

## SILK INDUSTRY: EMPLOYMENT AND INCOME GENERATION IN RURAL AND SEMI URBAN AREA OF JHARKHAND

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### ABSTRACT

*The effects of dynamic driving forces change such as population growth and change in access to Technology market infrastructure and services as well as of more slowly changing conditioning factor search and agricultural potential local institutions and culture. We also consider the influence of government policies program and Institutions which influence income strategies, land and outcome in many ways at different level by affecting the driving forces and Conditioning factor at the local level by directly promoting or inhibiting different income strategies buy directly affecting outcome. We argue that the impact of many factors is likely to be context dependent, emphasizing the importance of empirical research in specific con text through some unambiguous hypothesis derived. In general policy and programme interventions likely to involve trade-offs among the objectives of increasing agricultural productivity, increasing household income and reducing Land Degradation. In this paper Employment and income generation in rural and semi urban area of Jharkhand in respect of silk industry is discussed.*

**KEYWORDS:** *Income Strategies, Conditioning Factor, Trade-Offs, Land Degradation.*

### Introduction

Indian Silk Industry is the world's second largest producer of silk. It is the only country in the world which produces all five variety of silk in on commercial scale and contributes about 14% to the world production, however the market share of IRS in the Global silk trade is not significant where 85% of the Silk good are sold in the domestic market. The Silk goods export earnings decreased over the year due to global recession and reduction in demand for silk goods in western countries .India is the exclusive producer of Indian Tussar which is largely tended by tribal's. In recent years Jharkhand state has emerged as the biggest producer of the tasar silk. it's worthwhile to mention that India's Silk export has risen from rupees 2359 crores in 2011 - 12 to rupees 3338 cr during 2016-17.The experimental Silk unit Set up at kharsawah block in North Singhbhum district have proven to be a success. The district administration of the singhbhum has identified and allocated the tasks of production of silk. The tribal women first make the thread and then through looms they make the Silk cloth.

### Objectives of Research

- Encouraging the skilled and professional people from immigration through employment opportunities in these industries.
- Empowering women through employability in the rural areas of Jharkhand.
- To enable flow of equity from rich consumer to poor.
- To encourage easy marketability and also to provide maximum scope for generation of income (extra) from the by-products of silk like sericin, pupae, etc.
- High labour force participation rate with potential to generate huge employment.

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- To provide huge potential for contribution to export earnings.
- Adequate institutional credit to the needy farmer, reelers, weavers, etc from the government agencies would help to improve the quality and productivity and thereby income generation.

#### **Aim of the Research**

- To present dynamic analysis of the impact of perception of tribal peoples of Jharkhand
- To focus on the contribution of youth and people of Jharkhand in silk industry and decision of government on the employability the project is based upon a systematic analysis of existing literature and data and the collection of new material to a combination of quantitative and qualitative methods in selected regions of the Jharkhand.

#### **Research Methodology**

- Data collection the basics of data collection will be primary. However secondary data collection will also be collected through various journals, magazines, newspaper, books, online portals and other sources. Data collected through primary method will be both qualitative and quantitative. In qualitative research method the data will be collected through interviews, Focus Group, observation case studies whereas through quantitative method data will be collected and analyzed by using correlation analysis, regression analysis etc.
- Sampling various sample design are there, however for this research project simple random sampling will be used so that buyers can be eliminated and sampling error can be estimated. However, purposive sampling will be more appropriate as the research can be studied intensively.
- The methodology of the project will permit an in depth study of local processors and people's subjective perceptions as well as systematic comparison and quantitative generalization.
- A major challenge of the research will be to sufficiently draw together the quantitative and qualitative research part and to have each informed the other.
- Various team members' extensive expertise with multi method research will ensure the coherence of the project composite methodological design.

#### **Overview of the Literature**

According to M Sathiavathy, member Secretary of the Silk Board said,"the quality and quantity of tasar produced in Jharkhand make the state role model for others. Few states have also done a study on village producing tasar silk in the state but we are been on inviting farmers of other states." Out of 600 metric tonnes of production of silk in the country Jharkhand alone produce 350 metric tons of tasar annually. Currently state farmers produce 15 to 20 cocoon from one seed through traditional method in October and November month which is considered to be period for cocoon Production.

However at this time farmer can produce 16000 -20,000 cocoons and earn rupees 25000 to 35000 by selling it in the market. Jharkraft is all set to establish ELITE SEED speed P4 station for supply of quality industrial silk worms seed and transfer of technologies in the field to improve productivity and quality of tasar silk. Thus in this way production of raw silk can be increased in the state there by generating employment in rural and urban regions through the establishment of silk industry in the country. However climate fluctuation, growing condition and deforestation have taken their toll on the production of Tasar Coocon because it is a forest based industry. The tussar fibre is also under siege from the influx of cheaper Chinese silk in the market.

Apart from regular use of silk as yarn to make fabrics there are ample Avenue to utilize the byproduct of sericulture, which if used prudently and judiciously can help increase the value of sericulture product to maintain a healthy level of profitability. Creation of opportunities for youth in rural areas is the major requirement of today. Proper guidance and mentoring of small farmers on how to get the best deal for the market at remunerative price must be provided. The benefits of scheme of the government must be directed efficiently. It makes great social, economic and political sense. Skill and knowledge are essential driving forces of economic growth and social development of any country.

#### **Sericulture**

India is the second largest producer of silk in the world. It produces four types of silk - Mulberry, Tasar, Eri & Muga. Jharkhand is the leading producer of Tasar silk in the country. It produced 2004 M.T. Tasar silk in the year 2013-14, for which it got an appreciation letter by member secretary, Central Silk

Board. Tasar silk is mainly reared in the forests on Arjuna and Asan trees. The dominant ecorace is DABA. We are also rearing DABA on sidatree. In addition to DABA, it has started eco-conservation of Lariaecorace. It is mainly reared on Sal trees which are in abundance in the forests. The technology for ecorace conservation has been developed with the technical support of Central Tasar Research & Training Institute (CTR&TI) Nagri, Ranchi. It has got its Tasar Silk Certified as Organic by an International agency, One Cert USA. Today, it is the sole supplier of certified Organic Tasar Silk in the world. It has been planned to achieve a production of 8000 M.T. of Tasar Silk by the end of XIth plan. Realizing this potential of silk production in the state, various policy decisions were framed, which are as under:

- **Resham Doot Project**

This is an important policy decision which aims to strengthen the seed sector by organizing rearers in group. This has also changed the role of the department from implementor to facilitator. By introduction of this concept, quality seed production has increased by 15 times.

Farmers were organized into a group of 23-25. The structure of the group is as follows:

Resham doot - 1 (Group Leader)

Basic Seed Rearers - 2

Commercial Seed Rearers - 20-22

The Group Leader or the Resham Doot along with the Basic seed rearers are trained to convert Basic seed to Commercial seeds and are provided training and necessary rearing equipments. Each group is provided with 600 Basic seeds from which the Resham doot and Basic seed rearers produce 4000-5000 Commercial seeds. These Commercial seeds are then provided to the Commercial rearers at the rate 200 DFLs per farmer.

Some of the results are listed as below from the introduction of this Project:

- **Basic Seed:** Commercial seed ratio has increased from average J ratio of 1:4 to 1:15.
- **Commercial Seed:** Commercial Cocoon ratio has increased from the average ratio of 1:15 to 1:80. Some Rearers have also attained the ratio of 1:120 due to their efforts and hard work.

The income of the farmers has increased from Rs. 4,000-5,000 to Rs. 35,000- 40,000 in a rearing season of 45-50 days. The migration for new job opportunities has reduced. The people who had migrated to other states are also now coming back to their villages. Farmers have started to send their children to schools. Along with the basic needs various other needs are fulfilled. People have invested into Motor Cycles, Power Tiller, Mobiles, and Buildings & Property etc. This has resulted in the development & upraise of self confidence. The farmers do not get affected even in the drought as they now have other source of livelihood.

- **Nucleus Seed Project**

The second important policy decision taken by the state government was Nucleus seed project. To provide sufficient quantity for quality Commercial seed, it was realised that the state required 20-22 Lakhs Basic seeds from BTSSO (Basic Tasar Silkworm Seed Organisation). When it was written to the Director of BTSSO in the year 2007 to provide the required quantity of 20 lakhs Basic seeds, they replied that "BTSSO develops only 19 Lakhs Basic seeds to fulfil the requirement of ten different states, hence, it was not possible to meet; this requirement and only 2.5-3 lakhs basic seeds can be provided to Jharkhand state".

It was then decided to put the foundation of Nucleus Seed Project. During that time, the basic structure of PPCs were weak, neither did they have Grainage houses nor, Administrative buildings. In 2007, with the help of Forest Department, 67 Grainage houses were constructed and Nucleus Seed project was started. Hence, a new revolution in this sector was started with the collaboration of two different departments, namely, Industry Department & Forest Department.

Nucleus seeds are reared in the month of September-October to make Basic seeds from Nucleus seed. The Nucleus seed cocoon, obtained from the process, is stored in the Grainage houses between November to July of the following year in a particular temperature and humidity throughout the period. After completion of eight months the Silk moth comes out of the Nucleus seed cocoons for the laying. These eggs are supplied to the "Resham Doot" as Basic Seeds for rearing. At present, 10-12 lakhs Basic seeds are being prepared by the PPCs.

- **Elite Seed Project**

The state government of Jharkhand took another important decision in the year 2010. Two Elite seed stations were established in the state with the support of the Central Silk Board, one in Chakradharpur and another in Dumka. It was the outcome of the Policies of the state government that the state has become self dependent for the Commercial seeds.

### **Spinning**

The quality of spun yarn has improved in last five years. Fabric made from this yarn is also known as "Ahinsa Silk".

**Gheecha Yarn:** This is another type of yarn which is produced from cut cocoons, rat cut cocoon, pierced cocoon. It has got a very good market.

**Baikal Yarn:** This is the yarn which is produced from the peduncle of cocoons.

### **Silk Waste**

Jharcraft developed a technology for processing of silk waste. It is supplying processed silk waste to a buyer from Germany.

Jharcraft is also developing technology for the extraction of "sericin" from silk waste. Sericin has a good National and International Market. Sericin has good use in cosmetics and medicines. These efforts will increase the income of women groups who are engaged in reeling and spinning of cocoons.

### **Silk & Cotton Handloom: Weaving A Phoenix**

Jharkhand has revived handloom sector after a gap of 12 years. Before its intervention, the weavers were making grey fabric of coarse count. Today, they are weaving fine count yarn as 80s, 100s, etc. They are using 100 & 120 reeds. dobby and jacquard have been introduced for the first time in the state. Now, designer sarees and fabric are being weaved on these looms. research is also been done to improve the quality of looms. The income of weavers has gone up from Rs 1,500-2,000/- per month to Rs 6,000 - 8,000/-per month. Women in large numbers are joining this activity. People from non-weaving communities and younger generations are also joining this profession in large numbers.

### **Garment Manufacturing**

Jharcraft took the initiative to establish first, state of the art, computerized apparel unit at Ranchi. This is run by a private firm - Craftedge Apparels. Now with the help of AEPC and ATDC Ranchi, three more production units have been established. One of its partners NGO-ES AF, has established one unit at Dumka district.

### **Value Additions**

The state was known as the Tasar Cocoon producer. The conversion of Yarn from cocoon was done on a very small scale. In the 11th five year plan, projects were made and implemented in phases for attainment of a positive result. Establishment of "Aakarshani"- Resham Training Institute, Kharsawan, was a major and positive phase in this sector. With the help of NIFT Kolkata, this training institute was started in April 2006. Women were trained in groups of 30 each for reeling and spinning of Yarn from Tasar cocoons. After training, various Common Facility Centres (CFCs) were established in the villages for this process. Work-sheds were established in the villages for the women in an area of 1,000 sq.ft.. The same machines were installed on which the women were trained. 17 Cocoon banks were also constructed in the state to fulfil the cocoon requirement of these CFCs which are administered by Jharcraft. Jharcraft also provides marketing support for the products of the CFCs. Around 16,000 women are associated with this activity at present who earn an average income of Rs. 6,000 to 12,000/- per month.

The yarn is woven into fabric and used after dyeing and bleaching for stitching readymade apparels. Other value additions also provide livelihood opportunities to many artisans. Tasar silk is produced in the districts of Singhbhum (West), Saraikela, Singhbhum (East), Dumka, Pakur, Godda, Sahebganj, Dhanbad, Giridih, Latehar, Palamau, Garhwa & Simdega.

### **Mulberry Silk**

Mulberry silk is produced by the "Bombyx mori". These silk worms are reared indoors on the plucked leaves of Mulberry plants. Mulberry silk is majorly produced in the Latehar, Gumla, Ranchi, Khunti, Pakur & Sahebganj districts of the state. The quantity of production is very low in the state. Projects have been formulated for raising the production of the Mulberry silk in the state.

**Factors affecting income strategies, land and other implications**

• **Government Policies Program Institutions**

(Market policies, Agricultural Research and Development infrastructure, land policies, credit programs etc)

Community	Political, Economic Ideological Determinants	New Agricultural Technique	Govt. Policies	Globalization
Environmental impact. Food availability. Diversity Food price. income/poverty.	Population demographic change. Urbanization. Displacement due to civil war. Land parcelization.	High yielding varieties Irrigation Mechanization Fertilizers	Trade Subsidies Biodiversity Conservation Aid	MNC acting across border Faster transport and communication

Employment- household time allocation

↓  
Outcomes

↓  
Agricultural production  
Household income  
Land improvement  
Generation of income

**Hypothesis**

The hypothesis of the research is that, appropriate strategies are required for sustainable rural development which depends on the comparative advantages that exist for people in a particular location. We also hypothesize that different income strategies and land management practices are affected by difference in comparative advantage and that these are largely determined by differences in agricultural potential, access to market, infrastructure and population density. With available technology, determine the agricultural production possibilities. Other factors such as access to credit, education, land tenure, household wealth and other can also influence livelihood and land management practices by affecting the information that farmers have access to and the constraints that they face in the tribal regions of Jharkhand. Empirical research is essential to understand these impact and trade off. Sericulture provide maximum scope for generating extra income when several by products like silk worm, pupae, sericin, silk waste, basin reefuge, etc are effectively utilized.

**Central Idea of the Problem**

There is a wide gap between those who have access to education and skill development opportunities and these who do not, is a challenge that has to be overcome. Developmental economist have proposed several models for rapid progress of nations.

- One among them is to generate employment opportunities in countries where there are unlimited manpower available.
- Research must address women's need.
- It must contribute to an enhanced understanding of general issue.
- It must provide downstream employment, income generation in rural and semi urban areas.
- Full and productive employment and rejuvenation of forest, flora and reverse land degradation through increasing green covers.

**Conclusion**

Silk production is a wonderfully 'eco-friendly' industry. It leads to the growth and maintenance of states culture rather. This is what the silk worms feed on. Basically the silk worms from which emerge the cocoons need plenty of greenery, the right temperature to breed. In Jharkhand it is in the heavily forested regions where groves of Saal and Aasan trees provide this nourishment to the silk worms. 'Silk' actually is the generic name within which you have varieties depending on the silk worms and the trees they feed on. In Jharkhand it is the 'Tussar' production, which has caught on as viable economic activity, not only as a product generation but providing of livelihoods to hundreds of 'adivasis' in the villages. It is essentially labour intensive, a cottage industry which in effect feeds the 'mill' or 'factory' model of

production 'Tussar' has a muted lustre, more like a 'matt' rather than a 'glossy' finish and is highly coveted by the garments and fashion industry across the country and abroad. There is a lesson to be learnt in the flourishing silk industry in Jharkhand. It is possible to contribute to growth in a substantial way by nurturing cottage industries. What is more, is its singular and salutary effect on livelihoods of rural communities? They can continue to remain on their lands, engage in other agricultural activities and yet learn a new skill and engage with a home-grown industry which fetches them another income. In some cases, even make a transition to actually become a 'producer' rather than hired labor. Hemlaal Mumu, Minister of Industries, Jharkhand, says that one cannot ignore the role of Tussar industry in creating employment opportunities in the state. This is an example, which can extend beyond the forests of Jharkhand, beyond the silk industry and beyond the state. Essentially it needs political will backed by a sound understanding of the convergence between societal good, economic growth and environmental protection.

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#### Annexure

##### Cost Estimation to Approximation

Particular	1st year	2 <sup>nd</sup> year
Research assistant	156000	156000
travelling	25000	15000
Lodging /boarding	20000	27500
Source material	6000	7000
Software	10000	15000
Contingencies	12500	12500
Institutional overhead	18750	18750
<b>Total</b>	248250	251750

