

International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395 -0056 Volume: 04 Issue: 02 | Feb -2017 www.irjet.net

## THE ROLE AND WORKING OF HANDLOOM SECTOR IN CHHATTISGARH

### Mr. Rajiv H Peters<sup>1</sup>, Dr. Shobhit Bajpai<sup>2</sup>

<sup>1</sup>Assistant professor, Dr. C.V. Raman University, Bilaspur, Chhattisaarh, India

<sup>2</sup> Professor, Bilasa Govt. Girls Degree College Bilaspur, Chhattisgarh, India \*\*\*

### Abstract -

Handloom industry plays an important role in the development of the rural economical scenario of Chhattisgarh. It is one of the largest economic activities providing direct employment to larger number of persons engaged in weaving activities. The study is descriptive in nature in which method of observation and survey has been adopted. The study is conducted to know the concentration of handloom industries in Northern, Southern and Central Regions of Chhattisgarh with reference to the number of weaving co-operative societies operated, number of active looms used and number of weavers employed. The study focused on the most and least handloom production units of Chhattisgarh. The study finds that Central Region of Chhattisgarh consists of maximum hand-loom units. The study also explores that the increase in number of weaving co-operatives and active looms results in increased number of weavers which, later on increase in production of handloom products. Finally, it reveals that among all districts, Janjgir- Champa acquires maximum handloom production and their kosa/Tussar fabrics have made a mark in the domestic as well as the international market.

Key Words: Handloom, Weaving Co-operative Societies, Weavers

### **1.INTRODUCTION**

Silk production is an art and it involves hard and patience labour, high risk but good income. Silk constitutes only 0.3% of total fabrics of the World, but still it is called as Queen of Textiles due to its certain intrinsic qualities i.e., Natural sheen, affinity to colours, moisture absorbance, light weight, viscosity, poor heat conductor, excellent drape, low static current, low resilience and high strength, which make it comfortable for wearing, besides being highly attractive. In fact, sericulture has been the weft of the civilizing fabric of the Asian countries in general and India in particular. There is a sequential chain of activities performed by different artisans; some of them devoted to cocoon production, other in silk reeling, weaving, dyeing, printing, embroidery and product manufacturing, while some of them are engaged in trades of these lucrative products. Most of these people belong to poor and weaker sections of the society; many of them not even clad it on their body. But, certainly this graceful and human- friendly fabric attracts those who can afford to buy and use, and in the process there is a flow of money from rich people to the poor.

Silk industry in India provides employment to about 60 Lakh people through its value added chain of activities (cocoon production, reeling, spinning, twisting, weaving, dveing, printing, making finished products and marketing). Many societies in India, particularly the tribals of central India and the north-east are so intricately associated with the production of silk and silk goods that it has become a heritable culture in their life. Surprisingly, this culture is as old as human civilization itself. Legends reveal its existence in medieval India as early as 30000 BC. The evidence depicted in Mohenjodaro and Harappan civilization (About 4000 year ago) and inscriptions in *Rigveda*(About 3000 year ago) speak of the same. However, the silk production in India has seen ups and downs due to colonization by ancient rulers and their specific vested interests in silk.

#### **1.1 A FORMAL INTRODUCTION OF CHHATTISGARH**

Chhattisgarh is the 26th state of Indian union created on 1st November 2000, by dividing the erstwhile state of Madhya Pradesh. It has 16 districts and all the districts have Sericulture activities. Three types of Sericulture activities viz., Tasar, Mulberry & Eri (recently introduced) are being implemented by the State.

In this State Janjgir/Champa is the district which are having ample amount of tasar silk production and marketing system for which large number of Handloom is being utilized and many Government scheme is also running for the beneficial of rural folks those livelihood is depend upon this Silk production system.

© 2017, IRJET



International Research Journal of Engineering and Technology (IRJET)

Volume: 04 Issue: 02 | Feb -2017

www.irjet.net

e-ISSN: 2395 -0056 p-ISSN: 2395-0072

### **1.2 GENERAL AREA:**

#### TRIBAL SUB PLAN AREA

CENTRALY SPONSORED SCHEMES INCLUDEDHANDLOOMS							
S.No.	SCHEME	BUDGET ALLOTMENT 2014-15	EXPENDITURE DURNG 31-12-2014				
1	Establishment Directorate (Non Plan)	444.78	209.66				
1	Research and design	111.70	205.00				
2	development	10.00	2.48				
	Market study and Handloom						
3	exhibition	35.00	1.84				
4	Development Grant to Apex Weaver federation	100.00	40.00				
5	Kabir Weaver motivation scheme	0.01	0.00				
6	Revolving Fund	15.00	6.00				
7	Establishment of Indian Handloom technology Institute	71.20	37.08				
8	Late Shree Bisahu Das Best Weaver Motivation Scheme	2.50	0.00				
9	Best Deendayal Handloom Motivation Scheme	2.50	0.00				
10	Infrastructure development of Indian Handloom technology Institute	0.01	0.00				
11	Overall Handloom Development Scheme	200.00	159.03				
12	Special Financial Package Scheme (Centrally Sponsored)	30.00	1.76				
13	Integrated Handloom Development Scheme (Centrally Sponsored)	108.00	0.00				
14	Weavers Health insurance scheme (Centrally Sponsored)	8.00	0.00				
	TOTAL	1027.00	457.85				

S.No.	SCHEME	YEAR 2014-15 UDGET ALLOCATION	EXPENDITURE DURNG 31-12- 2014
	Market Study and		
1	Handloom Exhibition	16.00	0.00
2	Revolving Fund	4.50	1.50
	Blanket processing		
3	Establishment	50.00	0.00
	Overall Handloom		
	Development		
4	Scheme	50.00	49.00
	Integrated		
5	Handloom		
5	Development		
	Scheme	0.20	0.00
	TOTAL	120.70	50.50

S.No. PARTICULAR YEAR 31-12-14							
5.NO.	PARTICULAR	S.C.	S.T.	GENERAL	TOTAL		
1	2	3	4	5	6		
1	TOTAL LOOMS	2989	1624	16146	20759		
	WORKING						
2	LOOMS	1917	1016	12624	15557		
	LOOMS						
3	INSTALLED IN						
3	CO-OPERATIVE						
	SECTORS	1868	1003	11907	14778		
	WORKING						
4	LOOMS IN A						
т	CO-OPERATIVE						
	SECTORS	1075	568	8572	10215		
	TOTAL	-		_			
	NUMBER OF						
5	WEAVER						
	CO-OPERATIVE						
	SOCIETY				273		
	WORKING CO-	-	_	-			
6	OPERATIVE						
PURPUR	SOCITIES				210		
EAPEND	TURE TOTAL 21-12-	-	_	_			
2701	<b>1</b> <sup>1</sup> <sup>1</sup> <sup>2</sup> . PRODUCTION						
8.0	(IN MILLION				28.10		
0.0	0				20.10		
8	EMPLOYMENT	-	-	-	46671		

SPECIAL COMPONENT PLAN FOR SC

Revolving Fund

TOTAL

SCHEME

Apex Weaver federation development grant

Market Study and Handloom Exhibition

Overall Handloom Development Scheme

Integrated Handloom Development

Scheme (Centrally Sponsored)

S.No.

1

3

4

5

YEAR 2014-15

BUDGET ALLOCATION

20.00

10.00

6.00

19.00

50.00

105.00

49.93

59.43



Volume: 04 Issue: 02 | Feb -2017

www.irjet.net

	POWERLOOMS							
S.No.	POSITION IN 31-12-14							
1	TOTAL POWERLOOMS	257						
2	WORKING POWERLOOMS	210						
3	PRODUCTION (IN MILLION METRIC)	2.62						
4	EMPLOYMENT	630						

#### **GENERAL ADMINISTRATIVE SUBJECTS**

In the state of Chhattisgarh, under directorate of Rural Industries (Handloom) 9 District Handloom offices and one Government Tasar Weaving training Centre has been established in Raigarh respectively. In the State Handloom activities are being implemented in Raipur Gariyaband, Baloda Bazaar, Dhamtari, Durg, Balod, Bemetara, Rajnandgaon, Kawardha, Mahasamund, Bilaspur, Mungeli, Korba, Raigarh, Janjgir-Champa, Ambikapur, Jagdalpur, Kondagaon and Kanker. Details are as given below:

S.No.	NAME OF DISTRICT HANDLOOM OFFICE	DEPENDENT DISTRICTS
1	Raipur	Gariyaband, Baloda Bazaar and Dhamtari
2	Durg	Balod and Bemetara
3	Rajnandgaon	Kawardha
4	Bilaspur	Mungeli and Korba
5	Janjgir	
6	Raigarh	
7	Ambikapur	
8	Jagdalpur (Bastar)	Kanker and Kondagaon
9	Mahasamund	

Thus with the help of above mention District Handloom offices and one Government Tasar Weaving training Centre Raigarh, activities of Handloom, Co-operative, Power loom and Technological Institute are being run successfully. In the Weavers dominated new Districts of Kondagaon, BalodaBaazaar, Balod and Gariyaband it is proposed to establish new Handloom offices in the near future.

#### <u>"CHAMPA" THE HEART OF SILK PRODUCTION</u> AND MARKETING OF CHHATTISGARH

**District:**Janjgir-Champa is famous not only in India but in the Whole World for its production ofTasar Silk.

At present 520 Hectare of land having Saja/Arjuna Plantation is available for the production of Cocoon, in which 500 beneficiaries are working for the production of Silk. At present 45 lakh silk is producing at the District of Janjgir-Champa, Whereas the demand is above 5.00 Crore, So in order to increase the production of silk the district administration has projected some plans.

At present,	500	Hectare	of	Saja	/Arjun	Plantation	is
available for	the p	roductio	n of	Silk (	Locoon.		

2015-16	500	2016-17	500	2017-18	500			
	Hectare		Hectare		Hectare			
2018-19	500	2019-20	500					
	Hectare		Hectare					

Plantation of Saja /Arjuna is proposed. Not only the plantation for existing year but the forecast for next four years is proposed. The plants of Saja /Arjuna attain maturity by the Forth year hence become available for Silk production.

At present, women from ST/SC are working for the production of Silk. Further procedure of Reeling and Weaving is done by limited groups of beneficiaries. If proper training of Reeling and Weaving is provided to the existing SC/ST women workers then women from this Section of society will get more opportunities for Employment.

In the year 2014-15, it is planned to give a proper train 500 Silk producing women in the skill of Reeling, and the training is already in progress. It is proposed that in year 2015-16 about 500, year 2016-17 another 500, 2017-18 another 500, year 2018-19 another 500, total sum of 2500 women are trained for Reeling.

At present Cloth Weaving is limited to some special class of beneficiaries, but if a proper training of Cloth Weaving is provided to the women who are already involved in reeling, then their incomes would improve substantially. Given that, all the women involved in reeling cannot be trained for Weaving, Hence it is proposed that 50 % of women be trained for Weaving.

14-15	250 Women	15-16	250 Women
16-17	250 Women	17-18	250 Women
18-19	250 Women		

Post weaving, a group of beneficiary involved in the colouring of Weaved clothes will be required. In a year 15-16establishment of unit and in 17-18establishment of another unit is proposed.

PROPOSED PLANTATION FROM 2014-15 UPTO 2018-19			FIVE		YEARS		PLAN
S.N DISTRIC		PLAN	YEAR	201	201	201	201
0.	1		201 4-15	201 5-16	201 6-17	201 7-18	201 8-19
1	Janjgir- Champa	Arjuna-Plantation (per Hactare)	500	500	500	500	500

Т



FIVE FROM Y	YEAR P EAR 2014-15 U	LAN FOR IPTO 2018-19	REELING	TR	AINING	PRO	GRAM
S.No.	DISTRICT	PLAN	<b>YEAR</b> 201 4-15	201 5-16	201 6-17	201 7-18	201 8-19
1	Janjgir- Champa	Tasar reeling Training	500	500	500	500	500

	FIVE YEAR PLAN FOR WEAVERS TRAINING PROGRAM FROM YEAR 2014-15 UPTO 2018-19								
S.No.	DISTRICT	PLAN	<b>YEAR</b> 201 4-15	201 5-16	201 6-17	201 7-18	201 8-19		
1	Janjgir- Champa	Cloth Weaving Training	250	250	250	250	250		

# INDIAN HANDLOOM TECHNOLOGY INSTITUE CHAMPA

The Indian Handloom Technology Institute was establishing in the year July 2006. In this Institute 3 Years Handloom and textile technology diploma course is conducted and presently 52 Students (Male/Female) are studying in the Institute.

#### STATE AND CENTRAL SPONSERED SCHEMES

#### 1) DEENDAYAL HANDLOOM ENCOURAGEMENT BEST WEAVER PRIZE SCHEME :

In order to encourage the weavers in Weaving, Culture and traditional excellent design in the Handloom Sector, Under DEENDAYAL HANDLOOMENCOURAGEMENT BEST WEAVER PRIZE SCHEME every Year 2 Weavers are awarded with incentive prize of 1 Lakh Each (Including Shawl, Shrifall and Tamrapatra). In the year 2012-13 and 2013-14, the Chief Minister of Chhattisgarh Dr. Raman Sigh has awarded 1 Lakhs 2 each along with Shawl, Shrifall and Tamrapatra to 4 selected Weavers.

#### 2) OVERALL HANDLOOM DEVELOPMENT PLAN:

For proper development and extension of Handloom Weavers in the State, A new scheme known as Overall Handloom Development Plan Has been initiated. Under this plan a provision of 2000 Crore was made during 2013-14 through which 1103 beneficiaries were benefited. Similarly a provision of 3000 Crore was made during the year 2014-15 against which an amount of 2 257 Crore has been spent ending December 2014 through which 945 beneficiaries were benefited. During the current financial year of 2015-16 a budget provision of 2 3.50 Crore has been made through which a target of benefiting 1291 beneficiaries has been envisaged. Under this Scheme Weaker section of the society living in Rural Area's would be provided training in Handloom and textile weaving so that these persons gain more and more employment opportunities. In addition to this, construction of Loom House, common facility Centre, Drinking water Facility, Road and Local Requirements in Weavers Villages are being made available for their Overall Development.

#### 3) GOVERNEMT CLOTH DISTRIBUTION PLAN:

The Weavers Co-operative Societies under Chhattisgarh State Handloom development and through Co-operative Marketing federation, The Scheme of Cloth production for use in Government Sector is being implemented. Under this Scheme, requirement of Cloth in Government departments is being fulfilled under Governemt Cloth **Distribution Plan**. Through this Scheme in the State it has been possible to provide regular employment to the Weavers. During the year 2012 and 13 and 2014 supply of Cloth worth 102.35 Crore and 106.12 Crore respectively has been made to various Government Department. During the Year 2014-15 (ending December2014) Cloth worth 109.00 Crores has been supply to various Governments departments, which is likely to reach 125 Crores by the end of March 2015. For the Year 2015-16 a target of 132 Crores has been fixed for supply of Government Clothes.

#### SUPPLY OF REEL YARN TO WEAVERS, CLOTH PRODUCTION AND SUPPLY AND WAGE DISTRIBUTION

S.No	PARTICULAR S	2011 -12	2012- 13	2013- 14	2014- 15 ENDIN G UPTO DEC 2014	2014-15 UPTO MONTH MARCH 2014 ESTIMATED
1	2	3	4	5	6	7
	YARN DISTRIBUTIO					
1	N	23.86	42.72	49.25	28.54	48.00
2	WAGES FOR WEAVING	16.3	34.84	36.19	23.40	37.00
3	CLOTH PRODUCTION	49.75	86.68	88.94	57.12	93.00
4	CLOTH SUPPLY	64.77	102.3 5	106.1 2	109.00	125.00

# (A) INCENTIVE TO BRILLIANT SUNS AND DAUGHTERS OF WEAVERS:

Under this Scheme for awareness to study and for participation in competitive exams, the sons and daughters of Weavers who obtain 60% or more marks in 10<sup>th</sup> and 12<sup>th</sup>, the Chhattisgarh State Handloom development and Co-operative marketing federation is distributing encouragement prizes to these children in order to motivate them.



S.No.	YEAR	NUMBER OF STUDENTS MALE/ FEMALE	AMOUNT OF INCENTIVE MONEY DISTRIBUTED IN <sup>®</sup> LAKHS
1	2011- 12	186	3.59
2	2012- 13	240	4.81
3	2013- 14	193	8.00

#### **B) ENCOURAGEMENT FOR HIGHER EDUCATION:**

In order to encourage the Children's of Weavers for under taking higher education like Medical, engineering, C. A. and M. B. A. during the year 2013-14 amount of 2010,000 has been given to such students. During the year 2013-14, 3 students were given this prize for seeking admission in engineering and during 2014-15 one such student was given this incentive prize.

#### 4) DEVLOPMENT OF DESIGN AND TECHNOLOGY:

In the State, in order to produce cloth as per modern trend in the market and to prepare a new design and colour mixing produced cloth as compared to traditionally produced handloom made cloth, In Weaver dominated area / clusters the services of experts of National Institute of Fashion Technology / National Institute of Design / National Institute of Craft Design / National Institute of Handloom Technology would be taken to trained the Weavers. After earmarking the looms of primary Weavers Societies, it is proposed to manufacture sample of modern design cloth and to develop the technology at a large scale.

#### 5) FELICITATION OF SENIOR WEAVERS

Those Weavers who have attained the age of 60 or more and being a largest producer of cloth of the Apex Weavers Federation are felicitated by way of cash incentive of 5501 along with Shrifal. During the year 2013-14, 7 Weavers of Balod, Dhamtari, Rajnandgaon, Bilaspur, Raipur and Baloda Bazaar Districts were given total amount of 38508.00 as felicitation money and during the year 2013-14 an amount of 27505.00 was awarded to 5 Weavers.

# 6) ECONOMIC ASSISTANCE TO FAMILIES IN THE EVENT OF DEATH OF A WEAVERS:

In the event of death of a Weaver associated with Apex Weavers Federation of Weaver Society, the family is provided with an economic assistance of 2 10,000 /-each. During the year 2013-14 under this Scheme, Families of 27 Weavers were given 2 2.70 Lakh.

# 7) STITCHING OF DRESSESTHROUGH WOMEN SELF HELP GROUP:

The requirement of dresses in various Government teaching institutions is met through cloth produced by Weavers Societies of the State. The cloth produced by Weavers through Women Self help group is being supplied to SC, ST development department and Education Department and various teaching institutions under Education Department. Details are as follows:

DISTRIBUTION OF STICHING REMUNARATION TO WOMEN SELF HELP GROUP FOR DRESS STICHING					
S. No.	YEAR	REMUNARATION PAID TO SELF HELP GROUP FOR STICHING IN CRORES			
1	2010-11	2.55 Crores			
2	2011-12	6.02 Crores			
3	2012-13	11.56 Crores			
4	2013-14	9.45 Crores			
5	2014-15 (Ending Dec 14)	4.32 Crores			

#### 8) INTERNATIONAL CRAFT FARE SURAJKUND NEW DELHI AND INTERNATIONAL FARE MILANO ITALY:

The International Craft Fare at Surajkund was organized by the Government of India from 08 - 15 feb 2015. In this fare the products made by Craftsman and Weavers were exhibited. During the Craft Fare with the Cooperation of National Fashion Technology New Delhi (NIFT), A Handloom fashion show was organized by Chhattisgarh State Handloom Development and Cooperative federation. In addition during the International Fare organized from 13 – 16 sep 2015 at Milano Italy, a demonstration of cloth made by Handloom Weavers was also exhibited.

# 9) SPECIAL EFFORTS FOR MARKETING OF HANDLOOM CLOTH:

In order to Co-relate the Weavers directly to the market for the marketing of Handloom cloth District level Exhibitions were organised at Jashpur, Jagdalpur, Ambikapur, Korba, Bilaspur, Raipur, Kanker, Rajnandgaon, Kawardha, Janjgir-Champa, Bhilai and Bacheli Districts and Similarly out of State exhibitions were organised at Durgapur, Jamshedpur, Ranchi, Amrawati, Jabalpur, Kolkata.Sale of Handloom cloth worth 🛛 1.93 Crore was achieved through these exhibitions ending Dec 2014.

#### **10)CONVENING OF NATIONAL AND SPECIAL** HANDLOOM EXPO:

In order to promote the marketing of clothes made by State Handloom Weavers, with the help of Government of India and State Government, during the year 2013-14 National Handloom Expo were organised in Raipur, Bhilai and Special Handloom Expo was organized in Kota, Jamshedpur and Mumbai. District level Exhibitions were organised at Dhamtari, Baloda Bazaar, Kawardha, Ambikapur, Mahasamund and Mungeli Districts. In these exhibitions the sale of 2 6.75 Crores from Handloom Cloth was recorded.

During the Year 2014 National Handloom Expo was Organized at Subhash Stadium Raipur and special Handloom Expo were organised at Bhopal and Kota. District level exhibitions were organised at Ambikapur, Baloda Bazaar and Jashpur Districts and ending Dec 2014, Handloom cloth worth rs 2.65 Crores were sold in these Exhibitions.

#### **11) MARKETING THROUGH SHOW ROOMS:**

In order to promote the marketing of Handloom Cloth produced by Weavers, Chhattisgarh State Handloom development and Co-operative marketing federation Raipur has established Showrooms known as Handloom Emporium in Bilaspur and Chhattisgarh Haat near Lall Ganga Shopping Mall Raipur. Apart from this showrooms have been established at Civic Centre Bhilai, Rajnandgaon and Korba.It is proposed to establish an out of State Showroom at New Delhi by the Federation.

#### CONCLUSION

Keeping in mind the economic Strengthening of Handloom Weavers of the State, A target for providing training in Weaving, Dying and Designing has been fixed. The various schemes are being implemented for development of Handloom activities. In order to encourage the marketing of cloth made by Weavers and correlating them directly with the market, exhibitions are being regularly organized for sell of the cloth in leading cities of State as well as out of the State. The Weavers are getting regular employment under Government cloth distribution scheme.

### References

[1] Apu, A.A. (Jan-Feb.2011), Reviving Bangladesh handloom industry through adoption and diffusion process, www.textiletoday.com.bd.

[2] Neha Sahu, Dr. Usha Tiwari, Tarun Dhar Diwan, (2017)save green, go green through paperless. International Journal of Recent Trends in Engineering & Research (IJRTER), Volume 3, Issue, Pages1-6

[3] Nadh, R.R., Rao, P.V. and Harsha Vardhan, B.M. (May 2013), Handloom market (Need for Market Assessment, Problems and Marketing Strategy), 2(5), 6-11

[4] Rahman, M.M. (2013) Prospects of Handloom Industry in Pabna, Bangladesh, 13(5), 9-17

[5] Ramaswamy, R. (September 2013), Marketing problems of micro artisan enterprises in Thenzawl handloom cluster, Mizoram, 2(2), 41-45

[6] Sharma, N., Kanwar, P., and Rekha, A. (January 2008), Traditional handicrafts and handloom of Kullu district, Himachal Pradesh, 7(1), 56-61

[7] Vijayabhaskar, R. (Jan 2014), Increase import duty on china silk - Shut down the handloom industry, IV, 365-369 [8] Emmaniel, R. (October2012), Growth of handloom market in India, 2(10), 1-10

[9] Tarun Dhar Diwan<sup>1</sup>, Kamlesh Lehre, Vartika Kashyap. Aug 2013. "An Evolutionary Approach For Discovering Changing Frequent Pattern In Data Mining" "International Journal For Advance Research In Engineering and Technology. Vol.1, Issue VII, ISSN 2320-6802.

[10] Tarun Dhar Diwan, Upasana Sinha, Dr. Kamal Mehta, Aug 2013. "Intelligence Technique For Query Optimization Using Nlp & Fuzzy System" International Journal For Advance Research In Engineering And Technology. Vol.1, Issue VII, ISSN 2320-6802.

[11]Tarun dhar diwan, Varun Singh. Feb. 2014. "An Elegant Context Perceptive Page Rank Algorithm for Information Retrieval" International Journal for Scientific Research & Development, Vol. 2, Issue 04, 2014.ISSN (online): 2321-0613

[12]Bortamuly, A.B., and Goswami, R (June2013),"Awareness, a determinant of socio demography of handloom weavers associated with Jai-pur district", Indian Streams Research Journal, 3(5), 1-10, ISSN 2230-7850.

[13] Das, S.N. (March1996),"Role and working of handloom industry in Western Orissa", Abstract of Doctoral Dissertation, X(1), 108-110.

[14] Ghosh, S.K., and Akter, S.M. (2005),"Handloom industry on the way of extinction: An empirical study over the predominant factors", BRAC University Journal, II(2), 1-12

[15] N Sahu, S Dubey, TD Diwan(January 2016)- Asian Journal Of Science And Technology, Performance Evaluation Of Cluster-Based Routing Protocols Used In Wireless Sensor Networks, Volume 7, Pages 2213-2219.

[16] Neha Sahu, Surendra Dubey, Tarun Dhar Diwan, (2015)

Energy Efficient Communication Routing Protocols in Wireless Sensor Network Services.IRJET,vol2,issue 9,pages 1014-1019.

[17] Goswami, R., and Jain, R. (September2011),"An analytical study of managerial issues of handloom industry in Jaipur district", International Journal of Research in *Commerce & Management*, 2(9), 94-97, ISSN 0976-2183.

Т



[18] Das, S. (1995) Handloom Industry of India, Mittal Publication, New Delhi

[19] Jain,R., and Goswami, R.(June2013), "Awareness, a determinant of socio demography of handloom weavers associated with Rajasthan Rajya Sabha Sahkari Sangh of Jaipur District", *Indian Streams Research Journal*, 3(5), 1-10, ISSN 2230-7850.