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Role of Human Capital for Changing Livelihood Pattern: A Case Study in Nadia District of West Bengal

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Abstract

The pattern of livelihood in rural area of West Bengal is a complex in nature as mentioned by Robert Chambers and Gordon Conway that, 'a livelihood comprises the capability, assets and activities required for a means of living'. As per abidance of different research studies it has been found that so many ways are there to measure the status and changing pattern of livelihood in a particular area. But mostly accepted way is to go through five capitals to understand the subject better. In this research paper an attempt has been made to find out the role of human capital to change the pattern of livelihood in the four villages of Nadia district of West Bengal. Here we consider male headed household, family size, literacy rate and occupational health hazardas human capital. Findings show that these are the vital indicators to bring changes in the livelihood pattern of the study area.

Keywords: Livelihood, human capital, male headed household, family size, literacy rate and occupational health hazard.

Introduction

Livelihoods of the poor can never be understood in any one-track logic - be it economic, social, technical, cultural or political. The livelihood systems are made up of very diverse elements which - constitute the physical, economic, social and cultural universe wherein the families live[1].

The concept of livelihood first put forward by the Burndtland Commission (WCED 1987) of Sustainable Livelihood security. It was given these meanings:

Livelihood is defined as adequate stock and flows of food and cash to meet basic needs. Security refers to secure ownership of, or access to, resources and income earnings activities, including reverse and assets to offset risk, case shocks and meet contingencies. Sustainable refers to the maintenance or enhancement of resources productivity on a long term basis. A household may be enabled to gain sustainable livelihood security in many ways – through ownership of land, livestock or trees; rights to grazing, fishing, hunting or gathering; through stable employment with adequate remuneration; or through varied repertories of activities. [2]

The most widely accepted definition of livelihood of stems from the work of Robert Chambers and Gordon Conway (1992): 'a livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living'[3].

The livelihoods framework encompasses five assets (human, natural, physical, financial and social) and their change in four villages of the study area definitely indicated changing pattern of livelihood in this area. The livelihood approach is concerned first and foremost with people. So an accurate and realistic understanding of people's strengths (here called "assets" or "capital") are crucial to analyses how they endeavour to convert their assets into positive livelihood outcomes[4]. The five capitals of livelihood is discussed below briefly.

Human Capital: Human capital represents the skills, knowledge, ability to labour and good health that together enable people to perform different livelihood activities and achieve their livelihood objectives".

Social Capital: social resources upon which people draw in seeking for their livelihood outcomes, such as networks and connectedness, that increase people's trust and ability to cooperate or membership in more formalised groups and their systems of rules, norms and sanctions.

Natural Capital: Natural capital is the term used for the natural resource stocks from which resource flows and services (such as land, water, forests, air quality, erosion protection, biodiversity degree and rate of change, etc.) useful for livelihoods are derived.

Physical Capital: Physical capital comprises the basic infrastructure and producer goods needed to support livelihoods, such as affordable transport, secure shelter and buildings, adequate water supply and sanitation, clean, affordable energy and access to information.

Financial Capital: "Financial capital" denotes the financial resources that people use to achieve their livelihood objectives

and it comprises the important availability of cash or equivalent that enables people to adopt different livelihood strategies. [5and6]

It is found that there are not many studies which has been done in past on livelihood in the selected field area. Only two studies found which were carried out in this area. First study was done in 2012 by Dubey and Santra in Shantipur block of Nadia district. The paper seeks to find out the Cost and Benefit of individual weaver as well as middlemen in the locality involved in the activity. Finding shows that land less poor families got an opportunity to maintain their livelihood through handloom. Middlemen also received the maximum portion of the profit. Still it is not possible to remove the middlemen without finding an alternative who can take the responsibility to supply raw materials and marketing the final product. Again study suggested that it can only be possible through Public-Private partnership[7].

Another study was taken place in 2013 in Shantipur block. The paper stated that the weaving community of Shantipur of Nadia district of West Bengal performing the activities as a means of livelihood since long back. Earlier the weaving had potentiality to meet all basic demands of the families involved in the activity. But at present only the weaving alone as an activity failed to provide minimum livelihood support among the weaver. In the researchers had tried to represent the involvement of the community and the past and present status of the weaving as an economic activity[8].

Though all the five capitals of livelihood are important to study livelihood activities of any area, in this research paper only human capital is considered. Four indicators are taken to determine the composition and strength of this capital in the study area in the present paper.

Objectives: i. To compare the changes of different indicators of human capital of livelihood across four villages of the study area. ii. To study the position of each village according to human capital of livelihood.

Material and Method

Sampling Method: The study has been conducted on 200 sample households in four villages of Nadia district of West Bengal (For detail sampling and methodology for the selection of district, blocks, villages and households please see the thesis "Livelihood Pattern and Its Change: A Case Study of Some Villages in Nadia District" [monograph]).

Results and Discussion

In this paper, attention is paid to the composition and strength of the human, physical, financial,social and natural assets and how these assets differ from village to village. For this, the four villages are given four different scores i. e. 1, 2, 3 and 4 on the basis of different parameters. The village which indicates lowest development given score 1, and the village indicates highest development given score 4.

Human asset/ capital: Four parameters are considered to determine the change in human capital in different villages. i. Percentage of male Household (HH) Head, ii. Average Family size, iii. Literacy, iv. Health hazard faced

Percentage of male HH Head:

Table 2
Percentage of male Household (HH) Head

Villages	No. of male HH Heads	Percentage of male HH Head
Bansdob	22	70. 96
Haripur	48	90. 56
Dhawpara	63	92. 64
Krishnanagar	42	87. 50

Source: Field Study, 2014

As greatest percentage of male HH Head belongs to Dhawpara, this village is given the highest score i. e. score 4. Accordingly, Haripur, Krishnanagar and Bansdob has given score 3,2 and 1 respectively. See table 2.

Average Family size: This is another important indicator of human capital. The formula followed to calculate average family size in each village is given below:

$$\text{Average family size} = \frac{\text{Total no. of family member}}{\text{Total no. of household}}$$

Family size according to 2001 census: According to 2001 Census data the family size of India and West Bengal is 5. 3 and 4. 9respectively. Average family size of the studied district is same as the national data. Family size found in the study area was lower than the national data but higher than the state figure– 4. 7.

The average family size of the selected blocks i. e. Tehatta-II and Shantipur is same- 4. 8 which are also equal to the national figure.

Among the four villages of the Dhawpara has highest family size- 5. But Haripur and Bansdobhave same family size- 4. 6. But Krishnanagar belongs to the lowest position in terms of family size- 4.5. Graphical representation of family size of four villages of the study area according to census 2001 is shown in figure 1.

$$\text{Average family size of four villages} = \frac{\text{Sum of family size of four villages}}{\text{No. of villages}}$$

$$\text{Or, Average family size of four villages} = \frac{5+4.5+4.6+4.6}{4} = 18.7/4 = 4.7$$

Hence, average family size of the study area according to 2001 census altogether is 4.7.

Family size according to 2011 census: According to census 2011, the family size of India and West Bengal is 4.8 and 4.5 respectively. Average family size of the studied district is lower than both national and state figure- 4.2. Family size of Tehatta-II is same as the district figure like 2001 census. Family size of Shantipur is greater than Tehatta-II i.e.4.3. Surprisingly, according to 2011 census, Dhawpara has lowest family size-3.9, which is completely contrary to the picture of 2001 census. Other three villages – Krishnanagar, Haripur and Bansdob has same family size-4.2. Graphical representation of family size of four villages of the study area according to census 2011 is shown in figure 2.

Applying the same formula discussed above, average family size of the study area according to 2011 census is 4.1. The average family size of the study area is far lower than the national and state figure which indicates a good sign. See table 3.

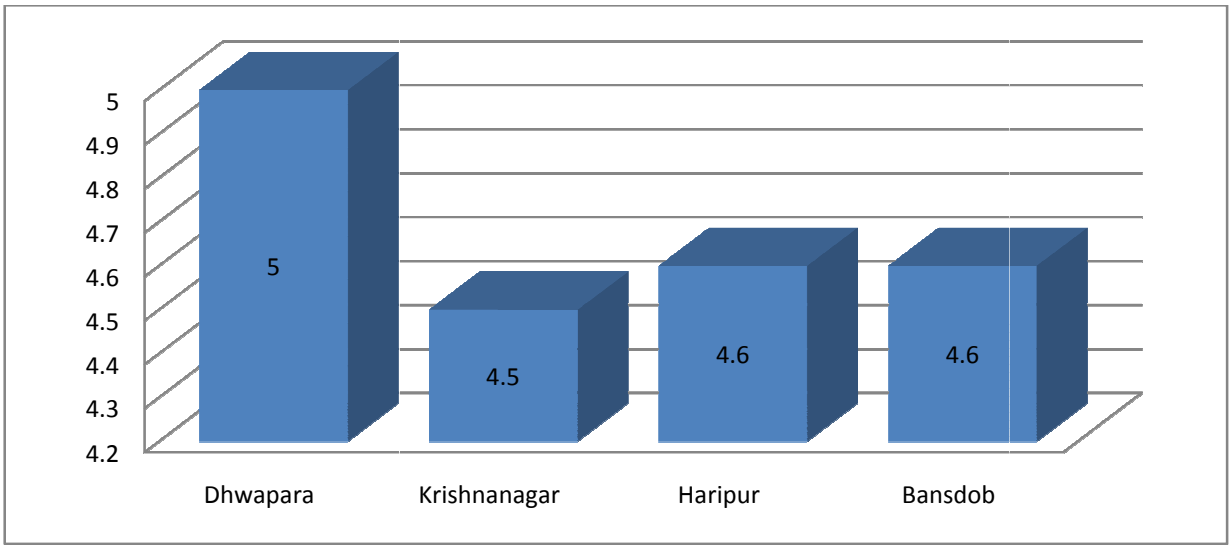

Figure-1
Family size of four villages of the study area according to census 2001

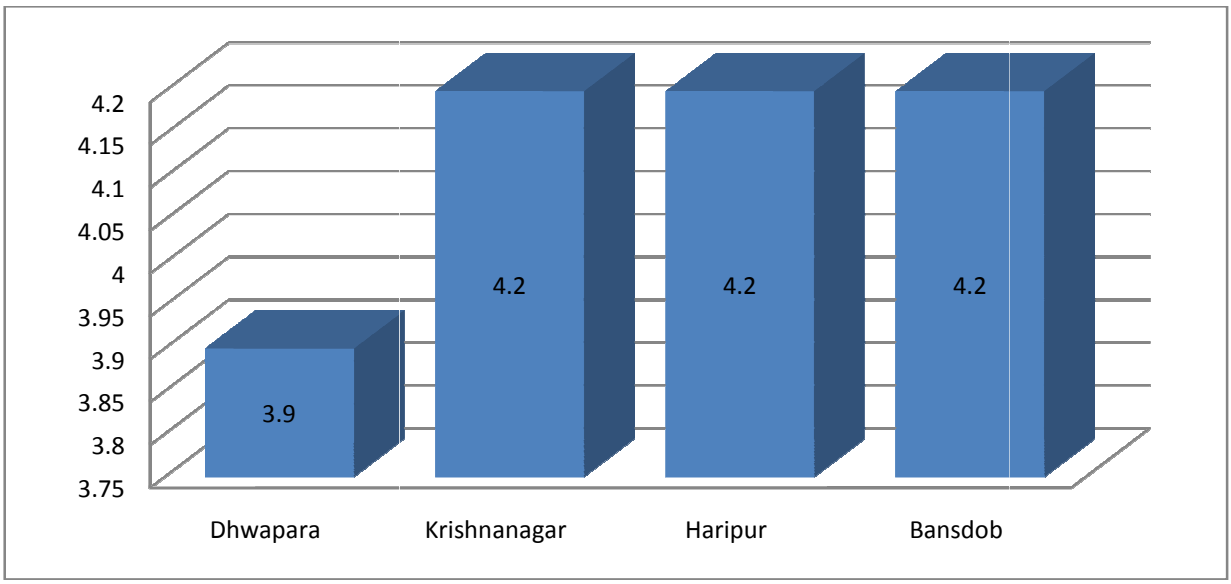

Figure-2
Family size of four villages of the study area according to census 2011

Table-3
Family size according to Study 2014, Census 2001 and 2011

2001	India	5. 3

	West Bengal	4. 9
	Nadia	4. 8
	Tehatta - II	4. 8
	Santipur	4. 8
	Dhwapara	5. 0
	Krishnanagar	4. 5
	Haripur	4. 6
	Bansdob	4. 6
	Study area	4. 7
2011	India	4. 8
	West Bengal	4. 5
	Nadia	4. 2
	Tehatta - II	4. 2
	Santipur	4. 3
	Dhwapara	3. 9
	Krishnanagar	4. 2
	Haripur	4. 2
	Bansdob	4. 2
	Study area	4. 1

Source: Field Study, 2014 and Census data 2001 and2011.

Table-4
Average Family size:

Villages	Haripur	Bansdob	Dhawpara	Krishnanagar
Average Family size	4. 1	3. 6	4. 4	4. 2

Source: Field Study, 2014

Applying the formula it is noticed that Bansdobhas lowest family size so it is given lowest score (score 1) and Dhawpara has highest family size hence it is given the highest score (score 4). See table 4.

According to field study, average family size of the study area 4. 1 which is exactly same as the average family size of the study area according to 2011 census.

Literacy: According to 2001 census: According to the latest 2001 Census data the literacy rate of India and West Bengal is 64. 84% and 68. 64% respectively. Literacy rate of the studied district higher than the national figure but lower than the state figure- 66. 14.

Among the two selected blocks, literacy rate of Shantipur (64. 16) is far better than Tehatta-II (57. 02). Among the four villages in the study area, Krishnanagar has highest literacy percentage (70. 54) which is even higher than the national as well as the state figure. It clearly indicated that this village is the most socio-economically developed village of the study area. Haripur is just below Krishnanagar in terms of literacy rate (61. 24) followed by Dhawpara (60. 72%) and Bansdob (59. 26%). Graphical representation of literacy rate according to 2001 census is shown in figure 3.

Table-5
Literacy rate according to census 2001 and 2011

2001	India	64. 84
	West Bengal	68. 64
	Nadia	66. 14
	Tehatta - II	57. 02
	Santipur	64. 16
	Dhwapara	60. 72
	Krishnanagar	70. 54
	Haripur	61. 24
	Bansdob	59. 26
	Study area	62. 94
2011	India	74. 04
	West Bengal	76. 26
	Nadia	74. 97
	Tehatta - II	68. 52
	Santipur	73. 10
	Dhwapara	70. 68
	Krishnanagar	74. 09
	Haripur	65. 43
	Bansdob	61. 55
	Study area	67. 94

Source: Field Study, 2014 and Census data 2001 and2011.

$$\text{Average literacy rate of four village} = \frac{\text{Sum of literacy rate of four village}}{\text{No. of villages}}$$

$$\text{Or, Average literacy rate of four villages} = \frac{60.72+7.54+61.24+59.26}{4} = 251.76/4 = 62.94$$

Hence, average literacy rate of the study area altogether is 62. 94%. Hence it is clear that average literacy rate of the study area is 62. 94 which is not much lower than both national and state figure. See table 5.

According to 2011 census: According to the latest Census data (2011) the literacy rate of India and West Bengal is 74. 04% and 76. 26% respectively. Literacy rate of the study district is also appreciable (74. 97%).

According to 2011 census, the picture of two selected blocks in terms of literacy rate is exactly same as in census 2001. Among the two selected blocks, literacy rate of Shantipur (73. 10) is far better than Tehatta-II (68. 52).

The findings show that the literacy rate of Krishnanagar and Dhawpara was quite appreciable – 70. 68 % and 74. 09% respectively. But literacy rate of Haripur and Bansdob was lower than the other two- 65. 43 and 61. 55percent respectively. Graphical representation of literacy rate according to 2011 census is shown in figure 4.

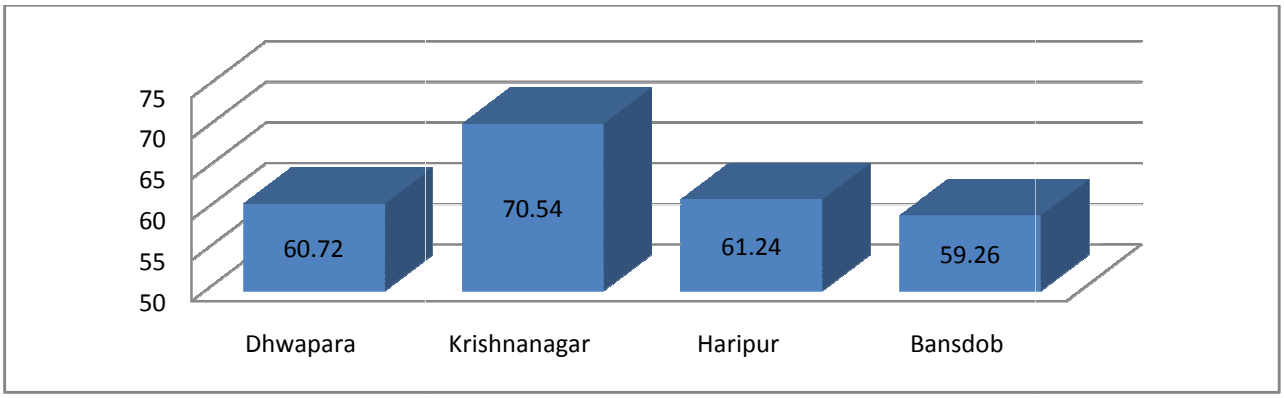

Figure-3
Graphical representation of literacy rate according to 2001 census

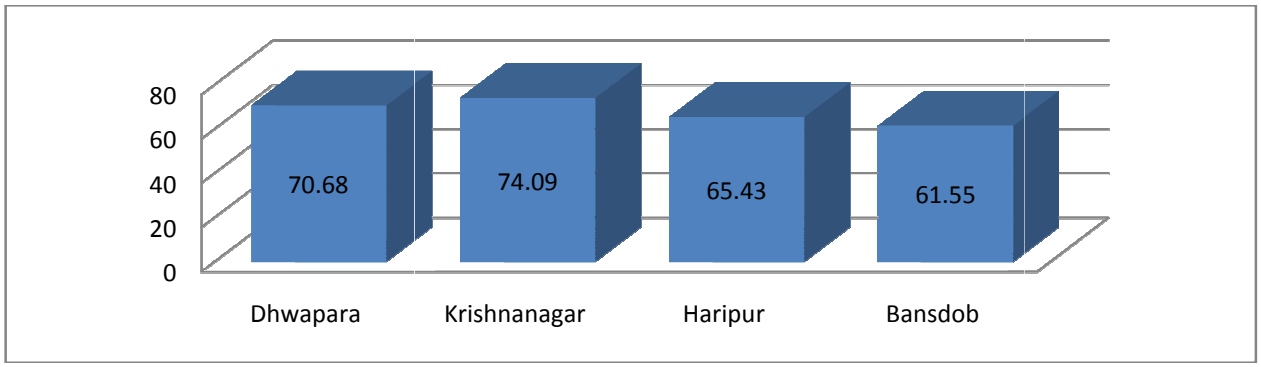

Figure-4
Graphical representation of literacy rate according to 2011 census

Applying the same formula discussed above, average literacy rate of the study area according to 2011 census is 67. 94%. See table 5.

Literacy rate according to field data, 2014: As literacy rate of Krishnanagar is the highest (85. 36 %), the village is given the highest score i.e.4. In similar way as literacy rate of Bansdob is lowest, the village is given the lowest score i.e. 1. See table 6.

Table-6
Average literacy rate

Villages	Haripur	Bansdob	Dhawpara	Krishnanagar
Average literacy rate	66. 41	45. 50	75. 81	85. 36

Source: Field Study, 2014

Applying the same formula discussed above, average literacy rate of the study area according to field data, 2014 is 68. 27%.

Socio – economic condition of Krishnanagar and Dhawpara is better than the other two villages. Krishnanagar has a well infrastructure and well-established high school facility. Hence, naturally literacy rate of this village is the highest. Table shows that Krishnanagar of Tahatta-II had the highest percent of literate population –85. 36 percent, much higher than the national and state figures. Krishnanagar was a predominantly Hindu village. The village was only 3 km away from the nearest town Palashipara. May be this is the reason for the higher rate of literacy of this village. Similarly, socio-economic condition of Dhawpara is also good. Naturally the literacy rate of this village is quite good – 75. 81 percent – only below Krishnanagar.

In Haripur parents were more willing to engage their children in weaving which was the traditional and steady income source for the villagers. That's why no. of drop out children was also higher in this village. In tribal village Bansdob education infrastructure including availability and facility of schools was not sufficient. The village had only one primary school but no high school. The awareness level about importance of getting education was also low. For this reason the average literacy rate of the four villages together was comparatively low than the census data.

Occupational Health hazard faced: In Haripur most of the villagers are engaged with weaving. For this reason, most of them suffered from eye disease. Except eye disease the villagers from all the four villages also suffered from Heap Pain, Knee pain, Chest pain, Asthma etc. Health hazard is found in Haripur with greatest percentage (56. 60%), hence the village is

given score 1 and as Dhawpara has faced least percentage of health hazard, it is given score 4. The supporting table is provided in the annexure table 7.

Preparation of table consisting final scoring of the four villages: The scores given to all the four villages according to the different parameters of five capitals are presented in tabular form in table 8.

From table firstly scores of each village for each capital is summed up and then divided by total no. of parameters to get final ranking. As for example in human capital Bansdob is given score 1 according to Age and sex of Household Head, Average Family size, Literacy and score 2 according to the parameter Health status. Hence, total score of Bansdob is (1+1+1+2) or 5. Hence final ranking of Bansdob in human capital is 5/4 (as total no. of parameter for human capital is 4) = 1. 25. All the villages get final ranking for each of the five capitals by applying the same formula. See table 9.

From table radar is prepared. From the radar the comparison of changes of different indicators of livelihood across four villages and position of each village according to each capital is clearly presented.

Table-7
Percentage of people faced occupational health hazard

Health hazard faced	Village			
	Haripur	**Bansdob**	**Dhwapara**	**Krishnagar**
Percentage of people faced health hazard related with their occupation	56. 60	9. 68	7. 35	8. 33

Source: Field Study, 2014

Table-8
Tabular representation of ranking of villages

Assets	Parameters	Scores			
		1	**2**	**3**	**4**
		Villages			
Human	Age and sex of Household Head	Bansdob	Krishnanagar	Haripur	Dhawpara
	Average Family size	Bansdob	Haripur	Krishnanagar	Dhawpara
	Literacy	Bansdob	Haripur	Dhawpara	Krishnanagar
	Health	Haripur	Bansdob	Krishnanagar	Dhawpara

Source: Field Study, 2014

Table-9
Final ranking of four villages

Capital	Haripur	Bansdob	Dhawpara	Krishnanagar
Human	2	1. 25	3. 75	3

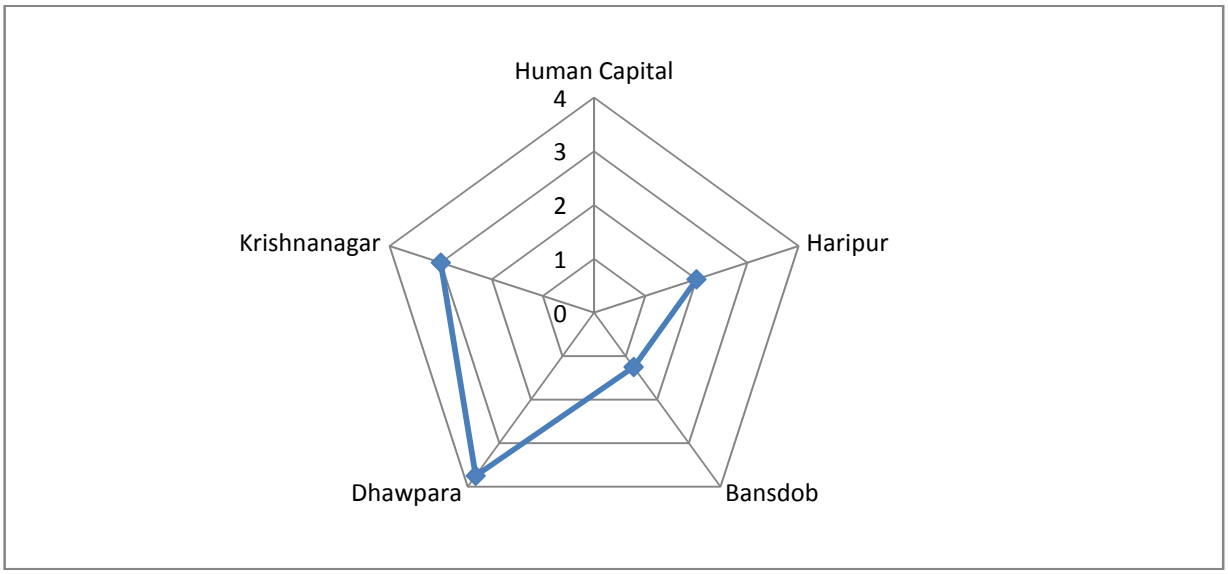

Figure-5
Graphical representation of ranking of villages through radar diagram

Figure 5 clearly reveals that Dhawpara get 3. 75 out of 4, which means in terms of human capital Dhawpara is the richest village among the four villages. Krishnanagar grabs second position after Dhawpara- scored 3. Haripur scored 2 and comes after Krsihnanagar. Tribal village Bansdob is poorest in terms of human asset. The village can able to score only 1. 25. The scores itself indicates that Krishnanagar and Dhawparaare more socio-economically developed villages compared to Haripur and Bansdob. Bansdob village is lacks of proper infrastructure of education. In terms of family size, also it ranks lowest. Only according to health hazard it is in third position just before Haripur. Hence, the reason behind the lowest score of Bansdob is quite clear. Exactly contrast picture can be seen in Dhawpara. So naturally Dhawpara gets highest rank after final ranking is done.

Conclusion

The sustainable livelihoods approach (SLA) is a way to improve understanding of the livelihoods of poor people. It draws on the main factors that affect poor people's livelihoods and the typical relationships between these factors. It can be used in planning new development activities and in assessing the contribution that existing activities have made to sustain livelihood. The present paper also does a thorough study to find out the status of accession to human asset and its capabilities to combine the livelihood strategies for a means of living.

The findings clearly show that the tribal village is in last position in terms of human asset and Dhawpara is in first position as far as human capital is considered.

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