

# Asian Resonance

## Revival of J&K Silk Industry through External and Internal Branding A Study of District Pulwama in J&K

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#### Abstract

Sericulture industry has occupied a prominent place in the industrial development in Jammu and Kashmir. J&K is the only state which produces the best quality bivoltine silk which is regarded as one of the finest fabric in the world. The Sericulture experts of Japan have recognized the superiority of natural climatic conditions in the state favourable for the development of Sericulture and for the production high grade raw silk of international quality. This industry attained a unique importance among all other sectors and provides an excellent and unique opportunity for socio-economic progress in the developing countries. There is an immense potential for the development of this agro-industry in Jammu and Kashmir State, because of the favourable climatic conditions, offers tremendous scope for the cultivation of mulberry and the development of good quality raw silk, as well as opportunity to uplift the status of economically poor in the rural Kashmir in particular. The aim of this paper is to highlight the present status of Sericulture in India with special reference to District Pulwama and to suggest some remedial measures to the various stakeholders of the Silk industry.

**Keywords:** Sericulture, J&K, Silk, District Pulwama, Stakeholders.

#### Introduction

Silk is the softest fabric known to mankind. Records indicate that silk was used as early as 1725 B.C, which is supposed to have been discovered by a Chinese princess. Sericulture was a Chinese art centred on the mulberry worm. An old name for silk was "*Chinansukh*" after the country of its origin. In India, silk came from three indigenous sources, the "wild silks" of tussar, eri and muga. The knowledge of mulberry silk reached India and soon became a symbol of royalty and prestige. Silk was also considered a "pure" fabric and used for all religious, ritual and ceremonial occasions. Silk is referred as "Queen of fabrics" and is well known for its natural colour, purity and unusual lustre. It is natural fabric, animal oriented and produced from silkworm (Hiware 2012). Silk is also environmentally friendly. Silk is produced with few chemical fertilisers and practically no insecticides. Primarily made of proteins, it is close in composition to human skin, making it extremely comfortable to wear. There are five major types of silk of commercial importance, obtained from different species of silkworms which in turn feed on a number of food plants: Except mulberry, other varieties of silks are generally termed as non mulberry silks. India has the unique distinction of producing all these commercial varieties of silk. **Mulberry silk:** This silk is produced from silkworm named as *Bombyx mori* that primarily survives on mulberry leaves of the mulberry plant and is cultivated and reared indoors. This moth belongs to China originally and it is the major silk producing moth and is found in all silk producing countries India, Korea, Italy, France, Russia etc. The threads produced by this moth are white or yellowish in colour. **Non mulberry silk:** 1. **Tasar Silk:** - this is copper brownish in colour and is slightly coarse in texture which mainly survive on leaves of Oak, Asan and Arjuna trees. Tasar silk is mainly produced in Jharkhand, Bihar, Chhattisgarh, Madhya Pradesh, Orissa and West Bengal & Andhra Pradesh. 2. **Eri Silk:** - Eri is unique variety and is spun from cocoons which are copperish in colour. It is primarily produced in India and is used for manufacturing of wraps (chaddars). 3. **Muga Silk:** - It is golden yellow colour silk obtained from semi- domestic multivoltine silk worm and is mainly produced in Assam. 4. **Oak Tasar:** - it is the finer variety of Tasar, which feeds on natural food plants of oak. It is produced in the sub Himalaya belt of India. China is the main producer of this silk type.

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China is the leading producer of raw silk in the world. It accounted for 81.89 per cent of the total raw silk production in the world during 2009. India ranks second and its share was 15.75 per cent. Other producers include Brazil, Uzbekistan, Thailand and Vietnam. The total production of raw silk in the world during 2009 was 126,995 metric tonnes, of which 103,627 metric tonnes were mulberry, which is 81.60 per cent of the total silk produced. Asia is the top producer of silk in the world contributing 95% of the total global output. There are 58 countries on the world map of silk; bulk of it is produced in China and India, followed by Japan, Brazil and Korea (Nagaraju, 2008). India is a developing country with majority of its masses living in rural areas. Agriculture is the main source of employment providing work to 70 percent of the rural population. Next to agriculture handloom provides a major source of employment to the rural people in India. Mahatma Gandhi said "the spinning wheel is a nation's second lung". He considered the

spinning wheel, a symbol of revolution. So, handloom weaving is the most important cottage and labour intensive industry in India carried out with labour contributed by entire family of the total handlooms in India 72 percent are engaged in cotton weaving, about 16 percent in silk weaving and rest are related to art silk and mixture. India is the second largest producer of raw silk after China and the biggest consumer of raw silk and silk fabrics and has the unique distinction of producing all the four varieties of silk viz., Mulberry, Tasar, Eri and Muga (Giridhar *et al.*, 2010). The tremendous growth of silk industry in recent times is an indication of the giant strides India is making. The total exports of silk fabrics have increased from about 2,920 tonnes in 1997-98 to over 5,391 tonnes in 2000-01; the total value of exports was Rs.12,300 million in 2000-01. USA, Germany, UK, Hong Kong, Italy, Spain and France are some of the major markets for the Indian silk industry.

Country	2005-2006		2006-2007		2007-2008		2008-2009		2009-2010		Total
China	87800	80.22	93100	80.89	78000	79.01	70980	77.96	84000	81.06	413880
India	15445	14.11	16525	14.36	16245	16.45	15610	17.14	16322	15.75	80147
Japan	150	0.14	150	0.13	150	0.15	150	0.16	90	0.09	690
Brazil	1285	1.17	1387	1.21	1220	1.24	1177	1.29	811	0.78	5880
Korea Republic	150	0.14	150	0.13	150	0.15	135	0.15	135	0.13	720
Uzbekistan	950	0.87	950	0.83	950	0.96	865	0.95	750	0.72	4465
Thailand	1420	1.30	130	0.94	760	0.77	1100	1.21	665	0.64	5025
Vietnam	750	0.69	750	0.65	750	0.76	680	0.75	550	0.53	3480
Others	1500	1.37	1000	0.87	500	0.51	350	0.38	304	0.29	3654

Table I: World Mulberry Raw Silk Production (Quantity in Tonnes)(Source: Silk industry in China)

Years	Mulberry	%to total	Tasar	%to total	Eri	%to total	Muga	%to total	Total
1999-00	13944	91.65	211	1.39	974	6.40	85	0.56	15214
2000-01	14432	91.01	237	1.49	1089	6.87	99	0.62	15857
2001-02	15842	91.30	249	1.44	1160	6.69	100	0.58	17351
2002-03	14617	89.57	284	1.74	1316	8.06	102	0.63	16319
2003-04	13970	88.74	315	2.00	1352	8.59	105	0.67	15742
2004-05	14620	88.61	322	1.95	1448	8.78	110	0.67	16500
2005-06	15445	89.25	308	1.78	1442	8.33	110	0.64	17305
2006-07	16525	89.45	350	1.89	1485	8.04	115	0.62	18475

Table II: Production of Raw Silk in India (in Metric Tonnes)(Source: CSB, Bangalore)

Kashmir in view of its favourable climatic conditions could be converted into Silkworm gene bank for sustaining the sericulture of the whole world"-Dr.Tazima. Jammu and Kashmir is the only state of the country which is in the same altitude in which leading bivoltine Sericulture countries of the world lie. Even the Sericulture experts of Japan have recognized the superiority of natural climatic conditions in the state favourable for the development of Sericulture and for the production high grade raw silk of international quality. Women play a dominant role in this sector, as the activities are mostly home-based. Women have been contributing to all the sectors of Sericulture starting from on-farm activities to fabric production, marketing and consumption. The involvement of women in different activities of Sericulture is well above 53 per cent (Gangopadhyay, 2008). In Kashmiri language the silk-fibre is known as 'pote' and the silkworm is the Patikeom (insects). Pote manufacturing in the Valley is an old industry.

**Sericulture involves the stages of:** (i) Rearing of Silk-worm,(ii) Collection of cocoons and their delivery for reeling purpose.(iii) Reeling of raw silk from the cocoons; and(iv) Availability of mulberry trees from which fresh leaves (the food of silkworms) can be obtained. Sericulture industry in Jammu & Kashmir State is of very old origin. The department of sericulture was created in the year 1889 under the monopolistic control of government to promote silk industry in the state. There are 2,800 villages and 33,000 households in which sericulture has become an important economic activity. Out of these, 1500 villages are situated in the Kashmir Division and the remaining 1300 villages in the Jammu Division. Presently about 25500 rural families generating income worth Rs.1100 lakhs annually & 1 lakh mandays in private reeling sector are associated with this profession (Dhar *et al.*, 2011). In the state there are about 7 lakh mulberry trees, out of which 53 per

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cent (370,000) are in Jammu Division and 47 per cent in Kashmir Division.

Year	Coccon Crop Production	Income Generation (Lacs)	Silk Worm Reares Population (No.S)
2006-2007	833	726	20263
2007-2008	803	500	20055
2008-2009	738	455.67	19700
2009-2010	810	800	22800
2010-2011	860	1100	25500
2011-2012	917	963	27000
2012-2013	901	1193	28000
2013-2014	1021	2026	29400
2014-2015	1055	-	31882

Table III: Year Wise Crop Performance (Directorate of Sericulture Development Department, J&K, Srinagar)

District	No. of Silk Worm Reares	Seed Distribution (Oz)	Cocoon crop exp. (MT)
Anantnag	1800	1756	80
Kulgam	650	610	28
Baramulla	1400	1200	56
Bandipora	700	613	29
Budgam	500	406	19
Kupwara	1600	1560	72
Pulwama	1400	1260	57
Shopian	500	450	20
Srinagar	280	270	12
Ganderbal	770	647	30
Total	9600	8772	403

Table IV: District wise Cocoon Production (Source: Directorate of Sericulture Development Department, J&K, Srinagar)

Indian sericulture sector is currently facing several problems which have restricted full utilisation of its potential. Some of the problems are: 1. Decline in the area under mulberry and fluctuations in its production. The reasons for these are: (i) Urbanisation in traditional silk producing states (ii) Fluctuations in prices (iii) Inflow of Chinese silk in Indian market (iv) Shortage of agricultural labourers (v) Absence of strict disease control measures (vi) Poor grading system of cocoons (vii) Lack of efforts to increase the area 2. Improper forward and backward linkages 3. High cost of production and low productivity 4. Prevalence of old technologies 5. Financial constraints 6. Marketing constraints. The other reasons i.e. lack of proper extension activities, abnormal conditions prevailing in the valley, illiteracy/ ignorance of the rearers and the watchers who actually have the interaction with the rearers, the unawareness of benefits of sericultural activities among farmers and the introduction of new avenues of income in the villages etc. are also responsible for the poor performance of the industry. Keeping these problems in view, proper marketing of silk can be one of the remedial measures. External branding can be a valuable action for promoting the silk industry while internal branding will emancipate the work force of the industry

## Review of Literature

Charsley in his book "Culture and sericulture" has discussed that wild silk Viz., Muga, Eri and Tasar were produced in India for a long time and no specific mention is ever made in Indian epics on mulberry silk. According to him these wild silks are certainly indigenous to India. Mookerjee N.G., the author of "Genesis of silk Worms" 1719, is the foremost contradicting the western opinion that China is the home of silk. Mookerjee maintains that domestication of silk worm "Bombyxmori" originated somewhere at the foothold of the Himalayas. The Aryans discovered the silk worm in the sub-Himalayas beyond Kashmir. Even though mulberry culture may have come to India from china, the references in the old scriptures point out that India had cultivated some kind of wild silks independently of China. The ancient scripture Rig Veda mentions "Urna" generally translated as land of silk. Another sacred law book "Manusmriti" refers to the "clothes made of silk" and the great ancient Indian epic "Mahabharata" as one of the array of luxury items brought to the courts of Pandavas after their conquest of the world, a garment having a border embroidered with pearls. It is certain that by the Mauryan period (4<sup>th</sup> to 2nd Century BC) there was considerable trade in silk. According to Basham, the famous historian few centuries later, India's "spinners and weavers could produce semi-transparent silks and muslins of extreme thinness which are clearly depicted in sculpture and which were much in demand in the Roman empire". Servius wrote in Vigil "Among the Indians are the Seres (Chinese) there are on the trees certain worms called Bombaycis that draw out very fine threads in the manner of spider and these threads constitute silk". Mirza Haider in his "Tarikh-i-Rashidi" refers to a large number of mulberry trees among the "wonders of Kashmir". Similar references are also found in the famous documents 'Aini- Akbari'. Kashmir shawls and woven silks were quite popular in the Emperor Akbar's court. (Dr.R.Anitha, 2011) has studied the performance of Indian silk industry in the global scenario, and analyzed the strengths and problems of Indian silk industry. It was suggested that the measures like the encouragement of additional technological and economic research in the various aspects of sericulture, standardization and quality control of silk and silk products, provision of quality seeds, imparting knowledge among the farmers regarding farm disease and rationalization of marketing and stabilization of prices of silk cocoons and raw silk, it could expand rapidly than ever before. (Kaneez Fatima, 2013) has made attempt to examine the performance of Jammu and Kashmir silk industry. The study has analysed the relationship between cocoon production and silk production and identified the factors responsible for poor performance of the industry. It was found that positive slopping trend line moving at the rate of 3.84 metric tons, reveals raising trend in Jammu Division, while as the negative slopping trend line moving at the rate of 0.13 metric tons, reveals declining trend in Kashmir Division. The raw silk is not to be produced according to the potential of cocoon production in the state as less

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than 30 percent of cocoon crop is consumed within the state, due to less number of reeling units existing in the state and the closure of Jammu and Kashmir Silk Factory Rambagh Srinagar. (Fayza Z, 2012) conducted a case study on the Human Resource Practices in a govt. silk factory and compared their practice to the Best Practice Model. This study revealed the importance of human resource practices in sick public sector undertaking of J&K. It showed that the Govt. silk factory adopts 4 of the 10 best practices: Providing a Safe, Healthy and Happy Workplace, Providing Performance linked Bonuses, Utilization of 360 Degree Performance Management Feedback System, and Utilization of a Fair Evaluation System for Employees, Highlighting performers and Employing Open house discussions and feedback mechanisms. The practices which are not carried out by the pharmacy include an Open book management style, knowledge sharing, reward ceremonies and surprising employees with unexpected rewards. (Tariq Ahmad Bhat, 2014) made an attempt to highlight the development of sericulture through public private partnership and trends of cocoon production in Jammu and Kashmir and to highlight the ways of income earning in the process of mulberry cultivation to silk weaving. It was suggested that PPP (Public Private Partnership) is one of the alternative solutions to promote the development through automation of the process of silk production and bring down the cost of raw silk. (Anna Katharina Kramer and et al, 2009) has worked on the assessment of the potential of silk production as a sustainable livelihood activity for rural households. The findings were that silk production can bring a significant additional income to the rural households while at the same time providing producers with skills and knowledge unique to the traditional silk production in the area. It was found that the biggest constraint of the silk producers is the difficulties of marketing their products, indicating current unsustainable economic conditions. It was suggested that stronger cooperation among producers could improve the ability to meet market demands. (Pankaj Roy, Rintu Sarkar, 2015) have investigated the rate of work participation between men and women in different age groups and earning from sericulture as a livelihood in the Alomtola village of Kaliachak-II Block of Malda District. It was found that the work participation rate in sericulture by male workers is 76.15% while the female workers is 84.51%. In case of income generation from sericulture production, most of the households earn Rs5,000- Rs15,000 in a particular season leading to an annual income of Rs20,000 to Rs60,000. (S.K. Dewangan, 2013) has investigated that how sericulture fulfill the opportunities of livelihood for tribal. The study finds that-Sericulture is the activity of low investment and high output. The study concludes with some suggestions to improve the long term feasibility of sericulture. The study suggested that the government should give them compensations for the losses incurred in this occupation due to diseases and the negative impact of natural, Provision of refresher training programme for the silkworm rearers, focusing

on use of new technology. (Chandrama Goswami, Manisha Bhattacharya, 2013) have made an attempt to determine the contribution of sericulture as an income source of women in the Goalpara district of Assam. The subsidiary objective was to determine the constraints associated with sericulture in the study area. It was found that sericulture can emerge as the most important opportunity in generating women's income in the study area. It is the least resource intensive activity, which also does not require high education. In fact, a very low investment leads to high returns. (Ramanna D. V, 1987) studied the growth potential of sericulture in Andhra Pradesh with reference to Rayalaseema region. The study brings out the analysis of economics of sericulture and its importance in terms of Income and employment generation. The study also focussed on global view of silk industry and its economic importance in the Indian economy. (Nanavathy Mahesh, 1990) A study on 'Silk Production Processing and Marketing' has presented complete profile of the sericulture and silk industry beginning with its obscure history and its global status through prevalent sericulture practices, post-cocoon processing, weaving, dyeing, printing and finishing to international marketing of silk including the growing demand for silk fabrics from middle class in the industrialised nations. (Shekar Prabha and Francis Sinha, 1992) have made an exploratory study on 'Raw silk Market in India' and analysed the qualitative and quantitative demand for silk yarn from the main silk weaving centers in the country. The study analysed in detail the area wise reputation for different yarns from traditional regions of Karnataka *i.e.*, Sidlaghatta filature raw silk and Kollegal charka raw silk. The significant finding of this study is that within a changing market, characterised by increasing role of power looms and emerging consumer demand for non traditional plain and coarse fabrics there has been a decline in the demand for charka silk. The share of charka silk in domestic production has fallen from 55 percent in mid 80's to around 37.5 percent during 1990- 91. (Gopal Naik and Babu K.R, 1993) estimated the demand and supply of high quality raw silk in India for the year 1993 and projected the demand and supply for the year 1995. The study points out to the need for high quality silk and the factors influencing quality of raw silk, the need to upgrade techniques and machineries used in reeling. It also made a quantitative estimate of imported high quality silk which is illegally sold in the domestic market. The study suggested various policy alternatives to bridge the gap between demand and supply for high quality raw silk in India. (Siddappaji. D, Latha C. M, Ashoka S R, Dr. M. G .Basava Raja, 2014) have analyzed the socio- economic development through sericulture sector in the world and in India. This paper has focused on socio-economic development, employment generation, and sericulture sector activities in the state. It was found that sericulture creates a self employment in Karnataka. More than 60 percent of people engaged in own activities in sericulture. (Dr. Bashanta Mangal Dutta, Mr. Biren Saikia, 2013).The objective of this paper was to

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determine the cost and return of Muga rearing to judge the potentiality of the industry in rural development in compared to other major activities performed by the sample households. It was found that the earning of Muga rearing in the study area is remunerative compare to other crop in the study area and the study suggest to develop the silk industry as an instrument of rural development. (Venkata Narasaiah P, 1992) studied the various aspects of sericulture in detail in the district of Anantapur in Andhra Pradesh. The study addressed to the aspects of inadequacies in production, finance and marketing practices and problems of sericulture in Andhra Pradesh. The study has examined the cost and net returns from sericulture in Anantapur. It has reviewed the efficacy of government schemes in promotion of sericulture in Anantapur. (DR. R. Jayavel, 2013) has worked on the blow of textile industry on member weavers of silk handloom co-operative societies in Kanchipuram District. The study has examined the change in status and pattern of employment of weaver communities engaged in handloom weaving in Kanchipuram. The study has reviewed the prevailing employment status and working condition of the weavers particularly member weavers in silk handloom co-operative societies in context with their social and economic benefits and security. The study suggests effective strategies to enhance their socio-economic status and quality of life through necessary provision of better facilities, welfare support and improved means of livelihood. (Tawheed yousuf, Ishfaq khan, 2013) analysed the socio-economic profile and the problems of silk weavers in Srinagar city, trying to offer possible recommendations to address the grey areas. The study results revealed that the situation of the weavers was worrying: they were feeble due to illiteracy, financial constraints, health problems, meagre remuneration and poor Government support. It was concluded that the Silk weavers in Srinagar, mainly those who have inherited this occupation, are in a pitiable condition owing to the poor socio- economic conditions. It was suggested that Kashmir silk products should be publicized and exposed through advertisement, exhibition, displays and trade fairs, to showcase the variegated silk made ups in co-operatives, allied institutions and showrooms. (Bandana Mahan, 2012) has made an attempt to introduce the silk industry of Assam and its relation to the tourism sector. Problems related to the production, spinning, weaving, selling and focusing of the products, economic upliftment, modernization of the products, government and other organization efforts in this connection have been also mentioned in the study. It was concluded that the traditional silk industry can be metamorphosed into modern industry. (Fayza Chowdhary ,2012) made an empirical study to find out the opinion of the employees of Jammu & Kashmir Industries Ltd, J&K for declaring it as a sick industry. She studied employees views about the most important reason for Jammu & Kashmir Industries Ltd, J&K becoming sick. She concluded that every reason given by the employee is responsible for declaring Jammu & Kashmir Industries

Ltd. as sick industry. It was found that financial reasons are the most important reason considered by the respondents of industrial sickness and another chief reason for the sickness of the industry is the managerial inability i.e. not able to cope up with the dynamism occurring in the modern day markets. The other factors which influence the sickness in the industry are Marketing problems and the corporate planning problems. It was suggested that the EDIs of the state should actively participate in training of the employees of sick units periodically. The development corporations, financial institutions should make efforts in alarming the units becoming sick. (Mithun Chandra Roy, 2013) made an attempt to bring awareness among the weavers inclined in this sector, various prospects of this sector, the various govt. policies, to linkup all the people of this sector with textile industry of the world through E-Commerce and aware them about the various scope of E-Commerce and its importance to survive and compete with other business sectors. (A. Arulprakash, 2013) has worked on understanding the silk retailing business, to get an insight of the silk retail sector in Tamil Nadu, to understand the purchasing behaviour of silk retailing owners. The findings were that the retailers select employees who have experience, basic education, conversation skills and good reference whereas in semi-urban area employees are selected from the surrounding areas and from poor families to give them a living. The salary of salesmen gets in urban areas ranges from 5500-7500 plus some allowances, whereas in a semi urban area it ranges from 3500-4500 plus allowances. In most shops 70 % of the salesperson is female. It was suggested that retailers should know the preference and taste of customers, to add more products to the product line other than silks to attract customers, and to build good relationship with the customers

## Rationale

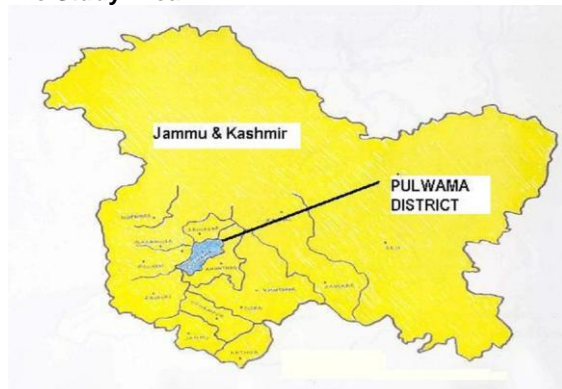
Sericulture has played an eminent role in boosting the economy of Jammu & Kashmir and this sector has been the backbone of Kashmir economy in particular. J&K is the only state which produces the best quality bivoltine silk which is regarded as one of the finest fabric in the world. In 1940s, the precious silk yarn produced in Kashmir was exported to entire Europe. In 1980s the cocoon production in Kashmir had reached more than 15 lakh kilograms. But then the time changed for the worse for the Kashmir silk industry. The cocoon production dropped to 60,000 kgs in late 90s. The sensitive industry of Silk has suffered severe setbacks. As against 1800- 2000 farmers who were associated with sericulture in every district three decades back, only 350- 400 farmers are presently rearing silk worms in each district. In fact, in the past five decades, the silk production of the state has dwindled by fifty percent which means that on an average every year we have been losing 1% of silk production. As per different estimates and reports, the silk cocoon production in Kashmir was merely 8.32 lakh kilograms in 2009 and in 2013-2014, it was 10.21 lakhs as compared to 15 Lakhs in 1960. Although it has shown an increasing trend but still the

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performance is not that remarkable as the productivity. So there is a need to focus on the revival of Silk industry as sericulture sector is one of the biggest contributor towards J&K economy. As the organizations have to operate in rapidly changing environment which requires radical changes just to ensure its sustainable survival thus, performance of the organization depends largely on the customers as well as on the employees. Today's organizations be it commercial, educational or health related need to have competitive advantage over the other for which they require huge investments in R & D, technologies over and above the highly skilled and highly qualified employees to attract more and more customers. And if this critical resource is groomed, nourished and empowered, the more it will yield rich dividends. The more the customers and employees are satisfied, the more benefit accrue to the very fabric of society as a whole. Therefore the focus of my study will be "Revival of Silk Industry through external and internal branding". External branding will be helpful in promoting the silk industry while as internal branding helps to emancipate and empower the work force of the industry. Following are some of the objectives of present research:

1. To evaluate the status of silk industry in Kashmir.
2. To identify the areas where the rural populations have been directed to adopt sericulture practices for their livelihood.
3. To identify the factors that have caused decline in silk industry in general.
4. To analyse the issues and concerns of various stakeholders in Kashmir sericulture industry.
5. To identify the efforts made by various stakeholders for the growth and development of Sericulture.
6. To evaluate the effect of branding on revival of Silk industry.
7. To suggest measures that will provide guidelines to promote silk production in the State.

## The Study Area



Pulwama district came into existence in July 1979. It is situated in the southeastern part of the valley. It shares its borders with Srinagar and Budgam in the northwest and is bounded by the Anantnag district in the south and east. The geographical area of the district is 1,398 sq. km. Agriculture is the main source of livelihood in the district. Mushroom cultivation and horticulture are of great importance to

the economy. Livestock rearing is also an important occupation. According to the 2011 census Pulwama district had a population of 570,060, roughly equal to the nation of Solomon Islands or the US state of Wyoming. This gives it a ranking of 535th in India (out of a total of 640). The district has a population density of 598 inhabitants per square kilometre (1,550/sq mi). Its population growth rate over the decade 2001-2011 was 29.18%. Pulwama has a sex ratio of 913 females for every 1000 males, lower than the national average of 940, and a literacy rate of 65%, slightly higher than the national average of 64.3%. The male and female literacy were 74.36 and 51.80 respectively. Total literate in Pulwama District were 293,958 of which male and female were 178,326 and 115,632 respectively. Pulwama District Urban Population 2011: Out of the total Pulwama population for 2011 census, 14.36 percent lives in urban regions of district. In total 80,462 people lives in urban areas of which males are 44,968 and females are 35,494. Sex Ratio in urban region of Pulwama district is 789 as per 2011 census data. Similarly child sex ratio in Pulwama district was 860 in 2011 census. Child population (0-6) in urban region was 13,776 of which males and females were 7,406 and 6,370. This child population figure of Pulwama district is 16.47 % of total urban population. Average literacy rate in Pulwama district as per census 2011 is 73.15 % of which males and females are 82.79 % and 60.71 % literates respectively. In actual number 48,779 people are literate in urban region of which males and females are 31,097 and 17,682 respectively. Pulwama District Rural Population 2011: As per 2011 census, 85.64 % population of Pulwama districts lives in rural areas of villages. The total Pulwama district population living in rural areas is 479,978 of which males and females are 248,096 and 231,882 respectively. In rural areas of Pulwama district, sex ratio is 935 females per 1000 males. If child sex ratio data of Pulwama district is considered, figure is 824 girls per 1000 boys. Child population in the age 0-6 is 83,598 in rural areas of which males were 45,828 and females were 37,770. The child population comprises 18.47 % of total rural population of Pulwama district. Literacy rate in rural areas of Pulwama district is 61.85 % as per census data 2011. Gender wise, male and female literacy stood at 72.79 and 50.46 percent respectively. In total, 245,179 people were literate of which males and females were 147,229 and 97,950 respectively.

## Sericulture at A Glance In District Pulwama

Sericulture is an age old industry of the state and serves as a subsidiary occupation of the poor farmers. The industry helps a large section of rural population especially land less, economically backward and far flung areas in their economic strengthening. District Pulwama comprises of four sericulture zones viz Pulwama, Tral, Pampore and Kakapora. At present in the District Pulwama there are 1165 rearing families involved with the industry. Sericulture Department helps in the development of Sericulture in the District by involving more families with this subsidiary occupation to improve their economic conditions. The sericulture is practiced in the

district Pulwama from times immemorial due to its traditional nature. In Pulwama, the department is having 12 nurseries spread over an area of 890 Kanals with annual out turn of 80,000 plants for distribution in the field. In this district there are 11 mulberry blocks over an area of 580 Kanals with 26230 mulberry plants existing serve as leaf reservoir for silk worm rearing families. About 1273 families in district Pulwama are directly associated with silk worm rearing, thereby earning their livelihood and during the year 2013-2014, 47.80 MT's of silk cocoons were produced by silk worm reares for which they have earned 113 lakhs registering 68% increase over last year income generation.

The major activities of District are as under:

1. Plantation and propagation of Mulberry wealth.
2. Silk worm Rearing and production of silk cocoons.

### Plantation and Propagation of Mulberry Wealth

Since the mulberry leaf is the only feed for silk worms, so propagation of mulberry is the basic requirement of the industry. In District Pulwama, there are 12 number of mulberry nurseries spread over an area of 890 Kanals of land where from about 0.60 to 0.70 thousands mulberry saplings are raised yearly. Efforts of the department are on to produce 100% exotic varieties of mulberry plants in the said nurseries. During 2012-13 about 0.80 lacs of mulberry have been planted in the District Pulwama under different field plantation programmes. In addition to this an area of 590 Kanals is under cluster Planatation which serves as leaf reserves where from mulberry leaf is distributed free of cost among the needy silk worm reares of the District. Silk worm Rearing and production of silk cocoons.: this is the 2<sup>nd</sup> major activity of the department in the District Pulwama

### Conclusion

Jammu and Kashmir produces the best quality bivoltine Mulberry silk in the country, mainly because of the conducive climatic conditions. Due to its longer length, better strength and shine Kashmir reeled silk has its luster and is famous throughout the world. The length of the fibre makes the product more durable than short length fibre. But the sericulture industry in North India, unlike south, has a typical problem of being subsidiary occupation due to its competition with cash rich agricultural crops; as such activity is confined to economically backward class of farmers. Silkworm rearers are scattered, in different pockets, all over the state. So there is an immense potential for the development of this agro-industry in Jammu and Kashmir State, offers tremendous scope for the cultivation of mulberry and the development of good quality raw silk, as well as opportunity to uplift the status of economically poor in the rural Kashmir in particular. Some of the suggestions for the Sericulture industry are as: First and foremost, we must understand the importance of silk and sericulture and must bring awareness about the same among the various stakeholders of the sector to make it reach to the heights of succes

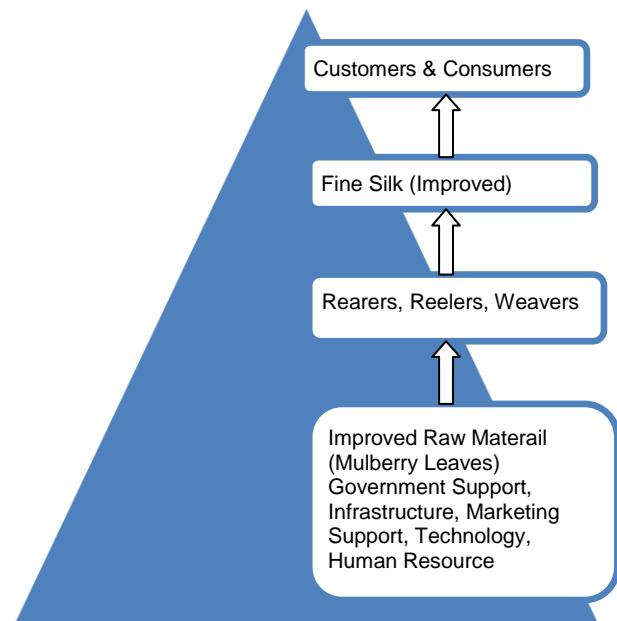


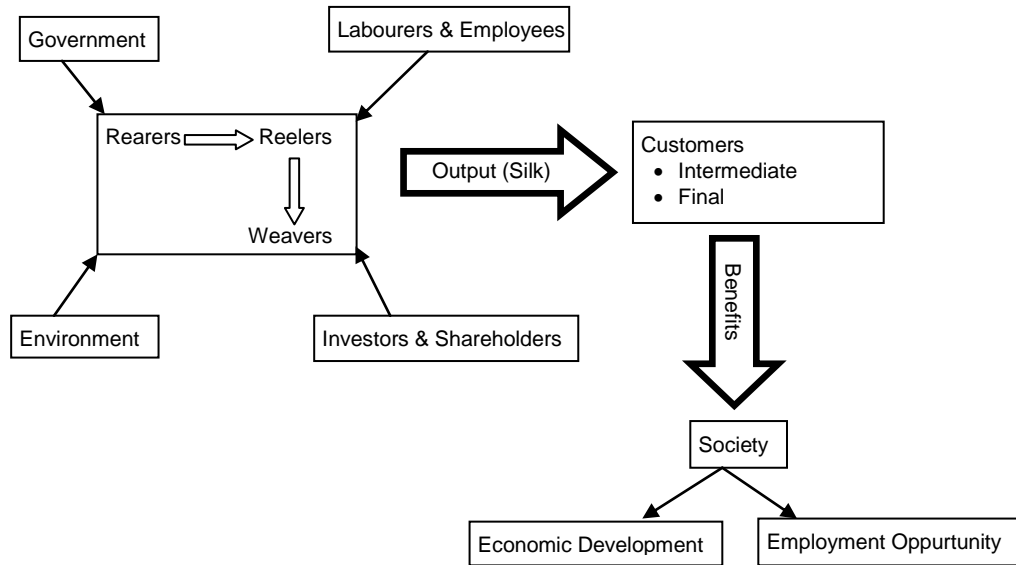
Figure I: Pyramid Of Silk Value Chain

Taking into account the importance of sericulture, cultivation of mulberry which being the sole food for the Silkworms is mostly in the scattered form of plantation with the Rearers, thereby affecting the quality of the Mulberry leaf. Establishment of "Chawki gardens" should be a priority as good young age worms leads to a better crop which will lead to the overall improvement of the sector. Unutilized government lands should be used for the cultivation purposes in order to increase the crop. Infrastructure for sericulture should be developed. Latest technologies, knowledge, training and grooming the human resources should be setup for both development of sericulture and silk industry both by the State Govt as well as the Central Silk Board. Less knowledge and lack of awareness among Rearers are some of the grave issues confronted by this sector. As the Training institutes are very far from their villages so, Training camps and workshops should be organised to create the awareness among the Rearers. Post cocoon sector also be involved in the training of the Rearers for better outputs. Sericulture provides ample work for the women folk. During the year, 4962 Women Rearers have been covered under Health Insurance Scheme, under Catalytic Development Programme. The rural women should be informed about the benefits and schemes so that women at home can easily adapt this occupation. More and more auction markets should be established. During 2012-2013, Cocoon Auction Market at Rajouri and other Cocoon Auction Market at Anantnag (2013-2014) have been established. More emphasis should be made on this so that the sericulture farmers may conveniently dispose off their produce. Markets should be conducted within one month of Rearing so that the quality of cocoons is maintained. Cocoon Hot Air Dryers have to be established to provide drying of Cocoons facility to the

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Rearers. This facility will help in conducting of Green Cocoon Auction Market for timely disposal of the Cocoon Crop. Enterprises should be started in the sericulture sector. Industrialization and Government support can help in this way. More and more youth should be encouraged by giving them necessary facilities and incentives as the young educated generation does not give so much interest in this sector. The entrepreneur training institutes should be stressed by the Govt to include more and more job oriented courses related to the Sericulture Sector

which can help in improving the Silk production as well as to curb the problem of unemployment to some extent. Silk carpets of Kashmir and hand knitted carpets are famous all over the world. They are the favourites of Europeans and Americans. The need of an hour is to rebuild the image of these carpets in the minds of the customers, both tourists and the locals so that it can help us to tap the untapped national and international markets. This can only be achieved by the Support of Govt to the Reelers and by restoring the glory and dignity of the Govt Silk Factory Rajbagh



**Figure II: Model for Silk Industry Revival**

Saying “Silk is Silk only” should be popularized among the wearers as silk is the natural fibre and it is eco friendly as the cocoon production does not affect the environment as compared to the other fibers. To attract more and more customers, modernization and innovations of the designs and silk products can be an option for high sales. We can also promote the Kashmiri Silk through expanding the product line; silk scarves, sarees, stoles, shawls, cushion covers, bed sheets and window curtains etc. We can promote the silk products through e-commerce, social networking sites. A web page can also be developed which can be dedicated for instantly solving the problems of the Rearers. Exhibitions cum sales should be organised so that more locals and tourists gets attracted towards the silk products as the publicity is very low in the state. It is also necessary to create an increased awareness among the consumers about different varieties of silks produced exclusively in Kashmir, different aspects of natural & eco friendly silks primarily produced by the small farmers.

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