

**Situational Analysis of Women Workers in Sericulture:
A Study of Current Trends and Prospects in West Bengal**

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Introduction

Women workers constitute one third of the world labour force performing nearly two thirds of aggregate working hours but their contributory role in vital productive work-share remains still invisible. It is estimated that India is home of 12.7 crores of working women while 90 per cent of them are working in the unorganized sector. Specifically they are found in marginal and casual employment in agriculture, where the gender-bias wage differential is substantial. In India, women are also concentrated in agro-based household activities, where they often serve as unpaid family labour and thereby remain imperceptible. Sericulture is one of such activities where most of the works are carried out by women alone, both in terms of operations performed and time invested. Thus in a way, they contribute a significant role in different spectrum of work-activities as well as in decision-making. While in general perception, women's role is mostly confined in silkworm rearing, in reality it goes beyond. Leaving the shackles of gender-stereotyping, women in sericulture often take part in mulberry planting, weeding, manuring, irrigating, leaf picking, leaf transporting and storage. In silkworm rearing, they are engaged in leaf-cutting, feeding, bed cleaning, worm spacing, mounting, harvesting and disinfections. Some also participate in decision-making.

Usha Rani (2007) in one of her studies showed that the establishment of one acre mulberry garden for rearing 300 dfls (disease free layings) of silk worms in two months generates 96.36 man days of employment, of which 72.70 percent are women. Not only this, she has also shown that cocoon cutting and sexing and egg incubation is exclusively done by women labour. According to one statistical analysis submitted at a National Conference on "Women in Sericulture" (held at Mysore on 16th and 17th March, 2007), it can generate employment up to 11 persons of every kg of raw silk produced, out of which more than 6 persons are women. In India, more than 60 lakh persons are employed as full time workers in the production chain out of which 35-40 lakh persons are women. Ever-increasing demand to meet the domestic handloom industry requirements and equally increasing potentials for exports provide tremendous opportunity for the women to avail sustainable income generating activities.

The dominance of women workers in sericulture is historically evolved. Despite showing tenacity and persistence, their efforts remained unnoticed and they continued to work as unpaid family workers. In recent years the role of women received increasing importance. The specific operations she performs as well as the magnitude of her production contribution have started being perceived more recently.

The year 1994 had been declared as the 'Year of Women in Sericulture'. Through this special campaign, "women in sericulture" was brought on to the center stage of sericulture development. Later on, the developmental schemes conceived by Central Silk Board, India advocates greater thrust on women empowerment, promotion, awareness generation and support services. The concept of gender budgeting introduced by the Government of India during Tenth Plan also led the Central Silk Board of the country to assess the adequateness of the allocation of resources for women and ensure that the gender commitment coupled with budgetary commitments are translated into achievements. The Eleventh Five Year Plan made a separate "women development component" mainly to address the social security concern of women associated with the silk industry.

In this paper we make a modest attempt to portray a brief picture of the state of women workers in sericulture sector and investigate the explanatory factors, among others, behind the female dominance of any sericulture farm. Apart from economic situation of the farms, wage differential across gender, hired-domestic female ratios, there exist several other factors which influence the female dominance criteria. Whether this dominance can be translated into distributive impact, we should need to know the explanatory factors behind these female dominant farms. This paper would try to shed some light into that region from the primary survey analysis.

I. Reasons for dominance of women workers in sericulture

Sericulture is practiced in villages of India as a family-based occupation and thereby provides women a major role to play with, in various activities of this household-industry. Nearly 60% of the labour requirement is met by the women in almost all the traditional sericulture agencies in the world. Women's precision and patience make their presence more invincible in silk- worm handling. Since, traditions and customs of society in Indian rural context do not encourage the majority of rural women to work outdoors, sericulture proves to be a boon. It gives a wide opportunity where women can carry all their contributory work

even after attending to their own regular household chores. Thus, sericulture is ideally suited for family women in the rural areas.

Farm women have certain unique attributes, which are of special relevance to sericulture development and that these characteristics make the female dominance in sericulture indispensable:

- (i) A farm woman is the sheet anchor of the farm family. She is the foremost member who is concerned all the time about the well being of the family. So when women dominance is seen in any activity that has to be turned out to be a successful one. Poverty in rural India is another key feature that makes the women from lower class more intensive and serious to the work and this also enhances their productivity.
- (ii) Women are proved to be an efficient home-maker from the time immemorial. So whether as an artisan or a household industrial worker, she is supposed to give her best as it is involved with her family. Sericulture is such farm enterprises that have a great share of indoor components and demand enough tenacity and sufficient attention. Thus female dominances in sericulture become quite natural.
- (iii) According to the analysts, women have proven themselves to be better learners. They are easily adaptable which is important for a dynamic world where better sericulture technologies are about to pay better dividends.

II. Major Objectives of Study

Census statistics or NSS surveys do not specifically cover the participation rate of women worker in sericulture. Therefore our perspective analysis would be based on few pilot surveys done by various researchers in different course of time in different corners of the country. All of them individually as well as in aggregate sense helped us to portray a gendered overview of sericulture. Along with that literature support we would add few results of our own primary survey done on two gram panchayats, namely Sujapur and Gayeshbari, in Kaliyachak Block of Malda district in West Bengal.

There exists a causal relation between “women participation in sericulture” and ‘incidence of poverty’. It is seen more than often that in lower strata women get involved in work due to dire necessity. Therefore this ‘pressing need’ acts as a driving force for women-workers in participatory role. Ultimately that becomes a tool of exploitation to the employers and services of poor women workers become subject to distress sale

However, unemployment – poverty link which has been noted for men in developing countries, is not so direct and evident for women. Many women are fully employed and still remain poor in absolute terms and adding to their work load does not necessarily improve their material condition. Work participation often creates double burden upon women whose household obligations still have to be fulfilled.

However, involvement of female workers in productive workforces and wage earning activities always work as an accelerator of social transformation. Dominance of female workers is always expected to exert a positive influence on all development indicators including health and education.

III. Impact of female dominance in sericulture

Women workforce in India has never been truly recognised as substantially significant work force in any productive activity. Macro statistics of women employment always understate the number of women workers in the rural areas. But the actual fact is that without these active (but invisible) role played by the farm-women, it would have been impossible to practice sericulture in India. Moreover, the impact of female dominance in sericulture on the perspective of poverty stricken rural mass is also enormous. Here we wish to categories those positive impacts of women participation within our limited scope of analysis.

With the increasing rate of participation in work force, women also become a decision-making agent. She can actively participate in decision-making activity without being a passive respondent. Thus the income generated by the rural women can be utilized more judiciously for the socio- economic development of the family. Moreover, in the report of the Working Group on “Empowerment of Women for XI Plan” (2006), it was emphasized that empowerment of women has two fold benefits:

- (a) *Intrinsic Benefit:* A woman is gaining the benefit for sake of herself by joining in family workforce, other than household activity. It raises her self dignity and self esteem. Her purchasing power and decision making power also rises.
- (b) *Spillover benefit:* Involvement of women workers also raises the welfare of her family members. Education level rises, nutrition level rises and thus the spillover effect helps in a holistic development of all the household members of her family.

Thus the spillover benefits from women-empowerment can broadly be categorized into following major heads:

- Rise in education level of children
- Rise in Nutrition level of family
- Rise in Health Awareness (specially among the girl child)
- Rise in the level of social resilience power against different social crimes like dowry, domestic violence, social abuse, illegal trafficking etc.

A study conducted by CARE (2009) on rural India reveals that economic empowerment via micro finance plan projects of women raises 125% of expenditure on education of their children and now they spend at least more than 43% on health care of their children. Micro surveys conducted by Ray (Ramesha & Sinha, 2009) also supported that women gaining employment from silk-sericulture always take care of their families more than before. They are able to ensure better education for their children on one hand and help their husbands in running their occupation side by side.

(i) Previous research activities indicate that economic participation of women – their presence in the work force in quantitative terms – is important not only for lowering the disproportionate levels of poverty among women, but also a significant step forward raising household income and encouraging economic development of the society as a whole.

ii) Through application of science and technology appropriate to the socio-economic condition of rural areas, rural women can be made economically self-dependent. There exists a preconceived notion that women do not want to learn new skills and techniques because they are seemed to be engaged only in primary household activities. This age-old belief acts as a bias against their inherent capability of adaptation. This notional bias itself contains some inbuilt contradiction and needs to be modified. Sericulture is such a family based occupation where the women can work along with their family responsibilities.

iii) Empowerment of women always makes a match between economic opportunities and their capabilities. Most of the time due to lack of concern, economic opportunities are lagging behind the capabilities of women in different social sectors. Increased women's participation and earning have not only helped them to raise their self-esteem, but also it has helped in reduction of poverty and accelerating growth. It also has a favourable impact on education and health outcomes of children.

For working women in lower income groups, it is particularly difficult to find outside labour to substitute for household based tasks, which, therefore tend to devolve upon young girls and aged women within the household or to put further pressure on the work load of the women workers themselves. According to Elson (Ghosh, 2004), it is wrong to assume that unpaid tasks of women would continue regardless of the way resources and incomes are collected. Therefore, “gender neutral” economic policies need to be formulated and stereotyping of gender division of labour needs to be changed.

IV. Involvement of women workers in sericulture: an expository analysis

In India four major states traditionally involved with mulberry silk production are (i) Karnataka , (ii) Andhra Pradesh, (iii) West Bengal and (iv) Tamil Nadu. Due to the absence of secondary data regarding women work force involvement in sericulture sector, we would analyze women work force involved in all those states as proxy variable, as sericulture is supposed to be a women-labour intensive industry. However, participatory role of women worker in sericulture is mostly confined within their domestic territories and thus constitute a part of the informal and un-organized sector. Female participation rate in four traditional states across the yeas are as follows:-

Table 1: RURAL FEMALE WORK PARTICIPATION

India & States	1971	1981	1991	2001
All India	15.8	23.5	22.25	25.68
Andhra Pradesh	31.9	44.9	34.32	34.93
Karnataka	19.0	30.8	29.39	31.88
Tamil Nadu	20.4	34.5	29.89	31.32
<u>West Bengal</u>	<u>4.6</u>	<u>9.4</u>	<u>11.25</u>	<u>18.08</u>

Source: Census of India 1981, 1991, 2001

Except, West Bengal all three states revealed their prominence as well as growth in work participation rate of women workers. Within West Bengal, Malda, Murshidabad, Bankura and Coachbehar districts are only prominent districts for sericulture, silk production and silk weaving. Murshidabad is famous for silk weaving, where female participation in household industry is 64.7% followed by Malda (37.17%). Malda is the leading district in silk

production and holds a golden legacy since the time of Mughal period. Women participation as agricultural and marginal worker in the district is 31% and 53.5% according to 2001 census.

A study by Rajapurohit and Gobinda (1981), in contrast, revealed a completely different picture of female labour work participation ratio in Bihar, West Bengal and Karnataka in raw silk production, while female employment (at over 58 percent) appeared to be the highest in West Bengal.

Table 2: Female Labour Ratios in Raw Silk Production

States	Female/ Male Labour Ratio
Bihar	0.14
West Bengal	1.42
Karnataka	1.15

Source: Raja Purohit et. al. (1981)

Sericulture creates the highest job opportunities compared to other principle crops. Not only that, in terms of women employment opportunities it creates greater man days from one acre land compared to other food crops, where a substantial percent of workforce is drawn from own family source. Therefore, Sericulture is often called as one such vocation where the family-females can be utilized at a higher scale. Usually, the work participation of female rural labour is mostly obstructed by their domestic obligation; in this context, sericulture can break the barriers faced by women from participating as workers while continuing their household activities.

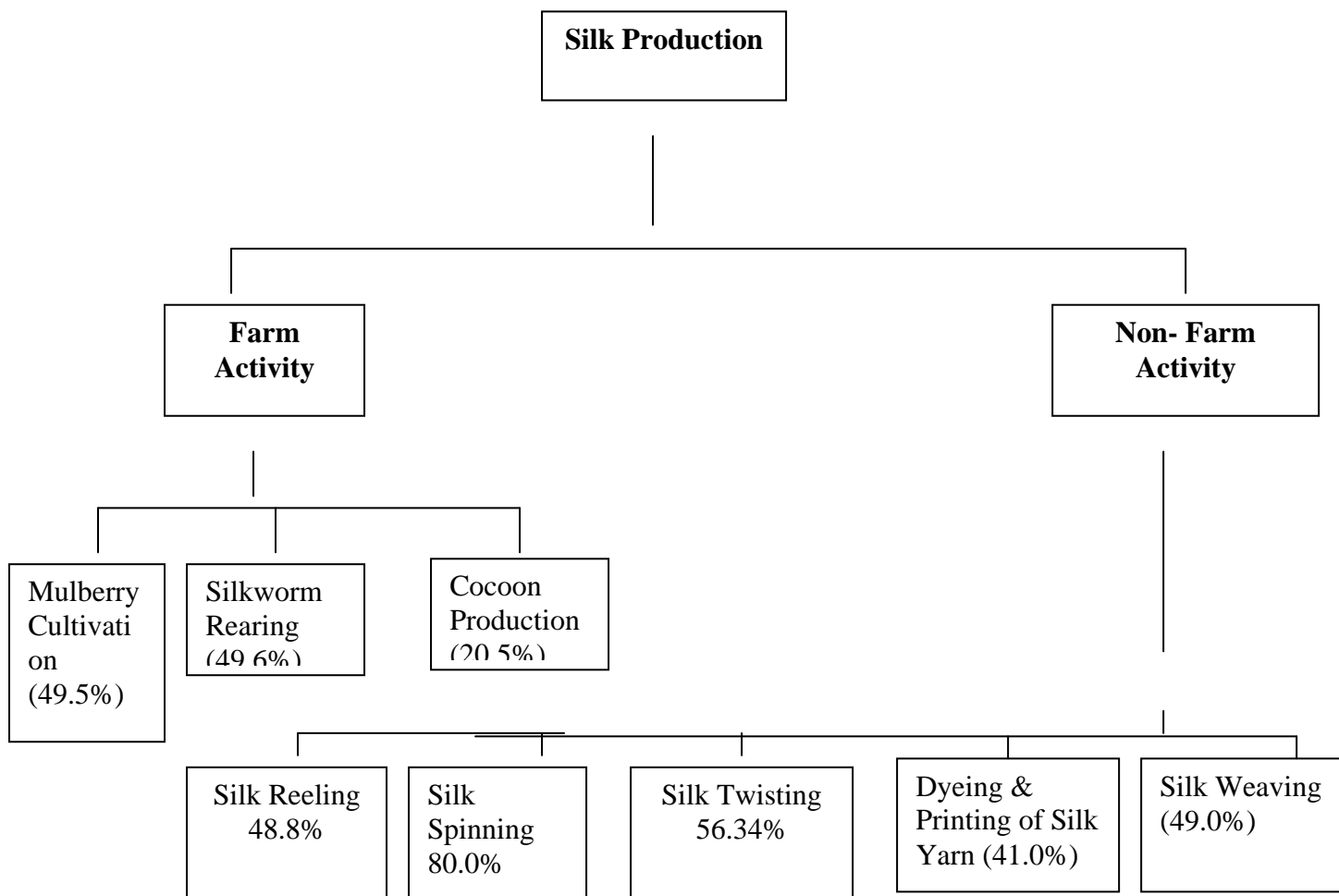
Few pilot surveys and literature review have helped us to reach at the conclusion that women worker participation is nearly 50 percent in mulberry cultivation, silkworm-rearing, silk worm reeling and silk weaving, while it is 80 percent in case of silk spinning.

The chart furnished in the following page (Page 9) provides a schematic representation of involvement of women in various stages of silk production.

Involvement of women is higher in all activities of sericulture except in field preparation of mulberry; cocoon cutting, sexing and egg incubation are done exclusively by women labourers. Weeding, transport of mulberry-leaves (which is food of silk worm) to the rearing sheds and rearing worms are the important activities where woman involvement is also

higher and these activities usually create employment of 11.18, 10.75 and 7.13 man days, respectively, per acre of mulberry crops. Feeding of worms and planting of mulberry creates employment of 6.93 man days and 6.49 man days per acre crop to the women. Transfer of worm to *chandrikas*, cocoon sorting, leaf harvesting, chopping and other important activities that create employment of 6.01, 4.51 and 3.7 man-days respectively to the worm. Preparation of field for growing mulberry creates an employment of 7.81 man-days of which 5.13 man-days are for men and 2.69 are for women. This is the only activity where employment of men exceeds women.

Women Involvement in Silk Production



V. Involvement of women workers across variable scales of farms

Sericulture provides both the family female labour (who belong to mostly middle class) and hired female labour (who are drawn from lower class families) a wide opportunity of

employment. Middle class female labour always bears a greater domestic burden. They do not suffer from acute poverty and thereby can never join the hired labour force as done by female worker belonging to lower economic classes. Therefore we can say employment opportunities of hired labour is much larger than the middle class housewives of sericulture families. So, Charsley (1976) pointed out that silkworm rearing represents a suitable domestic activity for the women folk of the middle class sericulture families, who would not be expected to work outside home.

Table 3: Women Labor Involvement in Sericulture (Per acre of mulberry crop)

Operation	Male Labour (man days)	Female Labour (man days)	% of Female Labour Involvement
Field Preparation	5.13	2.69	34.4
Planting	4.09	6.49	62.0
Fertilizer Application	1.76	2.95	62.6
Weeding	3.08	11.2	78.3
Harvesting & Chopping	1.73	3.7	68.1
Transport (mulberry leaves)	2.15	10.8	83.7
Cocoon Sorting of seed	0.16	2.11	97.6
Cocoon Cutting and sexing	0	1	100
Egg Incubation	0	1	100
Rearing	1.78	7.13	80.0
Brushing	0.17	1.93	91.9
Feeding	3	6.93	69.7
Transport to Chandrikas	1.45	6.01	80.5
Cocoon Sorting	1.57	4.51	74.2
Mounting & Cooking	0.35	1.67	82.7
Total	26.3	70.1	72.7

Source: Usha Rani, Journal of Social Science 14(3), 249-255, 2007

Theorists of women studies state that economic empowerment can truly create an emancipating environment for the women, because it always helps the women to participate in all the decision making processes regarding household. Family labour in that case can be assumed as the second best option vis-a-vis wage labour, because monetary transaction remains invisible in case of family labour payment. In case of hired female labour, though there exists huge exploitation and wage discrimination, the laborers are often paid either in cash or kind. Thus regarding the question of emancipation, lower class females become more successful in raising their intra family power balance. This can also help them to reduce the intra class power differential across scales.

Charsley (1976) said that both mulberry cultivation and silk worm rearing employ household labour, but the latter provides respectable, domestic occupation for ladies of the upper agricultural classes.

Again in the activities like reeling and weaving, scale of business varies widely. When a poor man operates a single simple machine using his family labour (i.e. his wife). the female labour gets attached with an artisan belonging to lower economic class. This particular woman attached to her small scale family firm is devoid of much opportunities and freedom. On the other hand, a wealthy businessman running 1500 or more complex machines employs hired labour from local communities, who are generally poor and of low traditional status. The women workers attached with this rich business class artisan enjoy access to greater economic opportunity and, thereby, enjoy greater spirit of freedom.

Amartya Sen(1999) has opined that Indian society wants to see women less as passive recipients of help and more as dynamic promoters of social transformation, which is only possible through greater ways of emancipation. For this their self esteem has to be raised at much higher level. Empowerment of women should, therefore, be viewed as a catalytic element of social transformation.

A few case studies were done by M. Ray, MD of MASUTA, (Ramesha & Sinha, 2009) in the interiors of Jharkhand where he found different women, suffering from different degrees of misfortunes, ultimately sensed a feeling of satisfaction after being empowered in silk. There was, for instance, a case of widow with small child. She was sent back to her mother's place and provided with only a house to live in and left on her own to earn livelihood and take care of education of her child. She decided to do silk-artisan work. With the amount of

income she has generated, she did not only pay her son's tuition fees, but also purchased 4 kottahs of land. Thus her employment gave her enough self esteem and confidence, which again transformed into spillover benefits.

VI. Women in sericulture and health issues

Sericulture is, however, alleged to have various adverse effects on health; in other words, there are occupational hazards associated with sericulture. Women suffer from giddiness, burning of eyes, backache, fatigue, and other related problems. As a result, they are desperately looking for health insurance in sericulture.

Reeling sector, where mostly women are employed, is one of the areas where the health problem is very intense. The major occupational health problems observed in this sector are asthma, infection, blisters on hand and burning of eyes. In seed production centers, due to high concentration of silk moth scales, dust and acid fumes, the workers are suffering from asthma, cough, dyspnoea, skin allergy, abdomen pain etc. But other disciplines like host plant cultivation, silkworm rearing etc. are relatively free from occupational health problems.

Most of the health problems affect women more because of their greater involvement and the regular health related issues in the family also make them more vulnerable both physically and financially. Central Silk Board in association with respective State Sericulture Departments launched Health Insurance Programme for women beneficiaries to address the health related issues in this sector.

VII. Women empowerment : a vehicle of poverty eradication

It has been widely recognized in the Working Group's Report of XIth Plan that a pro-woman growth is the most effective route to poverty alleviation. The concept of gender budgeting had already been introduced by the Government of India in X Plan. The Central Silk Board has adopted gender budgeting to assess the adequateness of the allocation of resources for women in sericulture. Experts in this field opined that government should ensure its gender commitments and, accordingly, provide relevant budgetary support so that commitments can then be translated into achievements.

In rural India poverty becomes a natural phenomenon due to irregular monsoon. Frequent draught results into crop failures and that, in turn, increases the debt burden of the farmers to

such an extent that even big farmers have been driven below the poverty line. Agriculture itself fails to support such a high population in our country on full time basis. In such a situation sericulture is one such activity, where women carry most of the activities alone. In drought prone areas, where there is no scope of non-agricultural employment generation, sericulture proved to be an enterprise that has the potential to eradicate poverty through creation of employment opportunity for women.

Devaki Jain (2007) in exploring the gendered policy through her experience on Karnataka based activities, stated that women need to become economic and political agents instead of passive recipients of special ladder and safety nets. This she calls a “bubbling up model”. Jain (2007) illustrated her points with examples from her work in Karnataka. To demonstrate the gender bias information, she uses the examples of poverty and sericulture programmes in Karnataka. Poverty programmes were based on data that did not adequately capture the extent of women’s work or the double burden they faced in working home and at outside. Therefore, special studies and surveys were conducted to map gender inequalities within home and extent of women’s work outside. This led to change in policy where programmes were modified to allow for direct targeting of women.

Rural women work participation is always assumed as a function of poverty, landlessness and few other non-economic factors (Nayyar, 1987). Women belonging to landless, marginal and small agricultural families are forced to seek employment. Thus poverty is considered to be a single most important factor of female participation. Landlessness is often synonymous with poverty and hence the line of argument is that greater poverty induces greater female participation in productive work.

Hence, we can infer that higher participation in sericulture is also considered as an indicative phenomenon that poverty is acute in Indian status. We have already analyzed in the previous section that there lies a class differential among participating women in sericulture. However, the percentage of household women involvement also rises along with hired women. This confirms that sericulture not only augments welfare of impoverished section of people but it also works in gender promoting activity in rural India.

VIII. Gender bias in wage differential

Discriminatory practices in the labour market of rural India are reflected in the wages of women workers. The increase in gender disparity in wages is quite marked in India throughout the planning period. For majority of women engaged in paid activity, the fact being female means being paid less than men for same work. It is most evident in the cases of agricultural labourers. Agricultural daily wages are, in general, low, though they vary by type of agricultural operations (ploughing, sowing, weeding, harvesting etc), by the typical nature of state and, most importantly, by gender. Some operations, like ploughing, do not involve women at all, whereas others such as weeding are women-intensive activity. In Andhra Pradesh (second largest sericulture state), the wage rates for weeding are Rs 43.00 for men and Rs.37.00 for women and wage rates for harvesting are Rs. 42.00 for men and Rs.37.00 for women.

All the previous analyses bear the testimony that if men and women perform the same function, men will be paid at a much higher rate. For India, as a whole for each of the farm operations, the male wage rate is higher than the female one. Despite the fact that the wage rate for workers is lower, employers prefer to hire male workers due to pre-determined socio-cultural prejudices.

Each state has a Minimum Wage Legislation, whereby wages are statutorily fixed. However, in the early 1970s, after much deliberation, some state governments deliberately fixed differential wage rates for men & women and two prominent silk producing states Tamil Nadu and Andhra Pradesh were two of these states. By 1980-81, the differentials seemed to have narrowed down, though the change was perhaps not the real one because despite a huge call for equal remuneration across gender, women are still less paid than their male counterpart. Sericulture and silk involves both agricultural and household industrial work. We have talked about the plight of the women in agricultural sector. In HHI sector women are exploited by intermediaries and middlemen who provide raw materials, machineries and market the final product, but pay the women very small amount.

IX. Women empowerment in sericulture and globalization

Globalization has dramatically changed the socio-economic conditions of an economy in such a way that rural women workers in the unorganized sector have become more vulnerable to job loss and impoverishment. Globalization has generated opportunities for the local producers and entrepreneurs to derive the advantages of open market, but on the other hand,

it has intensified existing inequalities and insecurities among poor woman. Since the gains of globalization are supposed to be concentrated in the hands of those with higher education in urban-centric area, poor rural women remain outside the periphery of distributed gains generated from trade.

One argument which is often forwarded in favour of globalization and trade liberalization is that it brought higher rates of employment in developing countries as the locus of manufacturing has shifted from North (i.e., developed country) to South (i.e., developing country) and that within developing countries women have emerged as winners. However this assertion is under serious criticism, which we will try to resolve in this section.

The tidal flow of free trade and open market mechanism make the domestic silk industry more vulnerable as the cheaper Chinese silk, both in raw silk and silk yarn, is being dumped in the domestic market. In order to grip the world market, China undercut its own price. Chinese price is already globally competitive due to economies of scale. Therefore, in the face of stiff competition, Indian silk farms have started closing down its silk operation and women are losing jobs at larger scale. In West Bengal, many such sericulture-farms have shown protest against the imported cheaper variety of Chinese silk.

A large part of the job destruction has taken place in those sericulture sectors and, as a result, large numbers of women have adversely been affected. Macro-level gender based disaggregated data are not available to validate the job losses in the sericulture sector. Thousands of silk spinners and twisters of Bihar have lost their employment due to the import of China-Korea silk yarn. Weavers and consumers prefer this yarn as it is somewhat cheaper and also with a shine. Trade liberalization has created this loss of employment without creation of new employment.

However, along with this adverse effect, there exists positive impact of trade liberalization. Indian women labour, being cheaper, can make the product of silk industry more competitive. So globalization has not only liberated those women force from their stereotyped household activity but also from their highly restricted cultural context. Women labour intensive export strategy helps the export oriented units of the silk sectors to manoeuvre their product utilizing the low cost advantage of women labour. Low wages and low value addition of the female labour can keep the export prices low and weaken terms of trade, but it happens only at the cost of gender inequalities in wage payment. This advantage is often known as *perverse advantage* by the trade theorists.

According to Sen, Gita (1999), these “perverse advantages” can reinforce structural inequalities in global trade between South and North. She suggested a transition policy from the so called “low-road” (based on cheap labour) to the “high road” (based on increasing worker’s productivity of labour) combined with better policy co-ordination at the global level to avoid the “fallacy of composition”. According to her, this would result when a large number of countries pursue a similar strategy.

According to one study report by Jhaval & Sinha (2002), many transnational corporations are subcontracting work with small factories and with household workers. The women are barely earning Rs. 500 per month, whereas the minimum wage is Rs.1500 per month, while a worker in a private sector doing the same work is earning Rs. 3000 per month. Some times female workers are paid on piece-meal basis. Their poverty compels them to compromise with any kind of economic exploitation. Therefore trade fails to act as an engine of growth for these poverty stricken working women classes.

X. Women worker in sericulture: a case study of two GPs of Malda district

In order to have a grass root level understanding of the gender issues in sericulture sector, a primary survey was done in two Gram Panchayats of Kaliachak Block (Malda), which is prominent for concentration of artisans in sericulture. A list of questions was asked to all respondents randomly chosen from these two GPs. Feedback received from the respondents helped us to construct few tables and carry forward our analysis in the desired direction. Our basic objective was to make a situational analysis of women workers in Malda. Female dominance in household farm can be the chief objective for accelerating the gender promoting role of sericulture and the influencing factors can be summarized as follows:

- (i) Wage differential between male and female (WD_MF): Lower the wage differential between male and female, higher is the chance of female dominance in household farms. So the difference between male and female wage is expected to exert an negative influence on gender dominance of the sericulture farms.
- (ii) Ratio between hired female workers to domestic female workers (HF_DF) : A general hypothesis is that as the ratio of domestic female worker rises, hired workers also rises and that combined effect would have a positive impact on female dominance in sericulture- farm. We will examine whether this hypothesis is true based on our primary survey.

(iii) Economic situation (income): Economic situation of a farm may also influence the female dominance of the farm. Richer farms can afford to employ costly male labours instead of its cheaper female substitute. Whether richer farms are affected by Veblen effect and may prefer costly male labour as better productive labour is subject to queries. Therefore, economic situation of a farm can be expected to exert a negative influence on female dominance status of the farm.

With the limited data available from primary survey, an attempt has been made to identify the statistically significant factors behind the extent of female dominance in sericulture farms. For this purpose we have worked with four variables: HFDF (hired female to domestic female in farm), WD (absolute wage differential between male and female workers), income of the sericulture dependent household and, finally, ratio of female to male workers (FM) in a farm. In order to test the extent of female dominance in sericulture, we have taken FM as the dependent variable. To be more precise, we have first taken dependent dummy variable approach where we have defined female dominance as a situation of FM exceeding a value “1”. Accordingly, we put a value 1 in all those cases where FM exceeds “1” and the dependent variable takes a value 0 otherwise. The econometric results of our Logit model exercise are furnished below.

Logit Model					
Maximum Likelihood Estimates					
			FEMDOM		
			ONE		
			60		
			5		
			-35.55119		
			-40.75160		
			10.40081		
			3		
			.1544909E-01		
+-----+					
+-----+					
Variable	Coefficient	Standard Error	b/St.Er.	P[Z >z]	Mean of X
+-----+					
Characteristics in numerator of Prob[Y = 1]					
Constant	-.3369505426	.79067011	-.426	.6700	
WD_MF	-.3228225091E-02	.30046000E-02	-1.074	.2826	7.6000000
HF_DF	1.366452108	.57604097	2.372	.0177	.73750000
INCOME	-.7267331810E-04	.45048639E-04	-1.613	.1067	14264.333

From the econometric analysis based on our small sample survey we may only deduce some sort of relation between proportions of hired female to domestic female involvement in the production activity and female dominance in sericulture farm. It needs to be recalled that we have defined female dominance as a situation when value of FM is equal to or greater than

“1”; in fact a value of “1” may be taken as a case of absolute gender parity. Better results may be obtained if one tests the logit model under alternative definitions of female dominance: by, say, taking FM a value in higher degrees [due to space constraint we have not attempted to do that here].

We have also attempted to investigate issue using simple linear regression using the ordinary OLS technique. After testing a number of alternative relations, we may report only the following two equations:

$$\begin{aligned} \text{FM} &= 1.756 - 0.0000416 (\text{Income}) \\ &\quad (5.737) \quad (-2.169) \\ R^2 &= 0.075; \text{DW} = 1.695 \end{aligned}$$

and

$$\begin{aligned} \text{HFDF} &= 0.554 + 0.007929 (\text{WD}) \\ &\quad (6.297) \quad (3.364) \\ R^2 &= 0.166; \text{DW} = 1.405 \end{aligned}$$

The poor or abysmally low values of R^2 point out that the factors or variables that have been assumed to be important determinants actually account for only a small variation. We also note that as income of sericulture household increases, the ratio of female to male employment in the farm declines; in other words, income has a negative impact on the extent of female dominance in sericulture. This result seems to be paradoxical as it interprets that with the increase in income, the household may afford not to engage its women folk in productive activities and/or potential women workers in the family do not feel the pressing need to take up employment. But this was what Charsley(1976) pointed out and Nayyar (1987) also reiterated. On the other hand, as wage differential increases, ratio of hired female to domestic female employment increases. The underlying logic may be like this: as wage differential increases, female labour becomes relatively cheaper and this may induce the sericulture dependent household to substitute in favour of hired female workers instead of relying more on domestic women workers. Thus poorer the sericulture farms more it becomes female dominant. Therefore a policy in favour of female dominant farm can also help the society to combat with poverty. However, one must be extremely cautious in interpreting and accepting the results. We may possibly assert, given the nature of the regression results, that the extent of female participation or dominance in sericulture cannot properly be understood unless one takes into account or is able to identify more factors that lie behind the dynamics of the sericulture sector. And, this, therefore, calls for more in-depth study and data collection which we intend to take up in a later exercise.

Conclusion

Sericulture is ideally suited for land and labour abundant economy like India, not only because it is low capital intensive but also because it is female labour intensive. Gender promotion and thereby social transformation along with poverty eradication is another major feature of this particular sector. Higher percentage of female labour can raise the gender dominance of the sericulture farms and gender dominance is associated with low income farms. Again through the direct effect and spill over effect of the female dominated farms the positive impact can be distributed in the society. Therefore, holistic level of development is possible via gender promotion only. Situational analysis of women workers in this sector gives us the scope to review the actual condition of the working women in sericulture. Gender discrimination against women worker in wage payment has to be legally banned. More incentive scheme (like concession in taxation etc.) should be provided to the employer in order to raise the involvement of women worker in sericulture farms. Women workers intensive sericulture also needs some primary institutional support and initiatives so that sole-women household members can survive. However, there always exists a major gap between policy resolution and policy implementation. Therefore restructuring the process of implementation is also urgently required at a time. Then only the existence of the invisible, unrecognized and unremunerated women workers can be prominent. Drastic change in mind set is also required while implementing equal wage payment and ensuring female dominance in farms. Socio-economic policies have to be remobilized in such a way so that at all activity level of sericulture, voice of working women can be clearly heard of.

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