private consultancy agency has recently developed a detailed tourism development plan.

Even with very modest facilities Birbhum now attracts a good number of visitors to various places of interest, with Shantiniketan, Bakreshwar and Tarapeeth being the principal attractions. Shantiniketan remains one of the most important destinations in this part of the state with over 1.2 million visitors each year. Temples such as Tarapeeth receive over 1.4 million visitors annually⁷. However, most of the tourism traffic in the area is from within West Bengal, and despite its great potential the district has not been able to attract the numbers that could exploit the potential effectively.

Several archaeological discoveries dating back to the Stone Age have been made in several places in the district. Associated with both Mahavira and Gautam Buddha, the area was once part of the Mauryan Empire, and later, also a part of the empires of the Guptas, Shashanka and Harshavardhan. After the end of Harshavardhan's empire, the region came under the rule of the Pala

⁷ Birbhum district official website (Birbhum.nic.in)

and Sena dynasties, until the advent of the Muslim rulers in the thirteenth century. Ruins of this period have recently been found in the Nanoor area of the district.

The region has seen periods of influence of all the major Indian religions, including Buddhism, Jainism, Hinduism and Islam, with their respective impact on the culture of the area. Mythological traditions linking Sati's dismembered body parts to different places have given rise to what are now known as Shakti Peeths with temples honouring the goddess Sati. In Birbhum they are located in Bakreshwar, Tarapeeth, Kankalitala, Labpur, Fulberia and Nalhati.

The region is famous for its tradition of poetry, and several poets dating back to centuries have been inspired by the local setting. Birbhum is the land of poets of Vaishnav and Shakta Padavali fame, such as, Jayadev and Chandidas . The folk culture of Birbhum is typified by the rich contribution of Bauls, their songs and a religiously liberal philosophy and lifestyle with links to the Sahajiya movement of 16th Century A.D. Chandidas and many other poets were part of the Sahajiya movement. Rabindranath Tagore was inspired by their philosophy and patronised them actively. Birbhum has been home to famous kabiyals, kirtanias and other folk performing art groups and is also famous for a number of fairs including the popular Pous Mela at Shantiniketan and a lively fair at Kenduli with the participation of bauls in large numbers.

The numerous temples and the association with the Shakti Peeths set the spiritual undertone of tourism activity in the district. The temple and hot spring complex at Bakreshwar is a famous and unique attraction, steeped in tradition and religiosity. The Vishwa Bharati University at Shantiniketan and the ashram complex at Sriniketan, built by Rabindranath Tagore, form an important location for the confluence of local traditions and modern ideas in art, culture society. Yet, despite its immense potential, the district is almost nonexistent on the country's tourist map.

To translate the potential into practice, the framers of West Bengal Tourism Policy 1996 generally suggested *“The only way out is to devise a comprehensive & competitive package of measures, incentives & concessions for attracting adequate investment from private sector, domestic or foreign, for tourism*

projects in West Bengal.” Religious, pilgrimage and cultural tourism can be identified as thrust areas for tourism development in Birbhum. A Tourism Circuit forming a triangle joining Bolpur, Bakreshwar and Nalhati has been proposed to be developed.

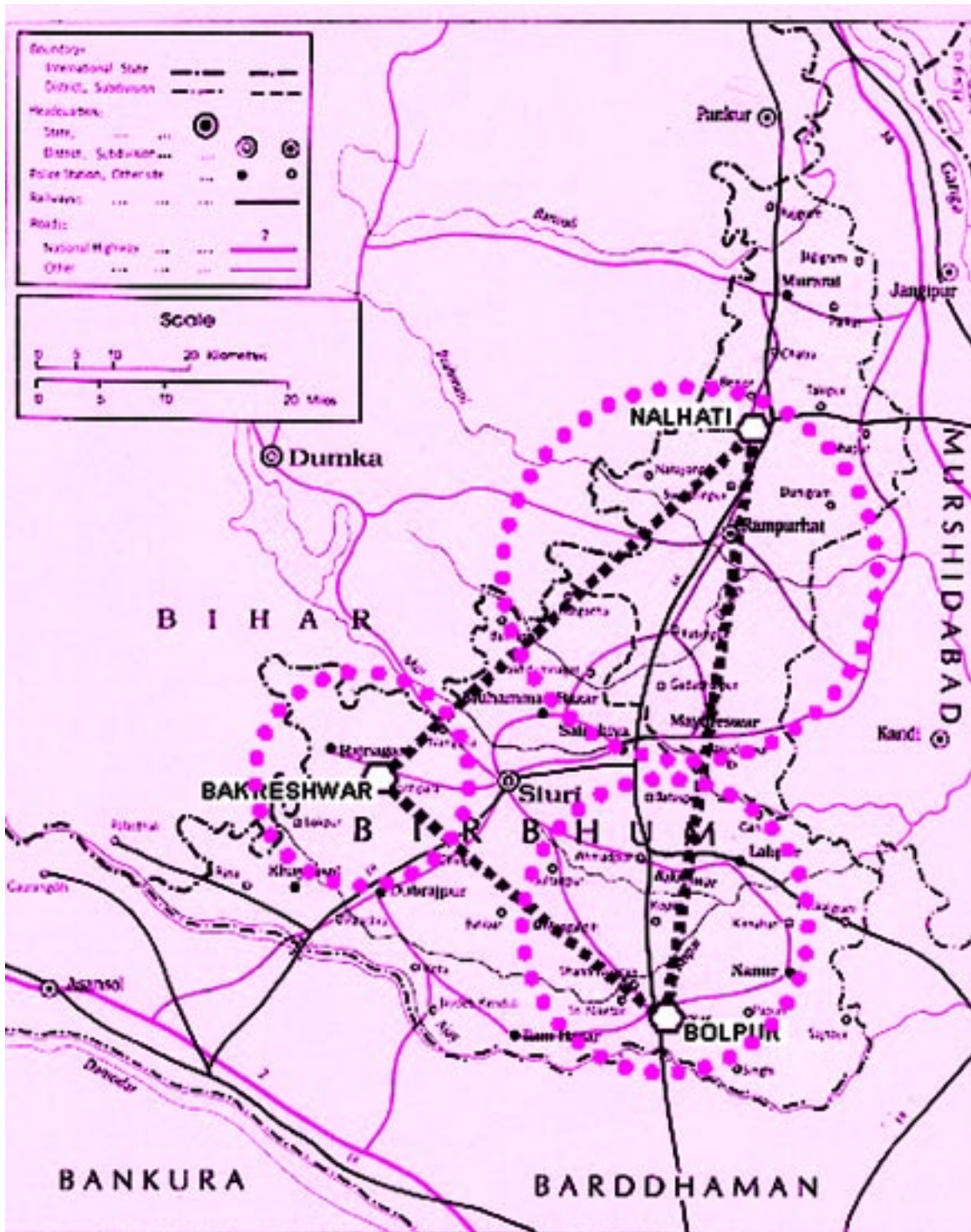
Birbhum attracts millions of people to its various tourist spots each year. However, at present, these locations lack basic tourist amenities like public transport, public conveniences, drinking water facility, pathways, parking for private and public vehicles, sit-outs, shelters, illumination etc. While most of these spots are day-tourist attractions and accommodation is needed only at a few places like Bolpur and Tarapeeth where sufficient accommodation already exists. Additional hotels and budget accommodation near the other spots on the circuit should be encouraged through private sector participation, by the State Government. Parts of the district such as Bolpur and Tarapeeth already have numerous facilities for tourists such as hotels, dharmshalas and eateries, of various categories.

While numerous attractions with immense tourism potential exist, poor marketing, promotion and lack of awareness amongst tourists is a major detractor. Most of the tourist centres are situated in the middle of human habitation, and are surrounded by dense development, making access difficult. This also limits the area available for construction of amenities, additional structures, parking etc. Poor quality of hygiene and limited awareness of hygienic practices amongst the local citizens and visitors is a detractor for tourists from outside the region. Maintenance is not adequate and limited funds are available. Since all these tourist spots are situated at a considerable distance from one another in terms of travel time, a lot of time is lost moving from one to the other.

Proper marketing and promotion to popularise the district can help convert it into a successful tourism circuit. Dissemination of information about the various destinations in the circuit and their attraction to potential tourists is extremely important to increase awareness about the district (at present most people outside the region have heard only of Shantiniketan, and limited details are available in tourist literature, internet etc.). Improvement of transportation within the district to ease local and regional movement of tourists can be beneficial for a satisfactory tourism experience. Improvement of conditions for visitors at the various sites, addition of amenities and simplification of access with

clean pathways etc., well maintained public toilet facilities and hygienic food at stalls within the complexes will make the area more attractive.

Figure 4.13 Proposed tourism circuit for Birbhum



Appendix

Main workers: Main workers, according to Census definition, are those who had worked for the major part of the year preceding the date of enumeration i.e., those who were engaged in any economically productive activity for 183 days (or six months) or more during the year.

Marginal workers: Marginal workers are those who worked any time at all in the year preceding the enumeration but did not work for a major part of the year, i.e., those who worked for less than 183 days (or six months).

Table 4A1: Population Features of Farmers in the Blocks of Birbhum for the year 2004-05

Name of Block	Bargadars	Patta holders	Small farmers	Marginal farmers	Agricultural labourers (2001)
Murarai-I	1987	6382	5602	8500	17710
Murarai-II	2926	6627	7360	10580	22166
Nalhati-I	6475	6075	6829	12682	27839
Nalhati-II	1998	4125	3010	4215	14573
Rampurhat-I	4304	7804	3000	9000	27079
Rampurhat-II	2361	4181	7000	7000	21908
Mayureswar-I	3267	7990	9986	11695	23599
Mayureswar-II	2901	7255	4400	7945	16912
Md.Bazar	4069	15274	4005	4675	21311
Sainthia	7982	7825	6475	6500	31594
Dubrajpur	14931	10653	3894	8410	25419
Rajnagar	7080	5807	3275	6850	10838
Suri-I	4572	6271	2480	6950	11551
Suri-II	3502	3897	4858	5758	15348
Khoyrasol	13304	7657	404	14330	16252
Bolpur-Sriniketan	8584	17806	6500	10000	34187
Labhpur	8107	8613	1817	5765	24282
Nanoor	9255	9776	3550	8360	28639
Illambazar	7975	8315	4865	5750	23423
Birbhum	115580	152333	89310	154965	414630

Notes:(1) Marginal farmer possesses agricultural land measuring up to 1 hectare. (2) Small farmer possesses agricultural land measuring more than 1 hectare & up to 2 hectares.

Sources: (1) Census of India, 2001; (2) B.L. & L.R.O. Birbhum; (3) B.D.O.s