

Study No. 128

**ECONOMICS OF COMMERCIAL SILK WEAVERS OF  
ASSAM : A STUDY IN SILK VILLAGE SUALKUCHI  
IN KAMRUP DISTRICT**



**Dr. (Mrs.) Bharati Gogoi**

**AGRO-ECONOMIC RESEARCH CENTRE FOR  
NORTH-EAST INDIA  
ASSAM AGRICULTURAL UNIVERSITY  
JORHAT - 785013, ASSAM  
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AUGUST, 2008



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## PREFACE

*The present study on "Economics of Commercial Silk Weavers of Assam : A Study in Silk Village Sualkuchi in Kamrup District" has been undertaken by the Centre at the instance of Directorate of Economics & Statistics, Ministry of Agriculture, Government of India. This is an individual study with regional importance proposed by the Centre and approved by the Ministry.*

*Silk weaving was once a household affair in Assam. Now a days it is a sustainable farm-based economic enterprise positively favouring the rural poor in the unorganized sector. Rearing of Mulberry, Muga and Eri silk worms has been playing an important role in the economic development of a large section of rural population of the State. Oak Tasar silk production in Assam is of recent origin. The State has produced all four varieties of silk clothes. However, the present study is confined to only Mulberry and Muga silk weavers of Sualkuchi which is the centre of the silk weaving of the State. The annual gross income (value of total produces) of sample households from silk clothes production in the year 2007 was Rs. 13,17,71,811.12 of which 56.00% came from Mulberry clothes and the rest 44.00% were contributed by Muga clothes. The average income per sample household was over thirteen lakh per annum. Total costs of production of silk clothes of sample households were Rs.93927609.21. Out of the total cost of production, 39.12 % were spent on wages of labour, 38.18 % were incurred on purchasing raw materials, 20.90 % on accessories etc. and rest 1.80 % on managerial cost. Silk clothes weaving of the sample households is an economically viable enterprise as the Benefit Cost Ratio was found at 1.40. Category-wise BCR of Pat clothes production of the sample households was 1.51, where as BCR of Muga clothes production was 1.29.*

*There is vast scope for development of silk clothes weaving of Sualkuchi in particular and the State as a whole. Some sincere coordinated and comprehensive efforts of Handloom Development Agencies by ways of providing necessary marketing outlets and other infrastructure can increase both quality and quantity of silk clothes production of the area manifold.*

*At the initial stage of the study the State Government Officials of the Department of Sericulture and the Department of Handloom & Textiles are consulted to collect secondary level information related to the study. I am thankful to all of them for their help and cooperation.*

*I am grateful to Mrs. Minoti Sarma, Sericulture Extension Officer, Sualkuchi for her kind cooperation during field survey of the study.*

*I would also like to express my gratefulness to the sample weaver households for their spontaneous help and cooperation to the research team by providing the field data.*

*Like all other studies, this one is also a joint product of the Centre. The report is prepared by Dr. (Mrs.) Bharati Gogoi. Names of other members associated with the study have been mentioned elsewhere in the report. Mr. Jotin Bordoloi has extended his valuable help and guidance in some points of Tabulation works and Mr. Debojit Borah has assisted Mr. Nabajit Deka in presenting graphs and photographs in the report. I am thankful to all of them.*

*I hope the report will be of immense help for researchers, traders, weavers and other Govt. agencies related to clothing and textiles for development of sericulture sector.*

*August, 2008*

*K.C.Talukdar  
Hony. Director,  
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# **Economics of Commercial Silk Weavers of Assam: A Study in Silk Village Sualkuchi in Kamrup District**

## **CHAPTER – I**

### **Introduction:**

The techniques of natural silk fibre production that sericulture deals with are outcomes of an agro based industry which combines agriculture with industry and play the role of one of the high profitable alternatives of crop cultivation in the rural economy of India. The word 'Sericulture' comes from the Greek '*sericos*' meaning silk and English '*culture*' meaning rearing. Historically, sericulture was introduced for the first time into China by Hoshomin, the queen of China. For a long time, sericulture was considered to be a national secret by the Chinese Government and as an industry it was not known in other countries. Later it was introduced into England, Japan and India. At present there are many countries in the world where sericulture is practised. China is the largest producer and exporter of raw silk of the world. India ranks the second largest producer accounting for nearly 16 per cent of World's raw silk production. Erstwhile USSR, Japan, Italy and France are other major developed countries producing raw silk, while among the developing countries, South Korea, Brazil and Thailand are the other major raw silk producing countries of the World.

Silk fibre is made of the protein secreted from the silk glands of silk worms. It is a high value but low volume commodity. Qualities such as natural sheen, inherent affinity for dyes and vibrant colours, high absorbance, light weight, resilience and excellent drape make silk the preferred choice of the rich and famous all over the world. Silk signifies luxury, elegance, class and above all comfort for women. Four major varieties of silk worms are reared for producing this natural fibre; they are; '*Bombyx*



*mori*, '*Antherea assama*', '*Antherea mylitta*' and '*Phylosomia ricini*'. Recently, '*Antherea royeli*' & '*Antherea pernyi*' are also adopted. Silk worms feed on varieties of food plants and create cocoons as a protective shell to sustain life. They have four stages in their life cycle: egg, caterpillar, pupa and moth. In sericulture, human interfere in the life cycle at the second stage to obtain silk, a long filament of commercial importance, used for weaving the 'dream fabric'. '*Bombyx mori*', the silk worm feeds on the leaves of '*Morus*' to produce the best quality of fibre among different varieties of silk produced in the country. '*Antherea assama*' is exclusively reared in Brahmaputra Valley of India only. It produces the famous muga silk of Assam. Tasar (Tussah) silk is a product of '*Antherea mylitta*' which feeds on *Terminalia tomentosa*. It is the tropical tasar silk worm. The recent introduction of '*Antherea royeli*' and '*Antherea Perniyi*' has enable the country to produce the temperate tasar popularly known as Oak Tasar silk. '*Phylosomia ricini*', the Eri silk worm feeds on '*Ricinus communis*' (KrishiworlD, 2008).

In other words, there are four major types of silk worms, namely, Mulberry, Tasar, Muga and Eri. Mulberry silk worms feed on *mulberry* leaves. Tasar silk worms feed on leaves of several plants like *Terminalia*, *Shorea*, *Logerstroemia*, *Cargya*, *Dalbergia* and *Oaks*, Muga silk worms feed on *Som*, *Sualu* and *Dighloty* and Eri silk worms feed on *Caster*, *Keseru*, *Borkeseru* and *Topioca*. Among all the silk worms, Mulberry and Eri silk worms are domesticated. Mulberry silk worms are most widely reared which contribute as much as 90 per cent to the World production of natural silk. The mulberry silk worms are identified as of Japanese, Chinese, European and Indian origin (FAO, 1976) and are classified as univoltine, bivoltine and multivoltine depending upon the number of generations they produce in a year under natural conditions. Univoltines and Bivoltines are also referred to temperate races, producing one and two generations respectively in a year. The eggs of these races undergo dormancy during winter months. The diapose of the eggs can be broken by acid treatment which helps to take several crops of univoltine or bivoltine in a year (Nair and Babu, 1993). Multivoltine races produce several generations in a year and adopted to tropical regions. However,

among all races of silk worms, only univoltine and bivoltine silk worms produce good quality silks.

The silk worms are also classified as pure strains and as hybrids which may be either monohybrid or polyhybrid depending upon the number of strains involved. In India an attempt to evolve a suitable race for both temperate and tropical climatic conditions, Cross breeds (cross between univoltines and bivoltines races) have been developed and in fact these cross breeds have replaced the traditional multivoltine races to the extent of 95 per cent. In recent years cross multivoltine and bivoltine hybrids are also successfully evolved and adopted in India. The adoptability of these hybrids to varying climatic conditions and their higher yields compared to traditional multivoltine breeds have attracted many cocoon producers throughout the country. Although the quality of silk produced from such hybrids is not at par with the pure bivoltine silk, it is superior to the silk produced from traditional multivoltine cocoons. Bivoltine hybrids are also evolved and adopted successfully in tropical climate. These hybrids can produce 40 to 45 kg. cocoon 100 dfl (disease free laying) as against the national average of 35kg./100 dfl having a silk content of 20 to 22 per cent and filament length of 1,000 to 1,500 metres and renditta of 9. Renditta is number of kg. of cocoon required to produce one kg of silk. (Naik and Babu, 1993). In other countries, mostly bivoltine silk worms are reared to produce silk fibre.

The Indian silk industry has a unique distinction of producing all four major types of silk. Mulberry silk is produced throughout the country from Kashmir to Kerala and Gujarat to West Bengal, while Tasar silk is produced in large scale by Orissa, Bihar, Madhya Pradesh and Uttar Pradesh. Muga and Eri Silk are produced in North-Eastern States only.

Out of total production of raw silk in India, 88 per cent is produced by the mulberry silk worms '*Bombyx mori*'. Among all the mulberry silk producing states of India, the state of Karnataka is the highest producer contributing about 85 per cent of country's total mulberry production by rearing multivoltine hybrid silk worms which enables the Sericulturists of the state to harvest five to six crops a year. Jammu and



Kashmir owing to its salubrious climate during autumn and spring is producing silk by rearing univoltine silk worms. Other states, namely, Andhra Pradesh, Assam, Tamilnadu, Uttar Pradesh, Himachal Pradesh and Punjab contribute roughly 1.8 per cent of total mulberry silk production of the country. Tasar silk worms are traditionally reared by the tribal people of Madhya Pradesh, Bihar, Orissa and Uttar Pradesh. The recent rearing of '*Antherea roylei*' & '*Antherea pernyi*' has enabled the country to produce the Oak tasar silk in the sub-Himalayan belt and in Manipur. Oak tasar is introduced in Assam in 1972. Muga silk worm is reared exclusively in Assam. Assam also produces as much as 90 per cent of Eri silk in the country.

In India sericulture used to be a subsidiary occupation in rural areas. Of late, recent technological development in the form of cross-breed silk worm races, improved mulberry cultivation and improved processing facilities of cocoons has made it a rewarding alternative to practice sericulture on an intensive scale as it generates more profit than competing agricultural crops. Growth of sericulture sector in the country encourages the hand loom industry to a great extent. Though the natural silk fibre accounted for only 0.2 per cent of the total World textile fibre production, the high demand and remunerative prices of silk cloths always dominate the World textile market for their exotic beauty and durability. It is reported that every 3.07 kg. of silk produced and the same used in hand looms generates gainful employment of one man year.

Silk provides impetus to the village economy. According to the estimates of Sericulture Department, about 57 per cent of the gross value of silk fabrics goes back to mulberry cocoon growers. Some 6.8 per cent goes to the reeler, 9.1 per cent to the twister, 10.7 per cent to the weaver and 16.6 per cent to trade. Thus, a large part of the income goes back to the village (Comp. Review, May, 2007).

In 2003-04, total production of raw silk in the country was 15,742 M.T of which 13,970 M.T. (88 %) was mulberry silk and non-mulberry silk accounted for 1,772 M.T comprising Eri 8.6 %,Tasar 2.0 % and Muga 0.7 %. The annual requirement of raw silk in India is 24,000 MT. The rest of the requirement is fulfilled by the imports from China. Sericulture provides gainful occupation to more than five million people in the



rural and semi-urban areas in India. Among the total work force of sericulture, a sizable number belongs to women folk from economically weaker and backward classes of the society. The low capital requirement and age old hereditary knowledge about the trade encourages even the semi-skilled ones to go for silk culture. Particulars of sericulture scenario relating to area, production and employment status of Mulberry Silk of the country are presented in Table 1.1.

**Table 1.1**

**Area, Production and Employment Status of Mulberry Silk of India**

Sl. No	Particulars	2003-04	2004-05 (Anticipated)
1.	Standing Area Under Mulberry (Lakh Ha.)	1.85	1.85
2.	Production of Raw Silk (Metric Tons)	15,742	17,380
3.	Employment (Lakh People)	56.50	58.00

Source: Directorate General of Commercial Intelligence & Statistics, Kolkata.

Total export earnings of the country from silk textiles as reported by Foreign Trade Statistics of India (Principal Commodities and Countries) DG C I & S, Kolkata during 2003-04 was U S \$545.21 million which was 4.04 per cent to the total textiles export of the country. It is raised to U S \$594.56 million (4.24 per cent to total exports) 04-05 and U S \$ 691.83 (4.05 per cent) in 2005-06. But, during the year 2005-06 and 2006-06(P) upto April-August, it is observed that the volume of export of silk textiles as well as volume of total textiles exports showed declining trend in the country.

Details of silk export earnings of the country during 2002-03, 2003-04 & 2004-05 are shown in Table 1.2.

**Table 1.2**  
**Export Earnings from Silk Items**

Sl. No.	Items of Export	(Rs. in crores)		
		2002-03	2003-04*	2004-05* (April-Nov.)
1.	Natural Silk Yarn, Fabrics & Made-ups	1,654.96	1,698.66	1,158.28
2.	Readymade Garments	527.20	751.07	503.64
3.	Silk Carpets	96.13	121.63	55.95
4.	Silk Waste	15.76	5.16	0.97
	<b>Total</b>	<b>2,294.05</b>	<b>2,576.52</b>	<b>1,716.83</b>

\* Provisional Figures are subject to change.

Source: Directorate General of Commercial Intelligence & Statistics, Kolkata.

Sericulture in India continues to be a traditional and labour intensive venture. The process of globalization has spurred commodity producers including the silk farmers to take a supply chain for their produces especially if it involved value addition for the end customer. To boost the acceptability of the Indian silk products in both domestic and international markets, the Silk Mark Organization of India (SMOI), a body sponsored by the Central Silk Board under the Ministry of Textiles has launched the symbol that will help to identify pure silk products.

Assam has a glorious cultural tradition in handloom weaving. Weaving as a handicraft, occupies such an important place in Assamese society that both culture and economics are interlinked. Until the beginning of the present century the whole of the cloth requirements of every Assamese family were secured from the family handloom ( Goswami,1988 ). Now, the scene has changed totally in urban areas. Mill made cloths are gradually replaced the home made products. However, in spite of easy availability of mill made cloths and high price of silk cloths, still today traditional silk attires are used in ceremonies specially in marriage ceremony. It is customary to wear silk bridal dress comprising of three pieces of silk cloths known as *Mekhela*, *Chadar* and *Riha* with matching silk blouse by the bride and silk *Dhoti Panjabi* by the bridegroom .In general, silk cloths are treated as the ceremonial dresses of Assamese people.

The handloom industry of Assam is basically silk oriented. Development and expansion of silk industry in the state are outcome of mainly three factors:

- (i) The salubrious climate of Assam is suitable for sericigenous flora and fauna needed for silk yarn production,
- (ii) Age-old knowledge among the people about silk yarn production and silk weaving,
- (iii) The Central and the State Governments' continuous efforts and assistances to promote silk industry of the state.

All four varieties of silk worms and their host-plants of Mulberry, Muga, Oak Tasar and Eri are popular and important for economic as well as commercial purposes in the state. Assam occupies an unique position being only place of rearing the famous *Muga silk* in the world. Although the state is enriched with all four varieties of silk products, the present study is confined to only mulberry and muga silks weavers of Sualkuchi which is the centre of the silk weaving of the state. Sualkuchi is better known as the *Silk Village of Assam*.

#### Objectives:

The study is designed with the following objectives:

- (i) to study the social and economic status of commercial weaver families in the society;
- (ii) to study the sources of collection of Muga and Mulberry silk yarn/cocoon;
- (iii) to study the cost and return of per unit of cloth produced by weaver families;
- (iv) to study the marketing system, marketing channels and marketing costs of the finished products;
- (v) to identify the problems faced by the weavers families;
- (vi) to suggest policy implications.



**Methodology of the Study :**

The study was confined to Pat (Mulberry) and Muga commercial weavers. The silk weavers dominated area of Sualkushi was purposively selected for the study. A list of weavers having Muga and Pat looms with their numbers was collected from the concerned area. The List was further stratified on the basis of number of looms possessed by each family as : Up to five looms, Five to ten looms, Ten to twenty looms, Twenty to thirty looms, Thirty to forty looms and Forty & above looms. One hundred weaver households were drawn randomly as samples of the study with the help of ratio proportionate technique from each stratum.

In order to study the marketing channels of finished products of Muga and Pat Silks, 3 (three) wholesalers were purposively selected from the Sualkuchi market on the criteria of having retailers under them in 3 (three) different city/towns, viz; Guwahati city, Pathsala town and Jorhat town. As such, the first wholesaler was selected who has business link (retailers) with Guwahati, the second wholesaler was selected who has business link with Pathsala and the third wholesaler was selected on the basis of his business link with Jorhat town. In the next stage, 3 (three) retailers under each wholesaler located in the selected city/towns were contacted and interviewed to collect the required data on marketing channels and price spread. Altogether 9 (nine) retailers i.e.; 3 (three) retailers from Guwahati, 3 (three) retailers from Pathsala and 3 (three) retailers from Jorhat were selected as samples for the study.

Three different sets of schedules and questionnaires were specially structured, one set for each group of sample, i.e., Weaver Households, Wholesalers and Retailers and canvassed respective schedules to collect the primary data from the selected samples. Relevant information from all secondary sources were collected and utilized in the study.

**Reference Year :**

The study relates to the year 2006-2007.

## CHAPTER – II

### Silk Culture in Assam

#### History of Silk Culture:

Silk culture in Assam is believed to be originated in the Vedic age, as there are references of rearing of silk worms by the Assamese people for production of various silk cloths even in the age of 'Ramayan'. Such references are also found in the Kautilya's 'Arthasastra'. In 'Kishkindha Kanda' of 'Ramayan', while mentioning name of the countries located in the east, it was written as 'Magadha' (South Bihar), 'Anga' (Bhagalpur), 'Pundra' (North Bengal) and 'the country of cocoon rearers' which must be Assam. In ancient days, Assam was known as Kamrupa. Kautilya in the 'Arthasashtra' referred to a place known as 'Suvarnakudya' in the eastern part of India. Kautilya stated that the best type of 'dukula' was from 'Suvarnakudya'. This was red as the sun, soft as the surface of a gem and woven while the threads were very wet and of mixed uniform textile. The 'dukula' was nothing else than Muga of Assam which is even today woven by wetting the yarn in the weft. There are also other evidences confirming 'dukula' as Muga silk and 'Suvarnakudya' as in ancient Kamrupa. Kautilya also referred to varieties of fibrous garments known as 'patrorna' and remarks, "the one which is produced in the country of Suvarnakudya is the best" (Sharma, 1961) This place has been identified as 'Sarkurhiah' which was a village in Kamrupa. The varieties of silk cloths mentioned in the 'Arthasashtra' as 'ksauma', 'duluka' and 'patrorna' fabrics were the produces of 'Suvarnakudya' of Kamrupa (Chowdhury 1959). It was reiterated by K.L. Baruah, a prominent historian of Assam that 'Survarnakudya' was an important

commercial centre for silk trading of Assam in ancient times. There are ample evidences of patronizing the development of sericulture by the ancient kings of Assam.

In '*Harsacharit*', it has been stated that the king *Kumar Bhaskar Varman* of *Kamrupa* (594-650 A.D.) sent some presents of silk '*abhoga*', the most important variety of silk textile in the shape of silk parasol umbrella, wrapped in '*dukula*' cloth to the *Maurya* Emperor *Harshavardhan* (Chetia ,2006). Ancient history of Assam states that as early as the 7<sup>th</sup> Century , the great king *Kumar Bhaskar Varman* of *Kamrupa* presented a valuable Muga wrapper of golden colour to Chinese traveler *Hiuen Tsang* as a mark of respect. It too has the reference that the same king also honoured Emperor *Harshvardhana* with presentation of an Assam silk cloth known to be the finest quality cloth ever produced at that time .

The *Ahom* king *Swargadeo Pratap Singha* (1603- 1641 AD) under the able supervision of *Mamai Tamuly Borbaruah*, his Chief of the Army Staff, made spinning and weaving a compulsory cottage handicraft which also included silk culture. The long reign of *Ahom Dynesty* for more than 700 years (1228-1919 A.D.) in Assam made the handloom industry reached the pinnacle of glory. Under the patronage of the kings and officials during the *Ahom* rule, *Guna* (gold and silver thread), *Eri*, *Muga*, *Pat* and weaving culture flourised. The *Ahom* women, irrespective of high and low social status , were experts in weaving, reeling and design making ( Mohan, 1989 ). *Ahom Rajas* kept skilled silk weavers to supply the royal wardrobe with cloths and it was found that during the reign of *Swargadeo Puranda Singha*, one silk weaver *Madhuram Tanti* excelled all over the other weavers and was, for his services to the royal family, granted rent-free land by the king (Semon,1897). There are also references such as, "it is likely that the art of sericulture, weaving etc., was introduced into Assam at an early period by the pre-Aryans ,Bodos , Kacharies and allied tribes. Weaving has probably come to Assam from China. Along with it, came *Pat* and *Muga* silk culture. Coloured yarn and '*Kingkhap*'(precious silk fabrics in bright colour richly woven in gold and silver threads) were contributions of the *Austric* people (Barua, 1969).



Evidences of silk culture in the State prove that it was practised in Assam since time immemorial. The Indo-Mungoloid and Tebeto-Burman tribes inhabited in Assam are well acquainted with the art of producing Eri and Muga which had been their tradition and a way of life (Chowdhury, 1982).

The first official record of commercial production of Muga silk in Assam is available from the accounts of *Jean Goseph Tarvernier*, the famous traveler who visited India in 1062 (Chowdhury, 1981).

As far back as 1832, *Captain David Scott* conceived the idea of opening a few Mulberry silk reeling factories in the State after the British take over of Assam (Chowdhury, 1981). The renowned English Writer *Franchis Hemilton* also narrated in his writings various information relating to silk culture in Assam during the 19<sup>th</sup> Century (Deka, 2007).

### Present Status of Silk Culture in the State:

Silk weaving was once a household affair in Assam. Now a days it is a sustainable farm-base economic enterprise positively favouring the rural poor in the unorganized sector. In this enterprise the requirement of fixed capital is low in comparison to its higher return of investment. All four major varieties of silk viz, Mulbary (Pat), Muga, Eri and Oak Tasar are reared in the State. Muga and Eri silk are known as 'Assam Silk' as these two varieties of silk have been producing in the State traditionally since long back. Muga is the pride of Assam. The golden yarn, famous for its yellowish colour is exclusively produced in the State as 99 % of total production of the country is from Assam. Unlike domesticated Mulberry and Eri silk worms, this species of silk worm is semi domesticated. The worms are raised out door in their food plants and they crawl down to the earth at the end of their larval period. The rearers then collect the worms and allow them to spin cocoons in '*jali*' made of wooden twigs inside the rearer's house. The State is also a major producer of Eri silk being 65% of country's total production of Eri silk is produced in Assam.

Rearing of Mulberry, Muga and Eri silk worms has been playing an important role in the economic development of a large section of rural population of the State. Oak Tasar silk production in Assam is of recent origin as it was introduced in 1972 only. Though Oak tasar culture is gaining momentum, the volume of production of this variety of silk is presently much low in the State. The sericulture activities (excluding Oak Tasar) of the State during 2004-05 and 2005-06 have been presented in Table 2.1.

**Table 2.1**  
**Sericulture Activities of Assam**

Sl. No.	Item	2004-05	2005-06
1.	Sericulture Village (Nos.)	9523	9683
2.	No. of Family Engaged	191166	196152
3.	Area Under Silk Worms food Plants	18262	18556
	Eri (In Hectare)	7279	7293
	Muga (In Hectare)	7172	7255
	Mulberry (In Hectare)	3811	4007
4.	Yield of Cocoons		
	Eri cut Cocoons (In MT)	736	700
	Muga Cocoon (In Thousand Nos.)	493679	490501
	Mulberry Reeling Cocoons (In MT)	78	119
5.	Production of Silk Yarn (In MT)	659	634
	Eri Raw Silk	553	525
	Muga Raw Silk	98	98
	Mulberry Raw Silk	8	12

Source: Directorate of Sericulture, Assam and Economic Survey of Assam, 2006-07, Assam

The Table indicates that there was an increase in number of sericulture villages from 9523 in 2004-05 to 9683 in 2005-06. Likewise an increase of 4986 families who are directly or indirectly involved in sericulture activities is noticed during the period, the respective figures being 1.91 lakhs in 2004-05 and 1.96 lakhs in 2005-06. Area under silk worms food plants has increased from 18262 hectares in 2004-05 to 18556 hectares in 2005-06, of which the highest increase was in Mulberry (186 hectares)

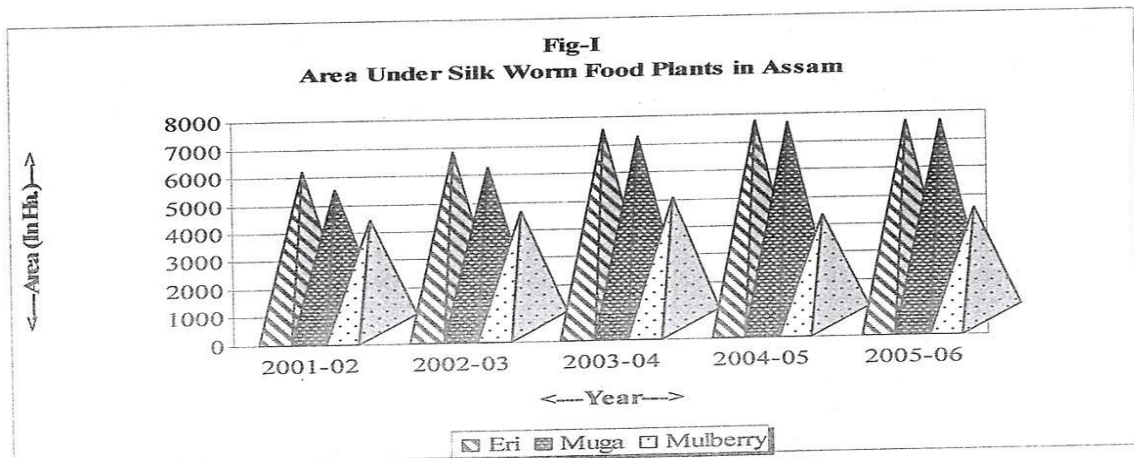
followed by Muga ( 83 hectares ) and Eri (14 hectares). It is found that, though area under food plants of all three varieties of silk worms has increased, surprisingly there was decrease in yield of cocoons of all varieties of silk resulting a decline in over all production of silk yarns from 659 MT in 2004-05 to 634 MT in 2005-06. However, so far the production of raw silk of mulberry is concerned, there was an increase of 4 MT in 2005-06 over 2004-05 .The position of muga raw silk production was also static at 98 MT in both the years. The decline was actually in Eri raw silk production as it came down to 634 MT in 2005-06 from 659 MT in 2004-05.

Analyses of year-wise data on area under silk worms food plants in Assam since 2001-02 to 2005-06 has been presented in Table 2.2 and the graphic representation has also been presented in Fig-I

**Table-2.2**  
Area Under Silk Worm food Plants in Assam  
(In Hectares)

Year	Eri	Muga	Mulberry
2001-02	5694	5007	3921
2002-03	6317	5746	4152
2003-04	7048	6755	4538
2004-05	7279	7172	3811
2005-06	7193	7155	4007

Source: Economic Survey, 2006-07, Assam, Directorate of Economics and Statistics, Government of Assam.



Ac No-60

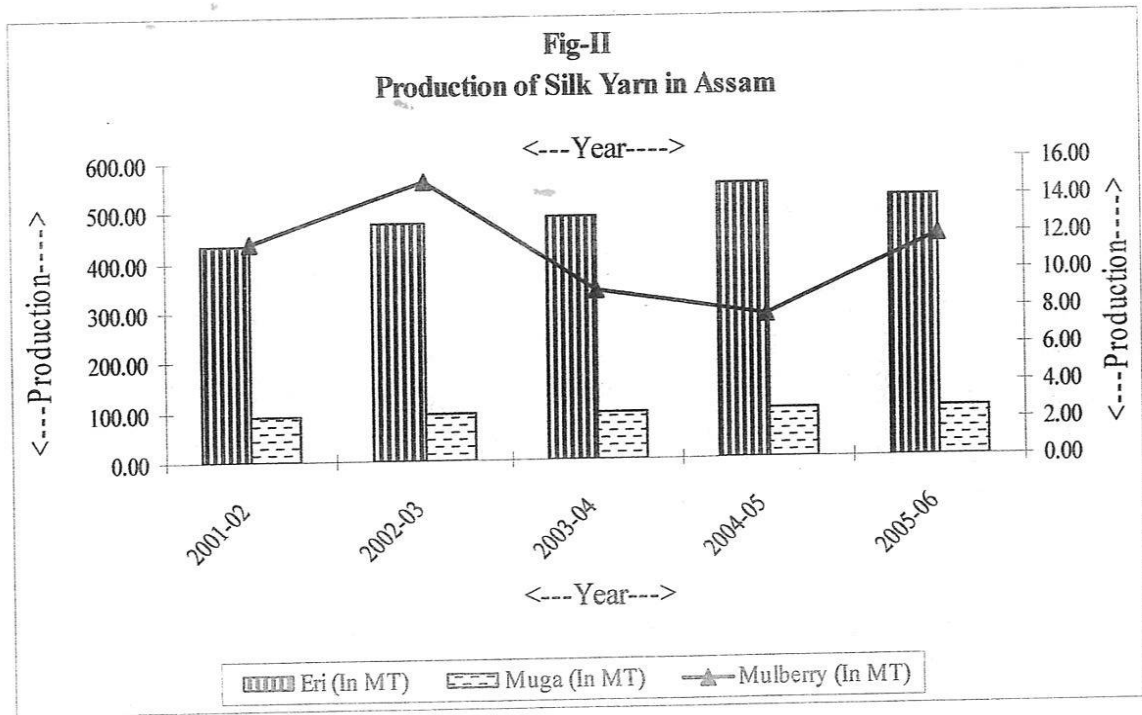


Analyses of year-wise data on production of silk yarns in Assam since 2001-02 to 2005-06 are presented in Table 2.3 with graphic representation in Fig-II.

**Table-2.3**  
**Production of Silk Yarn in Assam**

Year	Eri	Muga	Mulberry
2001-02	434.33	91.73	11.73
2002-03	476.25	93.94	15.00
2003-04	489.00	94.09	9.07
2004-05	553.00	98.00	7.71
2005-06	525.40	98.07	11.91

Source: Economic Survey, 2006-07, Assam, Directorate of Economics and Statistics



Since inception of planning era in the country, emphasis has been given for development of the sericulture sector in the state. Comparison of achievement on sericulture activities in Assam during the Ninth Five Year plan and the Tenth Five Year Plan is shown in Table – 2.4

**Table – 2.4**  
**Comparison of achievement during IXth and Xth Plans**

Sl. No	Sector	At the end of IXth Plan (1997-98 to 2001-02)	At the end of Xth Plan (2002-03 to 2006-07)	% of increase or decrease
1.	No.of village covered	8998	9373	4.00%(+)
2.	Families involved in Sericulture	172918	185291	6.68% (+)
3.	Area under Silk Worms Food Plants (Ha )			
	a) Eri	5694.38	7279.32	21.77% (+)
	b) Muga	5007.24	7172.10	30.18% (+)
	c) Mulberry	3921.46	3759.63	4.30% (-)
4.	Cocoon Production			
	a) Eri Cut Cocoon (lac Kg.)			
	Target	33.58	44.00	23.68% (+)
	Achievement	30.12 ( 89.70 %)	39.56(upto 05-06)(89%)	23.86 %(+) (upto05-6)
	b) Muga Raw Silk (MT)			
	Target	498	535	7 % (+)
	Achievement	398 (79.91% )	487(91.03%)	18.27% (+)
	c) Mulberry Raw Silk (MT)			
	Target	125	106	17.92% (-)
	Achievement	78 (62.40%)	48 (45.28%)	62 % (-)

Source: "Draft Eleventh Five Year Plan(2007-08) and Annual Plan 2007-08", Vol.II, Planning and Development Department, Government of Assam, Dispur

The comparative picture of the Ninth Plan period with the Tenth Plan period showed a positive trend in the State. The Table indicates that there were a rise of 4.00% in number of villages covered and 6.68% rise in families involved in sericulture

during the Tenth Plan. Expansion of area under silk worms food plants was 21.77% Eri and 30.18% Muga ; but, area under Mulberry silk worms food plants has reduced by 4.30% during Tenth Plan period over Ninth Plan period .It may be mentioned here that although in the earlier Table 2.2 shows an expansion of area under Mulberry silk worms food plants in 2005-06 over 2004-05 (both the years are under the same Plan period, i.e; Tenth Plan), the overall figure indicated a decrease of 4.30% in area under Mulberry silk worms food plants in Tenth Plan over Ninth Plan.

So far the production is concerned, a 23.86% rise of achievement in case of Eri cut cocoons and 18.27 % in case of Muga raw silk are reported in the end of Tenth Plan period against respective targets of 23.68% Eri and 7% Muga of Ninth Five Year Plan. However, there is 62% shortfall of achievement in production of Mulberry raw silk in Tenth Plan period over Ninth Plan period indicating a gloomy picture in Mulberry silk production in the State. Presently most of the internal demand of Mulberry silk yarns of the weavers of the State is met by import of Mulberry yarns from the Mulberry silk producing surplus States of the country. It is reported that the Mulberry silk of Karnataka, Mysore and to some extent West Bengal has overshadowed the Mulberry silk production of the State. Quality of imported Mulberry yarns is sometimes found superior than the locally produced Mulberry yarns while prices of such yarns are taken into consideration.

**Catalytic Development Programme:**

During the Tenth Five Year Plan, 21 schemes, commonly called Catalytic Development Programme (CDP) was implemented in Assam for development of silk culture in the State. The Government of India had an allocation of Rs. 2,334.71 lac under the CDP during the Tenth Plan. It is found that in the initial year 2002-03, though an amount of Rs.0.68 lac was allotted, that amount could not be spent by the concerned department. In 2003-04, allotment was raised to Rs. 393.50 lac, but only 11.94 % of allotted money was utilized during the year. As a result, next year's allotment came down to Rs. 168.65 lac. However, till March, 2006, Rs. 1,274.73 lac had been released by



Central Government of which an expenditure of Rs. 580.06 lac have been incurred up to 2005-06.

In the Tenth Plan period, the trust was on quality and productivity in non-mulberry silk of the State. Out of the total production target of 890 MT of the Tenth Plan, only 800 MT is achieved up to 2005-06. Significant problems in non-mulberry sector are demand and product diversifications. Introduction of new pedal cum motorized Muga reeling and twisting machines, and the low cost but higher productivity motorized spinning wheel for Eri has drastically improved the quality of non-mulberry yarns. This has facilitated product diversification in the non-mulberry sector which was essential for boost of production. Being the exclusive producer of Muga silk cloths and highest producer of Eri silk cloths of the country, improved spinning and reeling techniques almost revolutionized the non-mulberry production scenario of the State in terms of both quality and quantity.

The expenditure of Catalytic Development Programme fund in the first 4 years ( 2002-03 to 2005-06 ) of the Tenth Plan and anticipated achievement for the final year (2006-07 ) are shown in Table – 2.5

**Table – 2.5**

**Financial Achievement of Catalytic Development Programme**

(Rs. in lac )

Year	Allocation	Expenditure	% of Expenditure
2002-03	0.68	-	Nil
2003-04	393.50	46.98	11.94
2004-05	168.65	299.98	177.87
2005-06	711.88	233.20	32.78
2006-07 ( Anticipated )	1060.00	1754.55	165.52
<b>Total</b>	<b>2334.71</b>	<b>2334.71</b>	

Source: "Draft Eleventh Five Year Plan(2007-08) and Annual Plan 2007-08", Vol.II, Planning and Development Department, Government of Assam, Dispur.

For all round development of silk industries of the State, some other government schemes are also proposed for 2006-07. An amount of Rs. 297.00 lac is earmarked for the purpose . Emphasis has been given on development of enterprise by providing support to NGO / SHGs / individual enterprise for setting up of Post Cocoon Unit . There are also World Bank sponsored schemes worth of Rs. 37.00 lac . For development and expansion of silk industries of the state, Rs.112.50 lac is proposed. Like the Catalytic Development Programme, more emphasis has been given here too on the non-mulberry sector of the State. As such, an amount of Rs.50 lac for Eri and Rs. 43.00 lac for Muga are proposed for their development and expansion against an amount of Rs. 23.00 lac for Mulberry silk industry.

Details of the proposed schemes are presented in Table -2.6.

**Table – 2.6**  
**Schemes proposed for 2006-07**

1) Scheme for strengthening of supervisory and technical Staff	22.65 lac
2) Scheme for motivation and publicity	3.07 lac
3) Scheme for Sericulture	3.07 lac
4) Special Seed support to Muga Pvt. Graineurs	10.50 lac
5) Development of enterprise ( Support to NGO/ SHGs/ individual enterprise for setting up of Post Cocoon Unit (General+ SCCP )	48.28 lac
6) Development and expansion of Eri Silk Industry ( General + TSP +SCCP )	46.50 lac
7) Development and expansion of Muga Silk Industry ( General + TSP +SCCP )	43.00 lac
8) Development and expansion of Mulberry Silk Industry ( General + TSP +SCCP )	23.00 lac
9) State Share for Centrally Sponsored Scheme	60.00 lac
10) AACP Scheme under World Bank	37.00 lac
<b>Total</b>	<b>297.00 lac</b>

Source: "Draft Eleventh Five Year Plan(2007-08) and Annual Plan 2007-08", Vol.II, Planning and Development Department, Government of Assam, Dispur.

### Hand loom sector of the State:

The Handloom industry plays a very important role in the socio-economic development of the State. As per Handloom Census, 1995-96, conducted by the Government of India there are 13.22 lakh looms providing direct and indirect employment to 23.22 lakh people of Assam.

Department of Handloom and Textiles of the State has at present runs 102 Handloom Training Institute and 1 Power-Loom Training Centre under Training Programme, 97 Weavers Extension Service Units, 20 Handloom Production Centres, 1 Handloom Research and Designing Centre and 1 Product Procurement Centre under Production Programme. All these are for the benefit of individual weavers out side of Co-operative Societies. The three prolonged Co-operative organized sector consists of more than 3634 Primary Weavers Co-operative Societies at grass-root level, 223 District level and 2 Apex level Co-operatives.

Average production of handloom in the State is very poor in comparison to rest of the country. Most of the weavers are still using traditional looms including Loin and throw shuttle looms. In spite of the existence of large number of looms, the actual production forms only a small share of the total handloom production in the country. The average productivity per day of per loom in Assam is only 0.63 meter against all India average of 1.29 meter. Standard of looms, level of utilization and operating condition of the looms are considered to be some of the critical factors for low productivity.

As per the data available, 53 % handlooms of the country is in Northern states, but, ironically only 20% textiles is produced here as, of the total commercial handlooms of the country, there are only 13.40% in this region ( Bora, 2007 ). In Assam, at present about 2.8 lakh looms run commercially in true sense of the term, about 5.70 lakh looms run on semi commercial basis for earning subsidiary income and rest being domestic looms run at leisure hours to meet the family requirement of a few items of fabrics.



The Census of Handloom , 1995-06 indicated that of all the districts of the State , Kamrup district had highest number of weavers.

District-wise list of Weavers of the state is presented in Table 2.7

**Table -2.7**

**Distribution of Number of Weavers of Assam**

Sl. No.	District	No. of Weavers
(1)	Barpeta	58,541
(2)	Bongaigaon	53,282
(3)	Cachar	24,905
(4)	Dibrugarh	51,145
(5)	Darrang	89,761
(6)	Karimganj	38,046
(7)	Karbi Along	49,733
(8)	Kamrup	1,61,895
(9)	Lakhimpur	64,030
(10)	Morigaon	55,466
(11)	Dhemaji	30,477
(12)	Dhubri	19,497
(13)	Goalpara	34,687
(14)	Golaghat	56,835
(15)	Hailakandi	26,374
(16)	Jorhat	80,803
(17)	Kokrajhar	12,129
(18)	Nalbari	1,11,850
(19)	Nowgong	72,578
(20)	North Cachar	14,062
(21)	Sibsagar	61,136
(22)	Sonitpur	48,680
(23)	Tinsukia	43,966

Source: Census of Handloom, 1995-96, Government of India.

## CHAPTER- III

### Socio-Economic Profile of the Sample Village and the Sample Silk Weaver Households

#### Sample Village :

Sualkuchi, the silk village of Assam is deliberately selected as the sample village of the present study as since antiquity the village has been engaged in production and distribution of fabrics of Mulberry silk, commonly known as Pat and non-mulberry golden silk Muga, with various artistic designs and patterns. In the context of silk weaving in Assam, Sualkuchi is the name that stands apart. Sualkuchi is also called '*Manchester of the East*'. Like Manchester, the wealthy village of England which is famous as manufacturing centre of woollen, linen and cotton goods of all kinds, Sualkuchi is also the production and distribution centre of Pat and Muga silk cloths of Assam. The glorious tradition of silk weaving in Sualkuchi, has been traced back to the days of Kautilya ( 4<sup>th</sup> Century, B.C ).

History has references of Sualkuchi as production centre of silk cloths even in the reign of king Dharam Pal who had established his capital in Godand hills in the west of Guwahati which is just at the eastern side of present day Sualkuchi (Baishya, 1989). It is stated that in the 11<sup>th</sup> Century, King Dharam Pal of the '*Pala*' dynasty patronized the craft of weaving and brought 26 weaver families from '*Tantikuchi*' to Sualkuchi. The village took shape of a weaving village when the '*Shams*' occupied Sualkuchi defeating the '*Mughals*' in the mid 17<sup>th</sup> Century.

There are different views and suppositions regarding the origin of Sualkuchi. The word 'Suala' in Assamese means 'beautiful' and the word 'Kuchi' means 'settlement' ; hence, Sualkuchi means beautiful settlement ( Kalita,1979 ). References are also found of linking the 'Som'( Machilus) tree with Sualkuchi as *Som* tree is used for rearing Muga silk worms. However, the overall climate and also the available flora and fauna of the locality are, by and large, identical with those of Assam as a whole.

Situated in the north bank of the mighty river Brahmaputra at a distance of about 32 km west of Guwahati, Sualkuchi is linked with Guwahati city and Hajo township (12 km north ) by PWD roads and with Palashbari town on the south bank of river Brahmaputra by motor boats and country boats.

Sualkuchi is a block of Kamrup district with a population of 52,679 as per 2001 Census distributed in more than five hundred households in its 90 sq. km of area. There are 8 Gaon Panchayats in Sualkuchi block. Population settlement of Sualkuchi is very dense. The houses of the village are neatly laid out in columns.

It is remarkable to note that around 97 % of working population of Sualkuchi are engaged in non-agricultural activities and therefore, the Census authority have rightly classified it as an urban area. Sualkuchi can be considered as an industrial village which is exclusively inhabited by indigenous Hindu population living in 'Tols' and 'Paras' of two adjoining revenue villages, viz; Sualkuchi and Bamun Sualkuchi.

In ancient times, settlement clusters of a village were structured caste/trade-wise. The specific name of each cluster was given accordingly, such as: the bamun (priest) inhabited cluster was *Bamun para*, sonari ( goldsmith) inhabited cluster as *Sonari para*, tanti (weaver ) inhabited cluster as *Tanti para*, kumar ( potter) inhabited cluster as *Kumar para*, kaiborta (fisher man) inhabited cluster as *Kaiborta para*, so on and so forth. Now-a-days, however, the strict rigidity in settlement is no longer maintained in today's villages. More or less same is the case in Sualkuchi also. Above all, most of the inhabitants of Sualkuchi, irrespective of castes and economic conditions have adopted weavings in various scales as their ways of livelihoods. Except less than a



meager 3% of dwellers of Sualkuchi, all of them are taken up weaving as either their primary or secondary occupations.

The surrounding of Sualkuchi has some small hills. In fact, Sualkuchi is located amidst tiny hills. As such, though it is not a hilly area, yet there are much ups and downs. The *Ghatiya Pahar* ( Hill ) is situated towards the eastern periphery of the village. It is a beautiful small hill with lots of stones and pebbles. One can have an excellent panoramic of the *Saraighat Bridge* over river Brahmaputra and the famous temple of *Ma Kamakhya*, both located in Guwahati from this hill. On the southern side of Sualkuchi is *Rakhashi Pahar* (Hill), which is located in the heart of river Brahmaputra. On the northern side of Sualkuchi, however, has huge marsh land known as *Sarushara* and *Borshara*. The marsh lands are used as fishing grounds by the local people. The *Bagheswari Pahar* (Hill) and *Bathan Gaon* are located on the west of the village. A little far, there is *Barbari Pahar* (Hill) and a large mass of swamp called *Barbila Beel*.

### **Level of Infrastructures:**

#### **(1) Transport and Communication Networks:**

One of the prime parameters of measuring standard of a rural economy relates to availability of improved system of transport and communication networks. Sualkuchi has a reasonably satisfactory network of transport and communication facilities with neighbouring urban areas. Having good motorable road links to the urban centers, both public and private buses and other small vehicles like Gramin Taxi, Tata Sumo share Taxi etc. cater the needs of the villagers . The lanes and bye lanes that connect different areas with the main road are though not metalled ones, yet , the people do not seem find any inconvenience in their movements even in the rainy season.

During the British rule, it is reported that there were a few ships belonging to the East India Company that used to ply in the river Brahmaputra. In earlier days, when road communication was not sufficiently developed, the villagers utilized the Brahmaputra water ways to the maximum extent, specially in connection with their

business activities. The people used to cross the river by boats and thereafter, they used to go to distant places like Garo Hills and Sibsagar by bus, truck or train in search of buying Muga. After collecting the raw materials of silk yarn like muga cocoons from different places, those were then brought to Palashbari and from Palashbari ferried across river Brahmaputra (Chetia, 2006). They also carried along with the silk cloths produced in Sualkuchi in the time of outward journey for selling those in various palaces. At present the water ways of Brahmaputra is very rarely used as the people prefer the road ways rather than the water ways. The Government of Assam, of course, sometimes brings the foreign dignitaries and tourists to Sualkuchi by water ways in special Ferries (Streamer/Motor boats) as attractive treats to them.

**(2) Post and Telegraph Facilities:**

The village is self sufficient in this regard as there is a Post cum Telegraph office. An Electronic Telephone Exchange is also located in Sualkuchi. Cell Phone net work system is also available in the area and quite satisfactory. Thus the people of Sualkuchi do not face any problem in communicating with any inside or outside place of the state.

**(3) Drinking Water Source:**

The people of Sualkuchi generally use ponds, wells and river as sources of drinking water. The Government sponsored schemes of water supply through taps is also available in some areas. However, majority of inhabitants are not aware of water purification treatment like filtration of drinking water.

**(4) Health care Facilities:**

There is a Primary Health care Center (PHC) located at the entrance of Sualkuchi. But, as the PHC is not so well equipped, the people of the area prefer to go to Medical College at Guwahati for treatment of relatively complicated ailments. There are

also some facilities for Homeopathic treatments. One State Veterinary Dispensary is rendering medical care to animals in Sualkuchi.

**(5) Educational Facilities:**

So far the awareness towards literacy is concerned, the area is found to be in moderate level being around 60% of total inhabitants are literate. There is a good number of schools, both primary and secondary levels. A college for boys and girls ( co-education ) with Arts stream is imparting higher education in the area.

**(6) Co- operative Societies:**

One of the notes worthy feature of the weaving sector of Sualkuchi is that the collective spirit, i.e; co-operation was very much there as long back as 50's. The Assam Weavers' and Artisans' Co-operative Societies were formed in Sualkuchi even in Pre as well as Post independence periods of the country. Out of a good number of Co-operative Societies of the area, the prominent ones are:

1. Assam Co- operative Silk House , 1941
2. Assam Samabay Resham Pratisthan Ltd. , 1949
3. Sualkuchi Resham Samabay Ltd. , 1953

The remarkable point to note is that all these three Co-operative Societies have national level reputation. In this context it may be mentioned that *Assam Samabay Resham Pratisthan Ltd.* and *Assam Co- operative Silk House* were adjudged as the best in India by the Ministry of Textiles, Government of India in 1993-94 and 1995-96 respectively and awarded Gold medals. *Sualkuchi Resham Samabay Ltd.* also received Silver medal being positioned as second among all other Weavers' Co- operative Societies of the country.

Apart from these Co-operative Societies, there are also many other small Co-operative Societies in Sualkuchi that deal with different economic and developmental activities of the weavers. It is found that weavers of different *Paras* (settlement clusters) form own Co-operative Societies to look after their respective problems. These Societies



gather a collective fund through regular subscription from the members and the money is used not only for developmental activities relating to weavings but also lend out to needy members of the Societies to meet other economic crisis.

**(7) Banking Facilities:**

Like most of other industrial areas, Sualkuchi also has public sector financial institutions. In recent years altogether four of the nationalized banks have opened branches in Sualkuchi. Notwithstanding, the people of the area are still prefer regional banks like Assam Co-operative Apex Bank and Pragjyotish Gaolia Bank. The Assam Co-operative Apex Bank has playing an important role by extending financial supports to the Co-operatives of the state in general and in promoting the growth of the Weavers' Co-operative Societies of Sualkuchi in particular.

**(8) Marketing Facilities:**

Industrial growth of a place is very much related to a sound and efficient marketing mechanism. Without a good market, no industrial unit can be flourished. It is rightly stated, "the market occupies a pivotal role in the economic and social life of the people. It is the place where men and women from different walks of life gather, and sometimes for economic reasons are often compelled to rise above narrow considerations of caste, creed, religion and language. A dent, though temporary, is made on the otherwise conservative mental frame work and this provides an excellent opportunity for positive socio-economic activities. The market can be used very efficiently for exchanging social ideas and also for studying the economy of the people" (Biswas, 1984).

Sualkuchi is a trading centre since Pre independence era. In ancient times, however, trading of the finished silk cloths was usually carried out by door to door or shop to shop selling procedures in outside the area. It was the usual practice among the weaving families that some male fellows, locally called '*Bepari*' collect the finished goods (various type of silk cloths) from different weavers and carry those cloths to

different places for selling. Now-a-days marketing channels of silk cloth trading are very well organized. The present market of Sualkuchi is centrally located and is easily accessible to the people living around. The market not only made transactions on day to day needs but also deals with the items related to textile industry. It has shops with good stocks for various kinds of yarn. There are also well stocked shops for other accessories and materials of weaving. Items like Dobby machine, various looms, Shuttle and prints etc. are too easily available in the market. It is found that, so far the yarn of mulberry silk is concerned; a trader from Marowari community (outsider of Assam) has monopoly in the local market. The weavers are very much dependent on them for mulberry yarns which sometimes open opportunities for exploitation by those traders.

With regards to buyers of finished products of silk cloths, the weavers of Sualkuchi seem to have been placed in a favourable position. Most of the produces of Sualkuchi are channelised to different market places of the state through retailers who collect the items from the wholesalers of Sualkuchi and sell those to the buyers from their retail shops located in different places. Many people and cloth merchants from outside the state have also often visited the local market to purchase some unique silk textiles produced in Sualkuchi.

#### **Project Sualkuchi' - A recent boost :**

As reported by the Sericulture Department, Government of India, for the all around development of the weaver community of Sualkuchi, the North Eastern Council with the approval of Ministry of Home Affairs, Government of India sponsored and implemented the Scheme IPP on 8<sup>th</sup> May, 1987 covering Sualkuchi and Adjoining areas under the pattern of Self Help Group. The Project is defined as 'A dream of the people, by the people, for the people'. It is implemented by Deputy Commissioner, Kamrup District and Project Director, DRDA, Kamrup District, Assam. The estimated cost of the Project is Rs. 695.50 crores.

**Objectives of the scheme:**

- (a) to provide self-employment to the rural masses, specially women,
- (b) to organize poor weavers into Self Help Groups for their empowerment and sustenance,
- (c) to provide managerial and technical skill to the weavers,
- (d) to increase the numbers of skilled weavers and upgrade their proper training,
- (e) to facilitate the gainful utilization of Muga, Eri yarn products through the Yarn Bank.
- (f) to produce superior quality of furnished products through strict quality control mechanism,
- (g) to create relevant marketing support in the village itself,
- (h) to enhance income generation from the existing level through value addition.

National Institute of Fashion Technology (NIFT), a premier institution of design management and technology was set up in 1986, under the aegis of Ministry of Textiles to impart Fashion education and cater to the human resources development needs in India. The prime aim of NIFT is to train professionals to meet the varied manpower requirement of the apparel section and also to provide a solid foundation to which the country could profitably transform to meet the international challenges.

The Deputy Commissioner of Kamrup sought the participation of NIFT in 'Project Sualkuchi' for the development of managerial capacity and upgrading the technical skill of the weavers of Self Help Groups. Accordingly, NIFT is committed towards the development of entire Sualkuchi handloom cluster in terms of various technological and skill upgradation, establishment of Research and Development centres for handloom, setting up of various common facility centres, product innovation, design diversification and conversion of handloom materials into fashionable garments, setting



up of yarn bank and CAD centre, and conduction of various training and exposure programmes for the weaving artists of Sualkuchi region.

**Progress Report:**

The Sericulture Department has published a progress report on 'Project Sualkuchi' in 2007. As per the project report, a total of 100 Self Help Groups have been formed and they have been provided a revolving fund of Rs. 10,000/- each. Each Self Help Group has been provided with Rs.2 lakhs as subsidy and Rs.2 lakhs as bank loan. Under the project, 300 weavers were given training on updated looming methods, new designs and other related weaving aspects at NIFT, Kolkata. The construction work of common facility centre in Sualkuchi is going on. The approximate estimated Budget of the task is Rs.60 lakh.

The 'Project Sualkuchi' has opened up a new vista for economically weaker weavers of the area. Much enthusiasm has been noticed among the women weavers on this new concept of Self Help Groups and all other various training programmes. However, it was also reported by some women weavers of the locality that discrimination was there while selecting weavers for training courses. Normally influential backing and political linkage very often play considerable role in selection of trainees. Financial benefits are usually received not by the poor weavers but, by the well off ones. Nevertheless, there is no doubt about positive implications of 'Project Sualkuchi' in the upliftment of the weaving industry of the area as a whole.

**Sample Silk Weaver Households:**

The socio economic profiles containing demography, literacy, economic status, land holding pattern and income sources of the selected hundred (100) silk weaver families of the sample village Sualkuchi have been gathered from the micro level field data and presented here.

**(i) Demographic Features :**

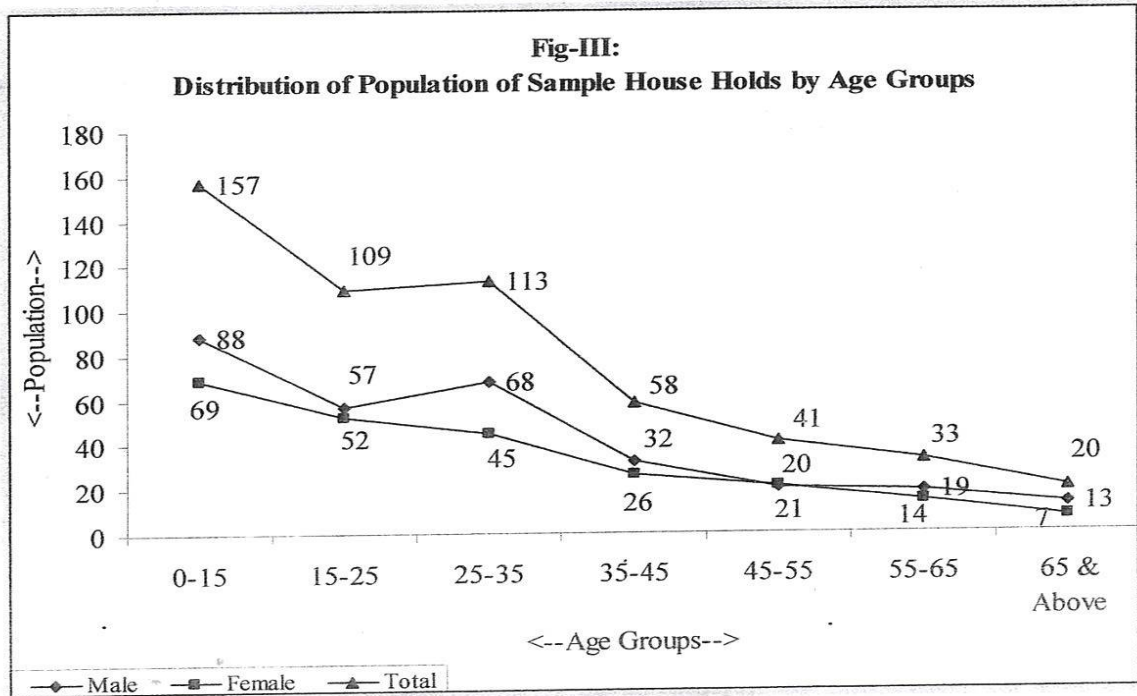
Human resource is the major component of a society. It has special significance in case of the families having privately owned household enterprises. Manpower plays important role in running such small industrial units. The demographic feature of the sample households is collected to examine their population structure. Distribution of population of the sample households by age and sex is worked out and presented in Table -3.1. Total number of family members of the sample households is 531 comprising of 55.93 percent (297) males and 44.07 percent (234) females; the sex ratio being 788 females per 1000 males. There are 29.57 per cent population below 15 years of age group and 3.77 per cent in 65 years & above age group. The rest 66.66 per cent constitutes the main work force of the sample households of which the highest number of population is found in the 25 years to 35 years age group (21.28%).

**Table-3.1****Demographic Feature of Sample House Holds  
by Age Group**

Age Groups (in years)	Population		
	Male	Female	Total
0-15	88	69	157
15-25	57	52	109
25-35	68	45	113
35-45	32	26	58
45-55	20	21	41
55-65	19	14	33
65 & Above	13	7	20
Total	297	234	531

Sex Ratio: 1000 : 788

The population structure of the sample households is also presented in graphic form in Fig-III.



**(ii) Educational Status :**

Education is a basic parameter of human resource development of a region. Economic upliftment of a family is also very much related to educational status of its family members. Level of literacy among the family members of the sample households shows that literacy rate of sample households is much higher than that of the State's literacy rate. As per 2001 Census, the literacy rate of Assam is 63.25 % and it is 58.91 % in case of Sualkuchi as a whole. The literacy rate of the sample households is outstanding as it being 87.76 %. Educational status of the family members is presented in Table-3.2.





Out of the total population of 531 of sample households, only 12.24 per cent are illiterate; that too 8.66 per cent are in the age group of below 0 -15 years which means a major portion of illiterate persons are either infants or small kids. There are 13.18 per cent who fall in the category of just literate and 18.83 per cent are educated up to Lower Primary level. It is found that though the literacy rate of sample households is as high as 87.76 per cent, there are very few who have higher education as only 0.76 per cent ( 3 males and 1 female) family members of sample households are Post-Graduate degree holders and 1.88 per cent (6 males and 4 females) have Graduate degree. Highest number of literate persons is found in the literacy level up to HSLC figuring 39.36 per cent followed by 10.55 per cent HSLC passed and 3.20 per cent HSSLC passed. It is observed that as weaving is the family enterprise of most of the sample households since generations, inclination towards family business starts in the minds of young population quite early. As a result, generally they prefer to involve actively in the weaving business rather than pursuing higher education considering the fact that weaving is an economically gainful enterprise and at present getting a government job or other occupation after acquiring a higher academic degree is not at all easy. So, they have usually opted for family business after obtaining high school (HSLC/HSSLC) level education.

**(iii) Economic Status :**

Economic status of the family members of sample households by age and sex is worked out and presented in Table 3.3. Out of the total population of 531, highest number is found as workers comprising 37.85 per cent of total population. There are 121 male workers (22.78 per cent of total population) and 60 female workers (15.07 percent of total population) in sample families. In the category of helper, there are 68 male helpers (12.81 per cent of total population ) and 78 female helpers (14.69 per cent of total population ) i.e.; 27.50 per cent of total population in the sample households. The figure in non worker category stands at 34.65 per cent of total population. It is found that there

are more males (20.34 per cent of total population) than females (14.31 per cent of total population) in non worker group. The reason is, majority of the school/college going boys do not participate even as part time helper in the family enterprise; but, contrary to that, some school/college going girls participate in various activities of the family enterprise as helpers in their leisure time. Higher percentage of non worker is evident due to inclusion of all infants and old persons of the sample population in this category of economic status.

**Table-3.3**

**Distribution of Population of Sample Households By Economic Status**

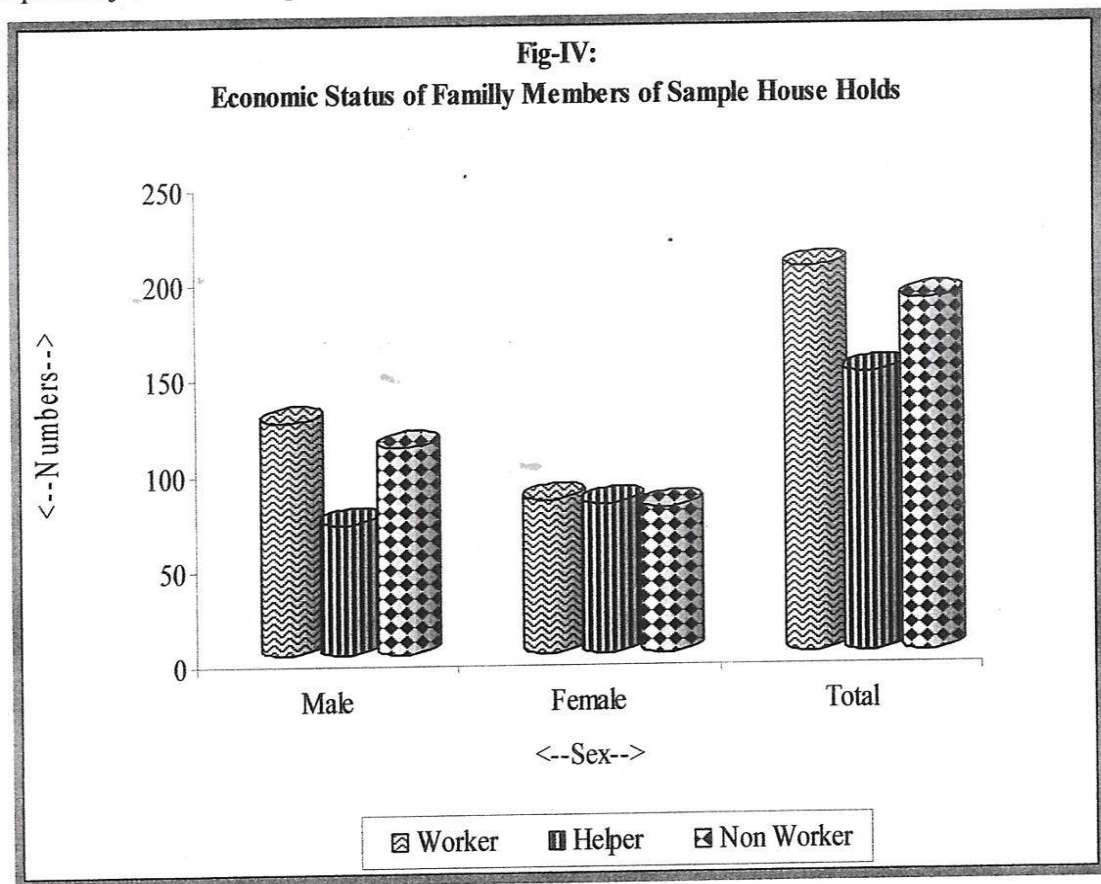
Age Groups (in years)	Worker			Helper			Non Worker			Total		
	M	F	Total	M	F	Total	M	F	Total	M	F	Total
0 - 15	0	0	0	10	18	28	78	51	129	88	69	157
15 - 25	35	35	70	12	8	20	10	9	19	57	52	109
25 - 35	45	20	65	20	23	43	3	2	5	68	45	113
35 - 45	22	9	31	9	14	23	1	3	4	32	26	58
45 - 55	10	10	20	8	9	17	2	2	4	20	21	41
55 - 65	8	6	14	7	5	12	4	3	7	19	14	33
65 & Above	1	0	1	2	1	3	10	6	16	13	7	20
Total	121	80	201	68	78	146	108	76	184	297	234	531
% to Total Population			37.85			27.50			34.65			100.00

One of the remarkable features in the weaving industry of Sualkuchi is the use of hired workers on contractual basis. There is a common and prominent practice among the weaver households of the area of employing batches of young girls and boys as weavers on yearly/item-wise wage basis. It is also found that a reasonable lump sum amount is paid in advance to the hired weavers as a part of their contract agreement. These hired weavers are mostly females. Tribal girls ( mainly Bodos ) are on high demand as weavers in Sualkuchi for their skills in weaving. Some of the sample



households reported that now-a-days they have to pay heavy amount as advance, otherwise some other households may taken away the skilled weavers by offering more money as advance. Hence, this practice also has some ill effects as it is making room for rivalry or bad blood among the fellow weaver households .Sometimes some such workers have cheated the employer by leaving the place without finishing the agreed works after taking the advance.

Economic status of the family members by sex of sample households is graphically shown in Fig –IV.



**(IV)Occupational Pattern:**

Weaving is the primary occupation of all sample households. The economic activities of the sample families, by and large, centre around silk textile

production. However, apart from silk cloth production, some households also earn as commission agents or from other weaving related business. Out of 100 sample households, 17 households have other subsidiary occupations. There are 83 households whose livelihood is exclusively weaving comprising of a total population of 160 of which 53.12% are males and 46.88 % are females. It is found that 10 sample households have double income. This double income category of households have earned from weaving along with services and trade. They have earned through silk cloth production mostly by engaging hired workers in their textile factories. Of these 10 double income sample households, there are service holders in 5 sample households and remaining 5 double income households have either own shops in market area or silk weaving related business or some other business like transport and communication.

Of the total workers of 201, there are 11 persons (5.47%) including one female member in 7 sample households who have more than two occupations. Although weaving is their primary occupation, all 7 households also earn from other trade and commerce. All of them also have retail cloth shops in the market area where they sell silk cloths produced in their own looms as well as silk cloths of other petty producers on commission/profit basis. They usually accept silk cloths of various types; most commonly Pat and Muga Sets (Jora) comprising of Mekhela, Chadar and matching blouse piece with lower prefixed prices from the petty weaver households. Then they refix the prices such cloths at higher side and keep the balance amount as their profits after selling out the items. Apart from that, in these 7 households whom have more than two income sources, 5 households have service holders and 2 households have livestock farms of poultry birds and ducks. These 2 households earn some income from sale proceeds of livestock farming. It may be noted that among the 100 sample silk weavers' households, service holders are found only in 10 households. However, the total number

of service holders amongst the family members of these 10 sample householders is 14 (10 males and 4 females) as there are more than one service holder in 3 sample households. Occupational engagement of members of sample households is shown in Table-3.4.

**Table-3.4**  
**Occupational Engagement of Members of Sample House Holds**

Occupations	No. of House Holds	Nos. of Population		
		Male	Female	Total
Single Occupation	83	85	75	160
Double Occupation	10	26	4	30
More Than Two Occupation	7	10	1	11
Total	100	121	80	201

**Notes:** Single Occupation = Weaving  
 Double Occupation = Weaving + Service/Trade  
 More Than Two Occupation = Weaving + Service/Trade/Contract etc.

**( V ) Land Holding Pattern:**

The land holding pattern of sample households depicts somewhat contrasting picture with rest of the rural Assam. Assam being an agricultural state, agriculture is the source of livelihood for more than 70 % of the state's total population. But, Sualkuchi, the silk village of Assam, shows that it is actually an industrial village as agriculture has not playing any role in the village economy. All 100 sample households do not cultivate any crop. They are totally dependent on others for their basic needs of food items. As such, distribution of land holdings of the sample households is worked out according to size groups of looms ownership and presented in Table-3.5.



**Table-3.5**  
**Distribution of Land Holdings of Sample Households by Size Groups**  
**Of Nos. of Looms Owned**

Size Group by Nos. of Loom Ownership	No. of HHs	Cultivable Land*	Homestead	Misc. Crops & Tree Grooves,	Permanent Fallow	Total
Less than 5	17	0.00	1.20	0.85	0.55	2.60
5---10	19	0.00	0.74	0.52	0.34	1.60
10---20	23	0.00	0.70	0.50	0.32	1.52
20---30	27	2.50	0.54	0.39	0.25	3.68
30---40	7	0.00	0.43	0.30	0.20	0.93
40 & Above	7	0.00	0.27	0.19	0.12	0.58
Total	100	2.50	3.88	2.75	1.78	10.91

\*As cultivable land of the Sample Households is not presently under cultivation, the land is treated as current fallow

The Table indicates that there are only 2 households among the sample households who possess 2.5 hectares of cultivable land. Ironically these 2.5 hectares of cultivable land (22.91% of total land holding ) was too found laying fallow and the owners are not interested in doing any crop cultivation on the plots. Hence, it is treated as current fallow. There are another 1.78 hectare (16.32% of total land holdings) of permanent fallow land of the sample households. The homestead area of hundred sample households is 3.88 hectares (35.56% of total land holdings). Miscellaneous crops and tree groves of sample households cover 2.75 hectares ( 25.21% of total land holding) of land. Miscellaneous crops include mostly horticultural crops like vegetables, coconuts, arecanuts, citrus and other fruits etc. Tree groves include bamboo and some other useful trees. Total land holding of sample households has stood at 10.91 hectares.

**( VI ) Annual Income:**

Generation of income from different sources of the sample households is presented in Table- 3.6. As stated, though the main source of income of the sample households is silk cloth production, yet some of the households managed to earned some additional income from other sources also.

**Table-3.6****Distribution of Annual Income by Sources of Sample Households**

Sources of Income	Primary		Subsidiary	
	Nos. of HH.	Income Earned	Nos. of HH.	Income Earned
Weaving	100	3,78,44,201.91	-	-
Business, Trade, Commerce and Transport	-	-	12	2,52,000
Live stocks & Poultry	-	-	3	21,600
Service	-	-	4	4,32,000
Other	-	-	-	-
Total	100	3,78,44,201.91	19	7,05,600

It is found that total net income from weaving of 100 sample households was Rs. 3,78,44,201.91 during the year under reference ( 2006-07 ). Apart from weaving, 12 sample households earned Rs. 2,52,000.00 from business, trade, commerce and transport. Most of these activities related directly or indirectly with silk cloth production of the area. However, it was also reported that some family members of the sample

households have government or private salaried jobs as their source of income. The annual earnings of those service holders stood at Rs. 6,68,304.00 in the reference year. Two (2) households have live stocks (poultry birds and ducks) farms and earned Rs. 21,600.00 from that source. Total income from subsidiary sources of the sample households was Rs. 9,41,404.00 during the year 2006-07.

Details of income earned from production of Mulberry (Pat) silk cloths and Muga silk cloths by sample hundred weaver households are discussed in the succeeding chapter.



## CHAPTER - IV

### Production of Silk Cloths in Sample Weaver Households With Special Reference to Mulberry and Muga Cloths

As stated earlier, samples selection of the present study is strictly limited to the weaver households of Sualkuchi who are involved in production of Mulberry (commonly known as '*Pat*' in Assam) and Muga silk cloths only. It may be mentioned that there are many weaver households who are engaged in production of Eri and Cotton cloths along with Pat and Muga silk cloths production in the locality. Eri silk weavers and cotton cloth weavers are not included in the purview of the study with a view to assess the economics of Pat and Muga silk cloths weavers households only. This chapter deals with the production of Pat and Muga cloths of sample households.

In the sample area, various types of handlooms are used. Handloom is a manually operated simple machine which is locally called as '*Tat Shal*'. It can be adjusted to weave from a simple plain piece of fabric to a varied and complex artistic pattern, but, beauty of its productions depends upon the manual skill of the weavers. "*Women of Assam weave dreams in their looms*" - is the famous remark made by Mahatma Gandhiji, *Father of the Nation* about the skills of the weavers of Assam. In the weaving of finest quality of cloths and most delicate patterns with extra weft, a handloom always proves to be a better and more successful means in comparison to a powerloom.

In Sualkuchi, it is customary for the bride to bring a loom and all other accessories with her in the time of marriage while coming to live with her husband in her in-law's house. It indicates the overwhelming importance and place of loom in the life of Sualkuchians. Sample weaver households of the area have been classified according to the number of looms they possessed. Distribution of looms according to number of loom ownership of the sample households is worked out and presented in Table - 4.1.

**Table – 4.1****Distribution of Looms by Loom Ownership Size Groups of Sample Households**

Size Group by Loom Ownership (in Nos.)	No. of HHs.	No. of Looms		
		Pat	Muga	Total
Less than 5	17	50	2	52
5 - 10	19	126	17	143
10 - 20	23	181	141	322
20 - 30	27	383	265	648
30 - 40	7	131	121	252
40 & above	7	224	84	308
Total	100	1095	630	1725

Among the sample weave households, there are a total of 1725 number of looms comprising of 63.48% Pat looms (1095 numbers) and 36.52% Muga looms (630 numbers). Pat looms are exclusively used for production of mulberry silk cloths and Muga looms are used for production of Muga silk cloths.

The popularly used varieties of looms of the state are : (i) Throw Shuttle, (ii) Throw Shuttle with a Draw Buoy, (iii) Fly Shuttle with Dobby, (iv) Fly Shuttle with a Draw Buoy, (v) Plain Fly Shuttle variety, and (vi) Jacquard . Loin loom is a commonly used variety in hill areas of North East India. It has been observed that in the process of modernization, use of traditional Throw Shuttle looms has lost their significance to a great extent. Inherent advantages of Fly-Shuttle varieties of looms over traditional looms pave the path of replacement of the old ones.

Introduction of Dobby and Jacquard looms in Sualkuchi is reported as a recent attachment. Dobby machine is not manufactured locally. In the earlier days of adoption, it was procured from Banaras. Now-a-days it is available in local market. It is found that although weavers of both sexes work in all varieties of looms, a probing understanding reveals that women feel more comfortable with all varieties of looms other

than the Jacquard loom. The reason behind is, operation of a Jacquard loom generally involves more physical strength.

**Description of Various types of Looms:**

**(i) Throw Shuttle Loom:** Throw shuttle loom is a variety of loom where a simple shuttle and a sley are used without having a race board and shuttle box. The shuttle is thrown by the hand through the shed of warp from one side and received by the other hand on the other side. The frame of the loom is made by using four stout bamboo posts which are driven into the ground forming a rectangle. The posts are joined at the top by cross beams. It is the pure indigenous traditional loom. The accessories required in a Throw shuttle loom are very simple and can be made out of indigenous materials, mostly of bamboo and wood.

**(ii) Fly Shuttle Loom :** Fly shuttle loom has a wooden frame with four posts. The Fly shuttle sley differs from the Throw shuttle sley mainly in the method of driving the shuttle from one end to the other. Shuttle boxes are provided in both ends of the sley for holding the shuttle and for the subsequent driving. The shuttle is driven with the help of a picker provided in each box. The shuttle is pushed by the picker, accelerated motion from the picker rope pulled by the weaver. Both sley and shuttle of Fly shuttle are much heavier than the sley and the shuttle used in Throw shuttle looms.

**(iii) Fly-Shuttle with a Drawbuoy :** The Drawbuoy system is the additional arrangement in a Fly shuttle loom for the shedding, required in extra weft designing. This additional arrangement for shedding can be made by means of extra set of heald shafts or harness. The Drawbuoy attachments, a special system is found to be most suitable for designing on handloom.



**(iv) Dobby Loom :** Dobby loom means a Fly shuttle loom with a Dobby machine. The over all frame of a Dobby loom is like that of a Fly shuttle loom. Dobby machine is more commonly used for the purpose of designing the borders of certain fabrics with extra warp. It is also used for structural designs with the figuring capacity of heald shaft, that can be separated by the machine. This machine with 6 to 40 levers, either of barrel or lattice type may be used for smaller designs. It can be used for shedding with healds as well as with the harness. The tie up connections of the heald are directly with the levers of the Dobby. The section of levers of Dobby for lifting is made with the help of pegs or a lattice. The rows of lattice are fixed in conformity with the number of picks of a repeat. The lattice is held by a barrel. The barrel rotates with the pressing of the treadle connecting the Dobby. The healds or harness move with the lifting of the lever to form a shed according to the pattern. The barrel is rotated by means of a catch. The movement of the barrel is regulated by a spring which allows the barrel to move a distance for inserting one pick at a time.

**(v) Jacquard Loom :** Jacquard loom is an improved variety of loom which was designed and first introduced by a French man named Jaseph Mave Jacquard in 1801. The designs woven out of a Jacquard loom are of very fine quality.

However, it may be put on record that during the present investigation, the use of a Jacquard loom has been found very infrequent in Sualkuchi. In fact, no jacquard loom is found in operation among the sample households of the study. Throw Shuttle looms are also not used by the sample households.

Regarding the use of loom varieties by the sample weaver households, it is observed that most popularly used looms in Sualkuchi include : (i) Fly Shuttle with Dobby, (ii) Fly-Shuttle with a Draw Buoy, and (iii) Fly Shuttle varieties. Details of the loom varieties used by the sample households are presented in Table - 4.2

**Table – 4.2****Type of Looms used by Sample Households**

Size Groups by Loom Ownership (in Nos.)	Sample Households (Nos.)	Variety of Looms			
		Fly-Shuttle With Dobby	Fly-Shuttle With a Drawbuoy	Fly-Shuttle Varieties	Total
Less than 5	17	34	12	6	52
5 - 10	19	125	10	8	143
10 - 20	23	279	27	16	322
20 - 30	27	626	22	-	648
30 - 40	7	238	14	-	252
40 & above	7	295	13	-	308
Total	100	1597	98	30	1725
% to Total Looms		(92.58%)	(5.68 %)	(1.74%)	(100%)

Predominance of Dobby loom is clearly visible in the sample households. Of the total 1725 nos. of looms of the sample weaver households, 92.58% are Fly shuttle fitted with a Dobby machine followed by 5.68% Fly shuttle looms with a Drawbuoy. The rest 1.74% looms are other varieties Fly shuttle looms.

In handloom weaving a large set of accessories are required. Most of those accessories are small equipments made of either wood or bamboo or cane. A few equipments like Denting Hook, sticks used in Sley, Pulleys etc. are made of steel or iron. Some of the equipments used in handloom weaving are : Charkha, Reeds or Sley, Pirm, Bobbin, Temple, Lease Stick, Treadle or Peddle, Pulley, Pulley Bar, Denting Hook, Long Lam, Short Lam, Balanced Rod, Jack Frame, Swift or Spool etc.

Details of equipments used by the sample households and essential provisions have been presented in Table – 4.3. In some cases number of possession of a particular accessory found to be more than one per loom. Cost of some of the accessories

**Table-4.3**  
**Equipments and other Provisions of the the Sample Weavers**

Nos of Looms Groups	No of HH	No. of Looms	No./ Price	Sley	Shuttle	Charkha	Bobbin	Pirns	Lease Stiek	Holi	Kathi	Nangal	Tultha	Sereki
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Below 5	17	52	No. Price	114 19950	208 15600	19 4180	629 3774	1144 4576	312 3120	130 650	1092 4368	104 2808	104 26000	51 1530
5---10	19	143	No. Price	380 66500	570 42750	22 4840	760 4560	3135 12540	998 9980	428 2140	3064 12256	285 7695	285 71250	67 2010
10---20	23	322	No. Price	966 169050	1288 96600	26 5720	874 5244	7406 29624	2576 25760	1127 5635	7084 28336	644 17388	644 161000	92 2760
20---30	27	648	No. Price	2008 351400	2592 194400	30 6600	1053 6318	12960 51840	4860 48600	2592 12960	14580 58320	1296 34992	1296 324000	122 3660
30---40	7	252	No. Price	806 141050	1008 75600	11 2420	336 2016	6048 24192	2142 21420	1134 5670	5796 23184	504 13608	504 126000	1260 37800
40 & above	7	308	No. Price	1015 177625	1232 92400	9 1980	350 2100	7238 28952	2710 27100	1540 7700	24360 97440	616 16632	616 154000	39 1170
Total	100	1,725	No. Price	5289 925575	6898 517350	117 25740	4002 24012	37931 151724	13598 135980	6951 34755	55976 223904	3449 93123	3449 862250	1631 48930

Contd/.

Spinning Machine	Durpati	Temple	Pulley & Pulley Bar	Denting Hook	Dobby/ Drawbuoy etc.	Wooden Frame	Others	Shed	Electricity Cost	Total
(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)
0	104	52	52	19	52	52	79	-	-	-
0	12480	1040	884	408.50	67860.00	32500.00	4784.00	260000.00	68640.00	535,152.50
1	285	143	143	23	173	143	161	-	-	-
3095	34200	2850	2431	494.50	225765.00	89062.50	13110.00	712500.00	188100.00	1,508,129.00
4	644	322	322	29	406	322	389	-	-	-
12380	77280	6440	5474	623.50	529830.00	201250.00	29624.00	1610000.00	425040.00	3,445,058.50
6	1296	648	648	39	936	648	697	-	-	-
18570	155520	12960	11016	838.50	1221480.00	405000.00	59616.00	3240000.00	855360.00	7,073,450.50
7	504	252	252	16	576	252	277	-	-	-
21665	60480	5040	4284	344.00	751680.00	157500.00	23184.00	1260000.00	332640.00	3,089,777.00
8	616	308	308	19	836	308	352	-	-	-
24760	73920	6160	5236	408.50	1090980.00	192500.00	28336.00	1540000.00	406560.00	3,975,959.50
26	3449	1725	1725	145	1,725	1,725	1955	-	-	-
80470	413880	34490	29325	3117.50	3887595.00	1077812.50	158654.00	8622500.00	2276340.00	19,627,527.00



Finishing refers to anything that is done to the fibre, yarn or the fabrics before or after weaving to change the appearance and over all get up of the final products. Some preliminary treatments are essential for elegant finishing. These are generally done before the final finishing touches are given. These preliminary treatments include : (a) Bleaching, (b) Degumming, (c) Desizing and (d) Dyeing. It may be noted that both bleaching and degumming are done in the same operation. A certain amount of stiffness in the yarn as well as in the washed cloths gives them a smooth glossy surface, which is resistant to dirt and dust. This process is known as sizing. Sizing involves a number of steps, viz; starching, rinsing and dyeing. Sizing is done in order to strengthen and protect the yarns during weaving. In Sualkuchi, the frequently used materials for sizing include : wheat flour, rice starch, sago, potato starch and barley. As reported by the sample silk weavers of Sualkuchi, to size 1 kilogram of Pat yarn, one has to use around 20 liters of water, 100 gram soda, 125 gram soap and 250 gram of rice starch or sago. It is also reported that if sago starch is used in lieu of rice starch, the yarn needs to be kept soaked in the mixture for about half an hour before it is finally washed. To size one and a half kilogram of Muga yarn, 20 liters of water, 100 gram of soda, 250 gram gum, 100 gram muga colour, half kilogram of sago and 1 kilogram of wheat flour are required. Sizing is done only in length-wise yarn. The yarns used cross-wise do not need sizing. Sizing is done in hanks, hung on a bamboo stick to dry. In the sizing solution, paraffin, glycerin or oil produces are added to soften the yarns and wax provides it with a glossy luster. Kerosene oil is used to keep insects away. This has been observed during field investigation that women folk generally undertake most of the works of preliminary treatments.

The world of textile without colour is almost unimaginable. Earlier one has to depend on plants and insects for supply of colours. Today, with the availability of synthetic dyes, there are hundreds of colour to be chosen from. Dyes are soluble substance which penetrate into the fibre and are fixed by chemical action, heat or other

treatment. Dyeing is done in various stages of fabric production – before spinning ( fibre stage ), after reeling and spinning ( yarn stage ) and after weaving ( cloth stage ). Fibre dyeing refers to the addition of dye to the loose fibre before spinning. Yarns are dyed in hanks ( locally called as '*Nesha*' ) or packages before weaving. When dye is applied to the finishing fabrics, it is known as piece dyeing. It has been observed that although most of the other preliminary treatments are done by the women folk, in case of dyeing treatment, both men and women are equally engaged themselves in this work in rotation as constant attention is needed for uniform and perfect dyeing.

After the preliminary treatments, winding of yarns and warping of yarns have to be undertaken. There are two types of warping ; one is stick warping and other is drum warping. In Sualkuchi, stick warping has now-a-days become completely obsolete. All weaver households of Sualkuchi at present invariably use drum warping. It can be carried out both indoor and outdoor and also involve relatively less time resulting warping of more yarns at a time.

The sample households are associated with production of a large varieties of silk cloths in their looms. These are : ( i ) Pat Sets comprising of same type of one Mekhela, one Chadar and one Blouse piece per Set (3 items) of mulberry silk, ( ii ) Muga Sets comprising of same type of one Mekhela, one Chadar and one Blouse piece per Set (3 items) of Muga silk, ( iii ) Pat Joras comprising of same type of one Mekhela, one Chadar, one Riha and one Blouse piece per Jora (4 items ) of mulberry silk, (iv) Muga Joras comprising of same type of one Mekhela, one Chadar, one Riha and one Blouse piece per Jora (4 items) of Muga silk, (v) Pat Single Mekhela, (vi) Muga Single Mekhela, (vii) Pat Single Chadar, (viii) Muga Single Chadar, (ix) Pat Single Riha, (x)Muga Single Riha, (xi) Pat Saree with matching Blouse piece (xii) Muga Saree with matching Blouse piece and (xiii)some Other items which include Pat Gamocha, Muga Gamocha (Towel), Pat Shirt piece, Muga Shirt piece, Pat Suria (Dhoti) etc. Total

production of various types of silk cloths and the prices of these products of the sample weaver households are presented in Table – 4.4.

**Table-4.4**  
**Annual Production of Silk Cloths of the Sample Households**

Sl. No.	Products	Nos. of Products	Average Price per Product (in Rs.)	Total Value (in Rs.)
1	Pat Set	9,312	3,154.42	2,93,73,959.04
2	Muga Set	5,518	3,609.00	1,99,15,905.60
3	Pat Jora	6,622	4,047.00	2,67,99,557.76
4	Muga Jora	4,967	4,906.00	2,43,65,943.36
5	Pat Mekhela	5,518	265.00	14,62,376.00
6	Pat Chadar	5,518	375.00	20,69,400.00
7	Muga Mekhela	4,967	535.00	26,57,109.60
8	Muga Riha	267	610.00	1,62,870.00
9	Pat Saree	4,415	3,150.00	1,39,06,368.00
10	Muga Saree	2,759	3,832.00	1,05,73,254.40
11	Others	1,656	293.00	4,85,067.36
	<b>Total</b>	<b>51,519</b>	<b>2,557.74</b>	<b>13,17,71,811.12</b>

The annual gross income (value of total produces) of sample households from silk cloths production in the year 2007 was Rs. 13,17,71,811.12 of which 56.00% came from mulberry cloths and the rest 44.00% contributed by Muga cloths. The average income per sample household was over thirteen lakh per annum (Rs. 13,17,718.11). Highest income was coming from production of Pat Set amounting 22.35 % of total income followed by Pat Jora which earned 20.39 % of total income. Muga silk cloths are



costlier than Pat silk cloths. As such, demand for Pat cloths is higher than Muga cloths. As a result, silk weaver households give more emphasis on production of Pat cloths than the Muga cloths. Production of Pat and Muga Sarees has gaining popularity because, although it is not a traditional attire of Assamese women, now-a-days Saree is wear by many Assamese women. It is also much common that many outsiders (women belonging to other States of India who are either visited Assam for holidaying or female employees posted in the State or stay with their working husband / relatives) are keen to purchase Pat and Muga silk Sarees for their unique design, quality and also as passion. Some outsiders prefer to posses Pat and Muga Sarees as souvenir of Assam. Total number of products inclusive of all varieties of items produced in the looms of the sample households was 51,519 in the year under reference.

Handloom weaving is a labour intensive enterprise. Being an age-old traditional profession, some of the family members of the sample households are involved in weaving culture. Apart from the family members, quite a large number of hired weavers, mostly skilled ones, are engaged in weaving of silk cloths of the sample households. Table – 4.5 has shown the Mandays of labour employed (both family labour and hired labour) and wages to the family labour (estimated) as well as wages to the hired labour (paid up). Total number of mandays required in the year for production of 51,519 nos. of silk cloth items from 1,725 looms of the sample households was 3,67,407 mandays; the shares of family labour and hired labour being 73,481 mandays (20.00% of total mandays) and 2,93,926 mandays (80.00% of total mandays) respectively. Proportion of male and female family labour was 40:60 where as it was 20:80 in case of hired labour.

The estimated wages to the family labours was Rs. 73,48,145.00 of which Rs. 29,39,250.00 (40.00%) for male and Rs.44,08,887.00 (60.00%) for female family labours. A heavy amount of expenditure had to be borne by sample households as wages paid to the hired labours. The total wages paid to the hired labours in the year stood at Rs. 2,93,92,583.00 of which Rs. 58,78,517.00 (20.00%) for male weavers and Rs. 2,35,14,066.00 (80.00%) for female weavers. Total cost, combining all workers

Table-4.5

## Employment of Labour in Silk Cloth Weaving

Sl. No.	Products	Nos of Products	Total Man Days	Man Days					
				Family Labour			Hired Labour		
				Total	Male	Female	Total	Male	Female
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	Pat Set	9312	79152	15830	6332	9498	63322	12664	50657
2	Muga Set	5518	52425	10485	4194	6291	41940	8388	33552
3	Pat Jora	6622	66221	13244	5298	7946	52977	10595	42381
4	Muga Jora	4967	49666	9933	3973	5960	39732	7946	31786
5	Pat Mekhela	5518	16555	3311	1324	1987	13244	2649	10595
6	Pat Chadar	5518	33110	6622	2649	3973	26488	5298	21191
7	Muga Mekhela	4967	14900	2980	1192	1788	11920	2384	9536
8	Muga Riha	267	1602	320	128	192	1282	256	1025
9	Pat Sari	4415	30903	6181	2472	3708	24722	4944	19778
10	Muga Sari	2759	19314	3863	1545	2318	15452	3090	12361
11	Others	1656	3559	712	285	427	2847	569	2278
	Total	51519	367407	73481	29393	44089	293926	58785	235141

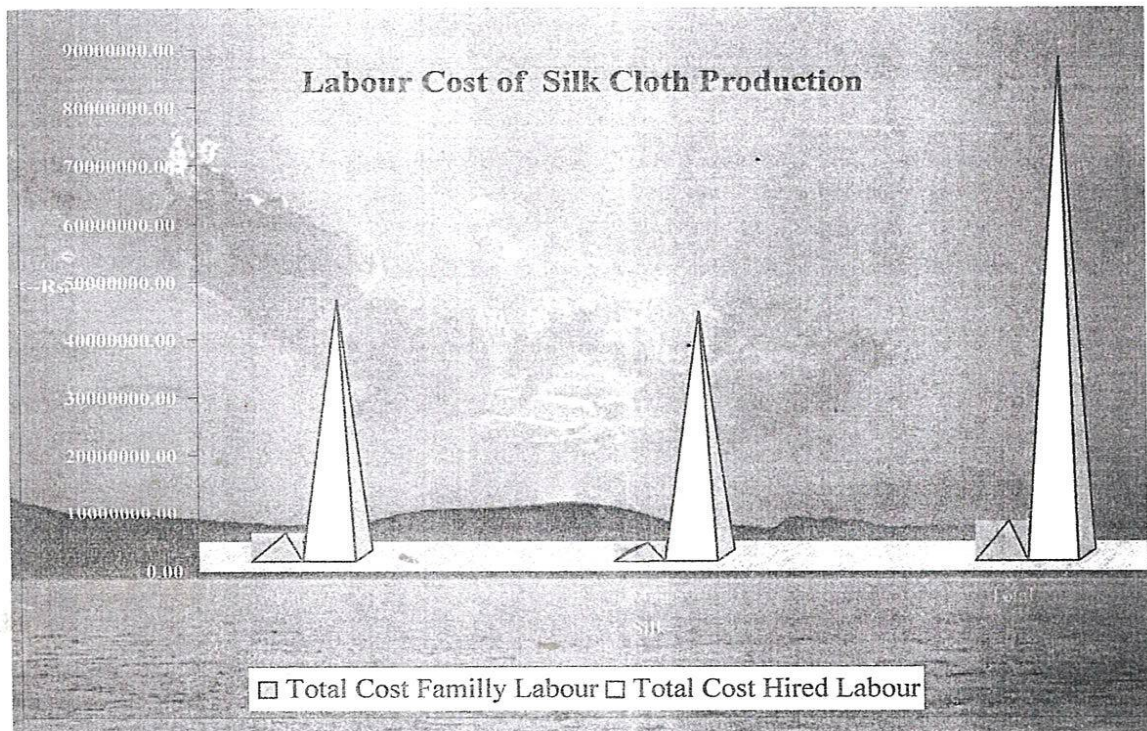
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Total	Cost of Labour						Total	
	Family Labour (Estimated)			Hired Labour				
	Male	Female	Total	Male	Female	Total		
(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
1583040	633216	949824	6332160	1266432	5065728	1899648	6015552	7915200
1048496	419398	629098	4193984	838797	3355187	1258195	3984285	5242480
1324416	529766	794650	5297664	1059533	4238131	1589299	5032781	6622080
993312	397325	595987	3973248	794650	3178598	1191974	3774586	4966560
331104	132442	198662	1324416	264883	1059533	397325	1258195	1655520
662208	264883	397325	2648832	529766	2119066	794650	2516390	3311040
297994	119197	178796	1191974	238395	953580	357592	1132376	1489968
32040	12816	19224	128160	25632	102528	38448	121752	160200
618060	247224	370836	2472243	494449	1977795	741673	2348631	3090303
386288	154515	231773	1545152	309030	1236122	463346	1467894	1931440
71187	28475	42712	284749	56950	227800	85425	270512	355937
7348145	2939258	4408887	29392583	5878517	23514066	8817775	27922954	36740728



(both family labour and hired labour) was Rs. 3,67,40,729.00; amounting 24.00 % (Rs. 88,17,775.00) for males and 76.00 % (Rs. 2,79,22,954.00%) for female weavers. Total labour costs of the sample households is presented in Fig – V.

**Fig: V**



Apart from expenditures on accessories, essential provisions and labour, purchasing of raw materials is the most important financial involvement in silk cloth weaving. Main raw materials required in silk cloth production are : (1) Pat and Muga Yarns, (2) Guna (the thread coated in gold is golden Guna and the thread coated in silver is silver Guna ) and various coloured threads (cotton and silk dyed threads) for making designs and motifs in the cloths, (3) Heald needed for making sheds as well as patterns during weaving. Expenditures incurred in procuring raw materials for production of silk cloths by the sample households have been presented in Table -4.6



**Table-4.6****Expenses on Raw materials**

Sl No.	Raw Materials	Total Raw Materials (Kg)	Price/Kg (Rs.)	Total Cost (Rs.)
1	Pat Yarn	7595.07	1648.00	12516675.36
2	Muga Yarn	4781.12	4800.00	22949376.00
3	Guna	41.00	6100.00	250100.00
4	Coloured Thread	431.25	163.00	70293.75
5	Heald	431.25	183.00	78918.75
	<b>Total</b>	-	--	35865363.86

As reported by the respondents, all sample families purchased their required raw materials from the local market. None of them involved in rearing of either mulberry or muga silk worms or spinning of any type of silk cocoons. The total cost on raw materials incurred by the sample households during the year under reference stood at Rs 35865363.86 of which maximum expenditure was for Muga Yarn (63.99 %) followed by Pat Yarns ( 34.90 % ), Guna ( 0.70 % ), Coloured threads ( 0.19 % ) and Healds (0.22 %).

Total costs of production of silk cloths of sample households is presented in Table- 4.7. In calculating total costs of production of silk cloths of sample households, an amount of managerial/management cost (miscellaneous expenditure) has been added which is worked out by charging interest at the rate of 2% per annum on operational costs. Operational costs consist of costs of equipments, expenditures on essential provisions, labour costs ( both imputed wages to family labours and paid up wages to hired labours) and expenditures on raw materials. Of the total cost of production, 39.12 % was spent on

wages of labour, 38.18 % incurred on purchasing raw materials, 20.90 % on accessories & provisions and rest 1.80 % managerial cost.

**Table-4.7**

**Total Annual Cost of Production of Silk Cloths of Sample Households in the Reference year**

( in Rs.)

Item	Muga Weavers	Pat Weavers	Total	Percentage to Total Cost
1.Equipments, Provisions Cost	7168314.21	12459212.79	19627527.00	20.90
2. Labour Cost				
(i) Family Labour	2718814.00	4629331.00	7348145.00	7.82
(ii) Hired Labour	11233845.00	18158738.00	29392583.00	31.29
(iii) Total Labour Cost	13952659.00	22788069.00	36740728.00	39.12
3.Raw Material Cost	23109101.00	12756262.86	35865363.86	38.18
4.Miscellaneous Expenditure @2%	829666.59	864323.76	1693990.35	1.80
<b>Total Costs</b>	<b>45059740.80</b>	<b>48867868.41</b>	<b>93927609.21</b>	<b>100.00</b>

The net income from silk weaving of the sample households has been worked out and presented in Table 4.8. Total value of silk cloths produced in the looms of the sample households was Rs. 13,17,71,811.12 in 2006-07 of which 56.00% came from mulberry cloths and the rest 44.00% contributed by Muga cloths. Total cost of production stood at Rs. 9,39,27,609.21; the shares of Pat and Muga cloths into total expenditure were 52.03% and 47.97% respectively. The net income of the sample households calculated by deducting total cost of production from total value of all silk cloths weaved in the looms of sample households is found at Rs. 3,78,44,201.91 consisting of 66.02 % ( Rs. 2,49,86,326.07 ) from mulberry silk cloths and 33.98 % ( Rs.1,28,57,875.84) from Muga silk cloths. The over all annual average income per loom found at almost twenty two thousands (Rs.21,938.67); the average income from per Pat loom and Muga loom being Rs.22,818.56 and Rs. 20,409.33 respectively.



**Table- 4.8****Return to Sample House Holds from Silk Weaving**

Variety of Silk	Gross Return	Total Cost of Production	Net Return (Net Income)	Average income Per Sample Loom	BCR
Pat	73,854,194.48	4,88,67,868.41	2,49,86,326.07	22,818.56	1.51
Muga	57,917,616.64	4,50,59,740.80	1,28,57,875.84	20,409.33	1.29
Total	131,771,811.12	9,39,27,609.21	3,78,44,201.91	21,938.67	1.40

Returns to sample households from silk cloth production are also graphically presented in Fig-VI( Gross Income ), Fig-VII ( Total Cost of Production ), Fig-VIII (Net Income) and Fig- IX ( Average Income per Loom ) .

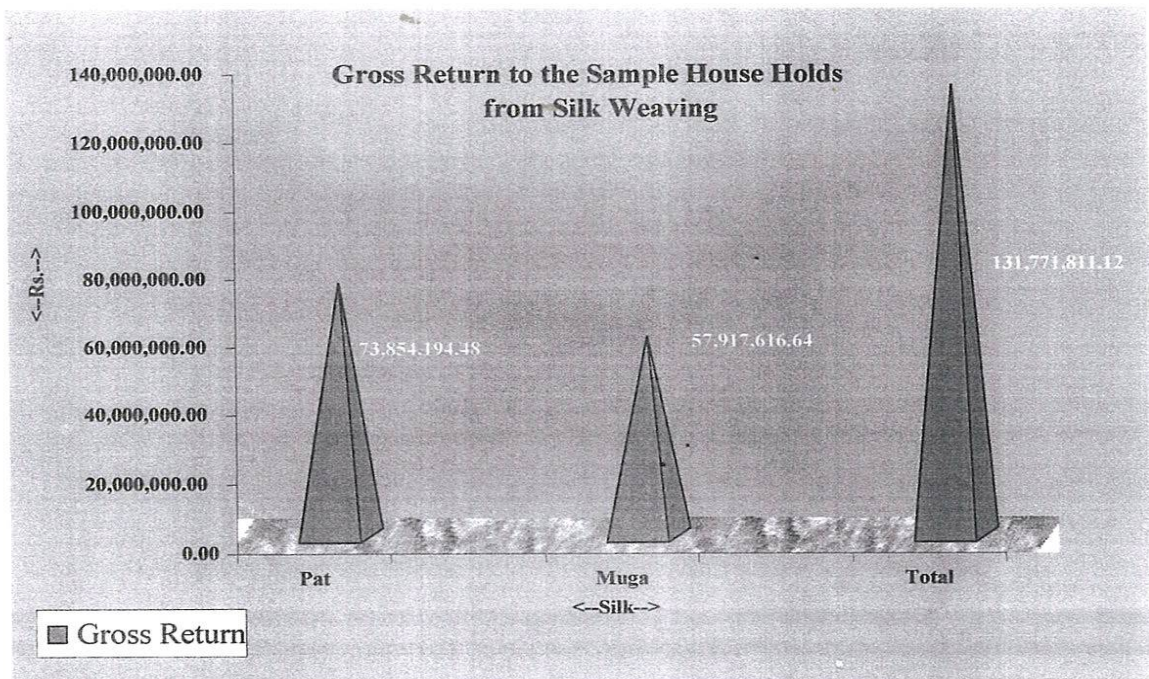
**Fig : VI**



Fig: VII

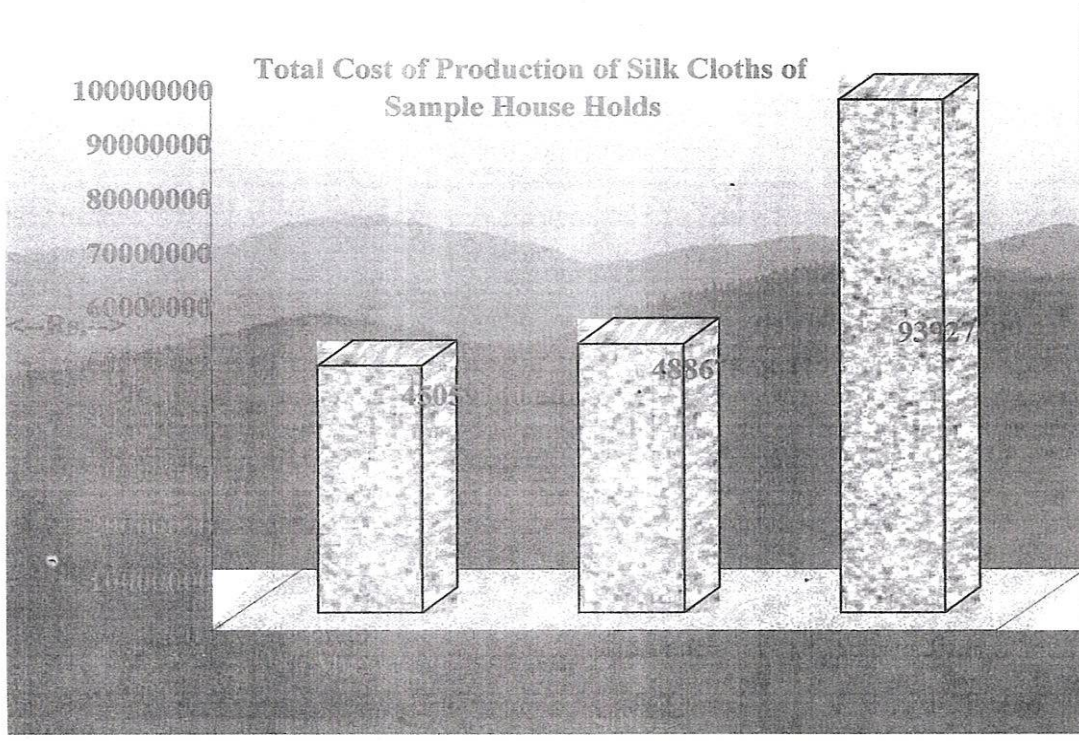
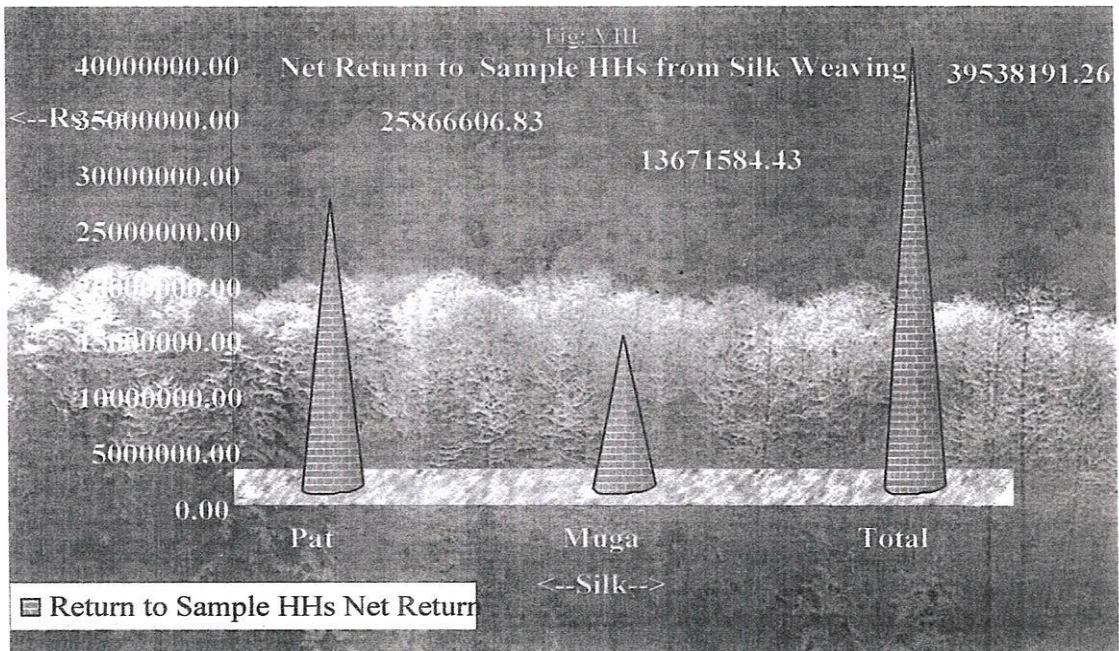
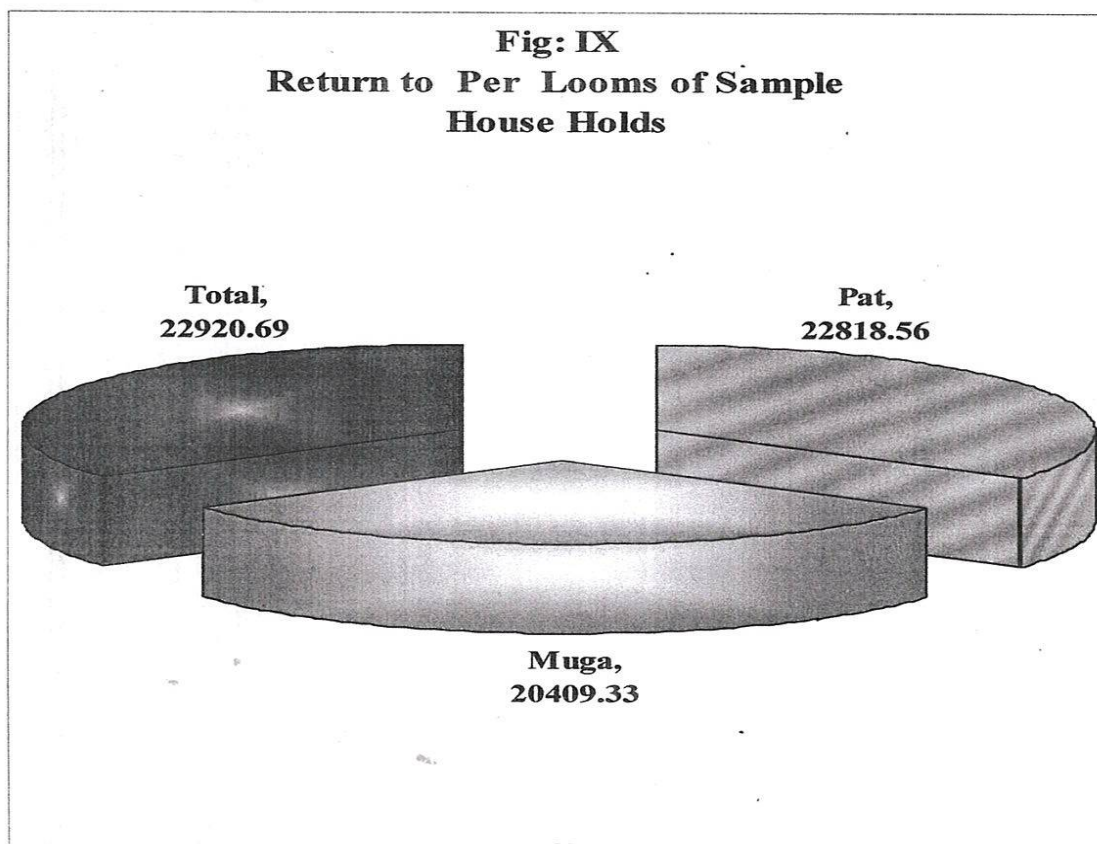


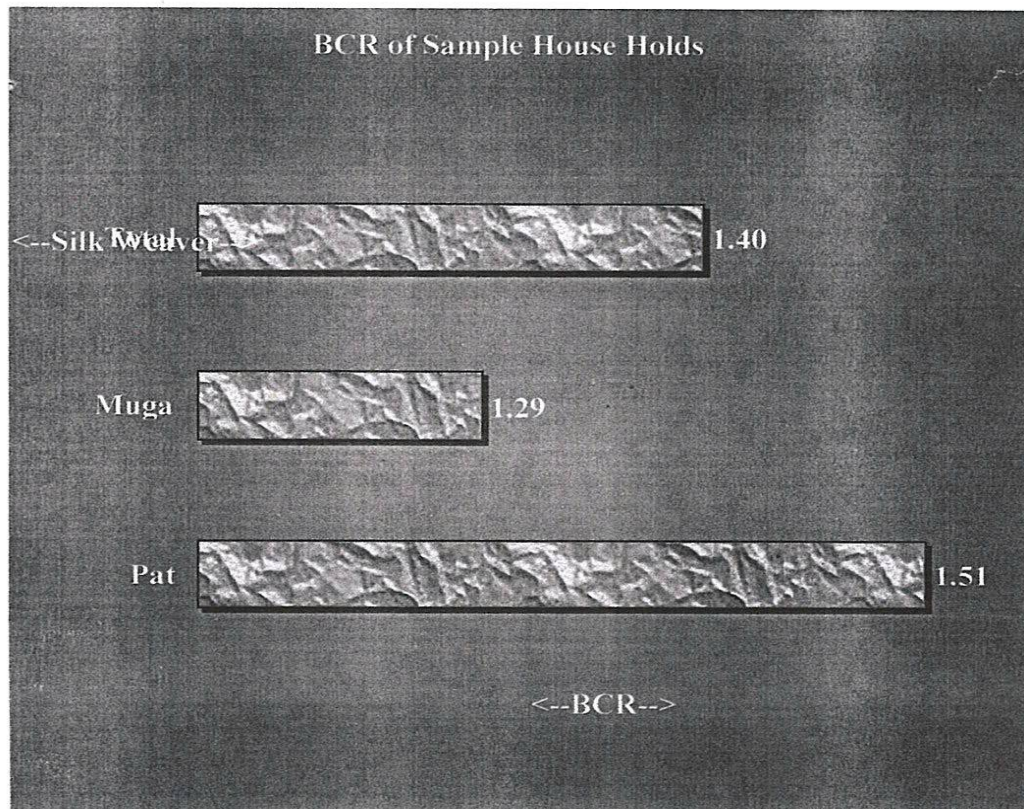
Fig: VIII





The Benefit Cost Ratio ( BCR ) of silk cloths production of sample households is calculated (Table- 4.9) to examine economic viability of silk cloths production of the sample weaver households. It is found that Silk cloths weaving is an economically viable enterprise as the BCR is found at 1.40. The Table indicates that category-wise BCR of Pat cloths production is 1.51, where as BCR of Muga cloths production is 1.29. Fig- X shows the BCR of Pat silk cloths and Muga silk cloths produced by the sample households.



**Fig: X**

The total capital investments ( combining both fixed capital and working capital ) have been summarized and presented in Table 4.9. The sample silk cloth weaver households invested an amount of Rs. 1,96,27,527.00 on various items which is the fixed capital of silk cloths weaving. The amount of working capital of the sample households in the year under study was Rs.7,43,00,082.21; figuring the total capital investments at Rs. 9,39,27,609.21.



**Table -4.9****Capital Investment in Sample Silk Weaver Households**

<b>Capital</b>	<b>Number</b>	<b>Price (in Rs.)</b>
<b>1. Fixed Capital</b>		
(a) Sley	5,289	9,25,575.00
(b) Shuttle	6,898	5,17,350.00
(c) Charkha	117	25,740.00
(d) Bobbin	4,002	24,012.00
(d) Pirns	37,931	1,51,724.00
(e) Lease Stick	13,598	1,35,980.00
(f) Holi	6,951	34,755.00
(g) Kathi	55,976	2,23,904.00
(h)Nangal	3,449	93,123.00
(i) Tultha	3,449	8,62,250.00
(j) Sereki	1,631	48,930.00
(k) Spining Machine	26	80,470.00
(l) Durpati	3,449	4,13,880.00
(m)Temple	1,725	34,490.00
(n) Pulley & Pulley Bar	1,725	29,325.00
(o)Denting Hook	145	3,117.50
(p) Dobby/ Drawbuoy etc.	1,725	38,87,595.00
(q) Wooden Frame	1,725	10,77,812.50
(r)Others	1,955	1,58,654.00
(s) Shed	-	86,22,500.00
(t) Electricity Cost	-	22,76,340.00
<b>Total Fixed Capital</b>	<b>1,51,766</b>	<b>1,96,27,527.00</b>
<b>2. Working Capital</b>		
(a) Labour Wages(Man Days)	3,67,407	3,67,40,728.00
(b) Raw Material (Kg.)	13,279.69	3,58,65,363.86
(c)Managerial Cost @ 2% of Total Cost		16,93,990.35
<b>Total Working Capital</b>		<b>7,43,00,082.21</b>
<b>3.Total Capital (1 + 2)</b>		<b>9,39,27,609.21</b>

## CHAPTER – V

### **Marketing of Mulberry and Muga Silk Cloths of Sample Households**

An attempt has been made in this chapter to examine marketing system, marketing channels and marketing costs of the finished products, i.e.; Pat and Muga cloths of the sample households. The utmost important aspect for successful and sustainable growth of a particular enterprise is marketing of its finished products. Without a sound and secured market, no industry, what so ever, can be persisted and flourished. A good market plays the pivotal role in the economy and the social life of a place and its people.

Efficient marketing network is very essential for the producers to dispose of their produces at reasonable prices. Remunerative sale proceeds of their products is a great incentive for the producers as it encourages them to produce more. Efficient marketing is equally important for the receiving end ( consumers/customers ) too as they want to get the required products of good quality at a reasonable price and at a proper time. “ It is marketing which helps making goods useful to the society by getting them where they are wanted, when they are wanted and transferring them to those people who want them.” – (Sinha, 1976).

Modern marketing system provides the channels of communication among the producers, consumers/customers and market functionaries. The marketing system provides knowledge to the producers regarding the magnitude of demand for their produces. In short, marketing is the performance of all business activities involved in the flow of goods and services from the point of production to the ultimate users through a channel of market functionaries. Hence, the most fundamental function of marketing is to

make ways for the products to the users. In other words, marketing system performs the function of coinciding supply with demand. Fortunately, Sualkuchi has a well organized sound marketing system for Pat and Muga cloths produced by people of the area. Demand and supply which are the core force for the growth of a healthy market is present in the marketing system of Sualkuchi. There is immense demand for the silk cloths produced in Sualkuchi and that encourages the weaver households of Sualkuchi to devote entirely in silk cloths weaving. So, there is no dearth of customers for the produces of Sualkuchi. It has already been stated in the earlier chapters how old the silk industry in Sualkuchi is and how much prestige as well as demand associated with the silk cloths produced there.

The micro field survey of the present study shows that the sample households are enjoying benefit of a well structured marketing system of the area. In the ancient days, the weavers of silk cloths of Sualkuchi had to carry their produces to different places for sale. Now-a-days, the scenario has changed. It is reported by the sample households that selling out of finished products is no longer a problem. Many a times the situation is reverse; there is more demand than the supply for the finished products. However, it is also reported by a few respondents that although they know their products could fetch better prices in outside Sualkuchi, they have to sell their products to local traders in low prices for economic hardship. Opinions have been sought on whether difficulties have been faced or not by the sample households in marketing of their silk cloth items through various functionaries/intermediaries and presented in Table – 5.1.

It is found that out of 17 households in the group of less than 5 Nos. of loom ownership, 12 households reported as facing difficulties in trading with Village Traders/Commission Agents. Only 5 households of this group opined as having no problems in dealing with Village Traders/Commission Agents. Maximum respondents have been found (16 Nos.) in the size group of 5 – 10 looms who said as facing difficulties with local Traders/Commission Agents followed by 13 households from the size group of 10 – 20 loom owners. The rest sample households are comfortable with local Traders/Commission Agents.



looms reported having difficulties. Rests are not facing any difficulties with Wholesalers and Co-operative Societies.

Enquiry has been made regarding nature of difficulties confronted by the sample households in marketing their silk cloths. All respondents who are facing difficulties viewed that there is no other difficulties except payment on their products. Some of them said that they are not getting good prices for their silk cloths and some of them expressed dissatisfaction for delay in payments by the intermediaries/functionaries. Opinions regarding problems related to payment and prices have been gathered and presented in Table – 5.2.

**Table – 5.2**

**Problems related to Payment and Prices faced by Sample Households**

**( in Percentage)**

Market Functionaries	Delayed Payment		Low Price	
	Yes	No	Yes	No
1. Village Traders / Commission Agents	24	76	17	83
2. Local Market	2	98	4	96
3. Wholesalers	0	100	8	92
4. Co-operative Societies	4	96	4	96

Out of the total sample households, 24 per cent households complained of delayed payment and 17 per cent expressed getting low price from the Village Traders/ Commission Agents. In case of selling silk cloths in local market, 2 per cent sample households informed about delayed payment by the retail silk cloth shop owners where they have deposited their products for sale and 4 per cent said that the shop owners offer them much lower prices for their silk cloths. Dealing with Wholesalers is reported as problem free in payment. However, 8 per cent sample households viewed that though the Wholesalers are good in payment for their products, yet, they usually offer much lower prices for the silk cloths. There are 4 per cent sample households who said that Co-operative Societies are also delayed in payment. Same number (i.e; 4 per cent) of sample

households expressed dissatisfaction on the prices offered by the Co-operative Societies for their silk cloth items.

The sample households are asked about their preferences regarding choosing of business intermediaries for selling the silk cloths produced in their individual factories as there are many intermediaries, viz; Village Traders/Commission Agents, Local Market, Wholesalers and Co-operative Societies. Sample households have expressed more than one preference in choosing market intermediaries as per their individual suitability on varied conditions. Loom ownership size group wise opinions on sales preference by the sample weaver households is shown in Table 5.3.

**Table 5.3**  
**Sales Preference of the Weaver Households**

Size Groups by Loom Ownership	Village Traders/ Commission Agents		Local Market		Wholesalers		Co-operative Societies	
	Yes	No	Yes	No	Yes	No	Yes	No
Less than 5 ( 17 HHs )	6	11	4	13	5	12	12	5
5----10 ( 19 HHs )	7	12	7	12	9	10	13	6
10----20 ( 23 HHs )	9	14	10	13	15	8	11	12
20----30 ( 27 HHs )	12	15	15	12	10	17	15	12
30----40 ( 7 HHs )	1	6	3	4	1	6	3	4
40 & above ( 7 HHs )	2	5	0	7	2	5	1	6
Total ( 100 HHs )	37	63	39	61	42	58	55	45

The opinion Table shows that out of hundred sample households, 37 samples have preferred to sale their silk cloths to Village Traders/Commission Agents and 63 samples do not prefer them. These Village Traders are used to visit factories of the sample households and collect various finished silk cloth items by paying prices

which are normally much lower than the outside market prices for the respective silk items. After collecting the silk cloth items, they supply those to retail shops of various places. On the other hand, Commission Agents do not pay on spots the prices of the goods they are collected from the factories. They have prefixed prices of various items with the loom owners and commission thereof on percentage basis. They then carry the items for sale in different places out of Sualkuchi. After finishing the sales, the Commission Agents keep their shares of commission before handing over the sale proceeds to the loom owners.

So far trading in local market is concerned, 39 per cent prefer to sale their products in local market against 61 per cent who are not interested with the trade in local market. There are 42 per cent sample households whose preference is wholesalers where as 58 per cent dislike wholesalers. It is found that business deal with Co-operative Societies is preferred by as many as 55 per cent sample households and 45 per cent do not like to sale their cloths to the Co-operative Societies.

A detailed analysis of marketing system and channels there of that are working in the area indicates that the silk cloths market of Sualkuchi is governed by various functionaries . There are as many as six (6) marketing channels which are dealing with silk cloths trading in the area. The following marketing channels are operating in Sualkuchi :

Channel – I : Producer – Customer

Channel – II : Producer – Retailer – Customer

Channel – III : Producer – Wholesaler – Retailer - Customer

Channel – IV : Producer – Commission Agent – Retailer - Customer

Channel – V : Producer – Co-operative Society – State Govt. - Customer

Channel – VI : Producer– Co-operative Society – Wholesaler - Retailer – Customer

In the present study, three markets located in three prominent towns of the State are surveyed to assess the working of marketing channels of silk cloths besides the local Sualkuchi market . These three sample markets of are :

(1) Pathsala market,



(2) Guwahati market and

(3) Jorhat market.

Pathsala market is selected as one nearby market of Sualkuchi being it is situated in Pathsala town which is only 25 km away from Sualkuchi. Guwahati market is selected as the market at the heart line of Assam. It is situated in Guwahati town, i.e. in the capital city of the State which is 32 km away from Sualkuchi. Lastly, Jorhat market of Jorhat town is selected as a market situated in a distant place from Sualkuchi. Jorhat town of Upper Assam is 340 km away from Sualkuchi.

To work out price spread of silk cloths in these markets, the average price of total silk cloths produced in the sample households is taken into account. Unit-wise calculation of price spread of various silk cloth items is, however, avoided as the average price is a good indicator of marketing cost structure of silk cloths due to their low volume, light weight etc. The marketing charges like CESS, VAT are also not imposed in silk cloths trading. Initially taxes @ 4% were imposed on finished products which are now withdrawn as a measure of providing incentives on production of such items. It may also be mentioned that both State Government as well as Central Government are very much keen to encourage the production and marketing of silk cloths produced in Sualkuchi for their unique features. The Textile Department of State Government has a wide marketing net work of cloths produced in Sualkuchi, specially the silk cloths throw out the country. "Pragjyotika" is the leading enterprise runs by the State Govt. where various silk cloth items are traded apart from the Assam State Government. Emporiums.

Notwithstanding the high quality and established acclamations for the silk cloths of Sualkuchi, ironically no sample weaver household has been found having trade with outside the State, not to mention about exports of silk cloths. As such, marketing channel, linked with export of silk cloths, is non existent at Sualkuchi. Export of silk cloths from Assam is exclusively confined to a few Guwahati based entrepreneurs who have their own looms (factories) at Guwahati Town.

#### **Channel – 1 : Producer – Customer**

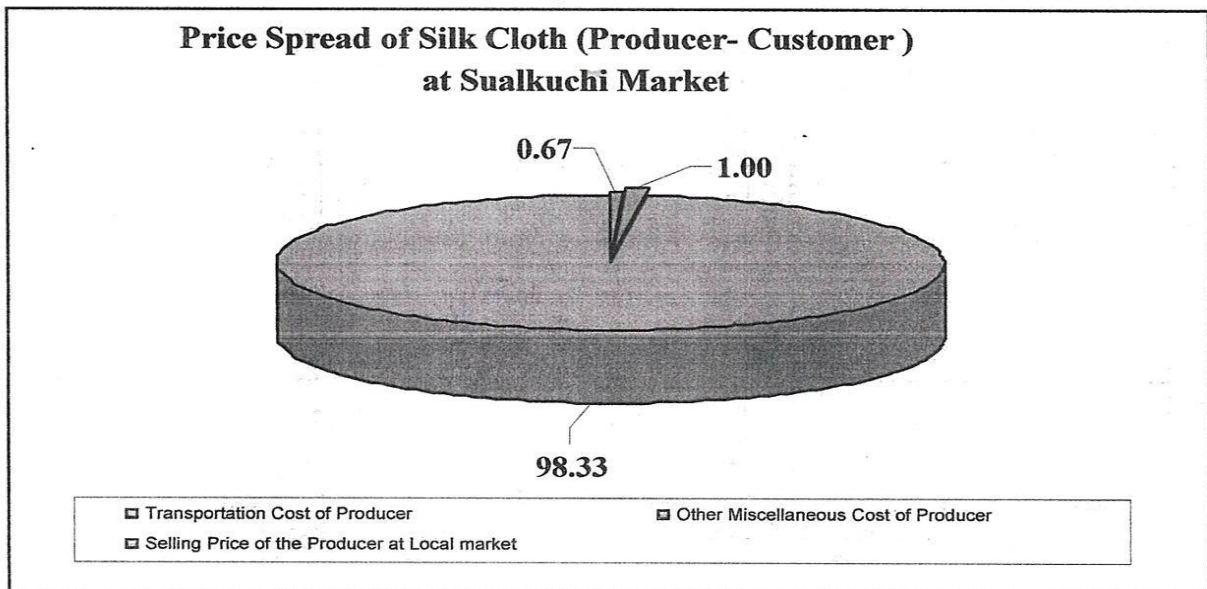
As mentioned earlier, many of the sample households have sold out their

produces to customers directly through their retail silk cloths shops located in Sualkuchi market. Table 5.4 has shown the price spread of this direct marketing channel at Sualkuchi. The Table indicates that the producers have enjoying 98.33 % share of consumer's (customer's) rupee in this channel as transportation cost and other miscellaneous costs are nominal. Fig – XI shows the diagrammatic representation of Channel – 1.

**Table - 5.4**  
**Price Spread of Silk Cloth (Producer- Customer )**

<b>Sualkuchi Market</b>				
Sl. No.	Market Functionary and Costs Involved	Average Price (Rs)	Margin at Different Level(Rs)	Percentage
1	Producer's Selling Price at Loom	2557.47	-	-
2	Transportation Cost of Producer	25.57	25.57	0.67
3	Other Miscellaneous Cost of Producer	38.36	38.36	1.00
4	Selling Price of the Producer at Local market i.e; Customer's Purchase Price	3836.21	3772.27	98.33
5	Total		3836.21	100.00

**Fig - XI**



### Channel – II: Producer – Retailer – Customer

In this Channel producers sale their silk cloths to the retailers and the retailers sale these cloths to the customers through their retail silk cloths shops situated in their respective localities. Price spread of Channel- II in Pathsala, Guwahati and Jorhat markets are shown in Table 5.5(a), Table 5.5(b) and Table 5.5(c) respectively. Tables of Channel – II indicate that share of consumer's (customer's) rupee for the producer is highest in Pathsala market as it being 62.11% followed by 61.54% in Guwahati market and 60.24% in Jorhat market. Retailer's share of consumer's (customer's) rupee is 36.65% in Pathsala, 36.62% in Guwahati and 36.14% in Jorhat markets.

Fig – XII (a), Fig – XII (b) and Fig – XII (c) are presenting price spread of Channel – II of Pathsala, Guwahati and Jorhat markets respectively.

**Table - 5.5(a)**

#### Price Spread of Silk Cloth (Producer- Retailer-Customer)

Sl. No.	Market Functionaries and Costs Involved	Average Price(Rs)	Pathsala Market	
			Margin at Different Level(Rs)	Percentage
1	Producer's Selling Price i.e Retailer purchasing price	2557.47	2557.47	62.11
2	Transportation Cost of Retailer	12.79	12.79	0.31
3	Other Miscellaneous Cost of Retailer	38.36	38.36	0.93
4	Selling Price of the Retailer	4117.53	1508.91	36.65
5	Total		4117.53	100.00



Fig - XII(a)

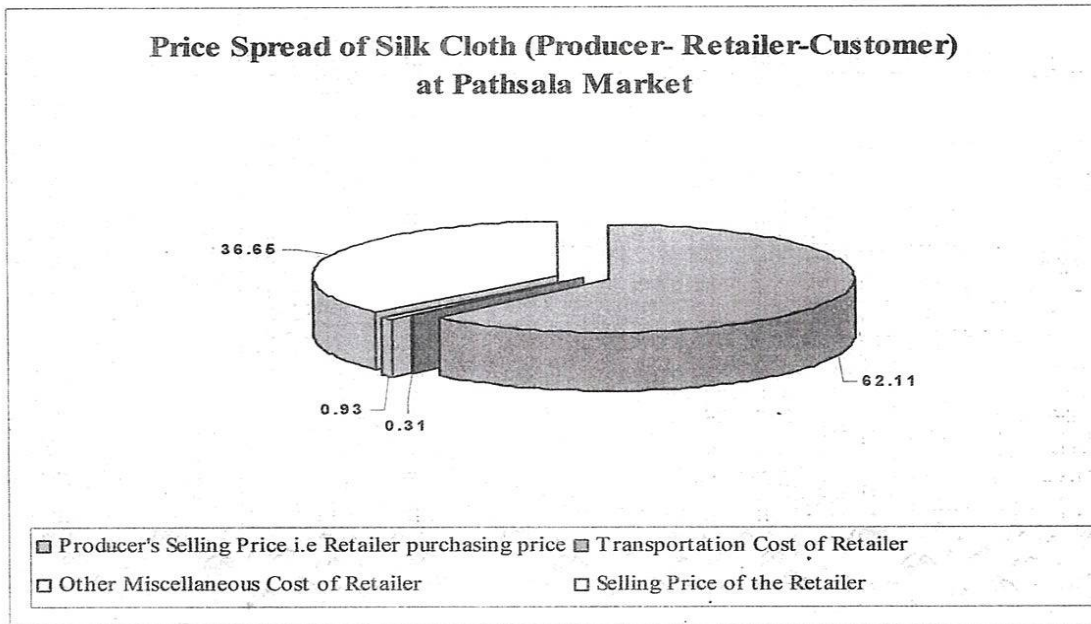


Table - 5.5 (b)

## Price Spread of Silk Cloth (Producer- Retailer-Customer)

			Guwahati	Market
Sl. No.	Market Functionaries and Costs Involved	Average Price (Rs)	Margin at Different Level(Rs)	Percentage
1	Producer's Selling Price i.e Retailer purchasing price	2557.47	2557.47	61.54
2	Transportation Cost of Retailer	25.57	25.57	0.62
3	Other Miscellaneous Cost of Retailer	51.15	51.15	1.23
4	Selling Price of the Retailer	4155.89	1521.69	36.62
5	Total		4155.89	100.00

Fig - XII(b)

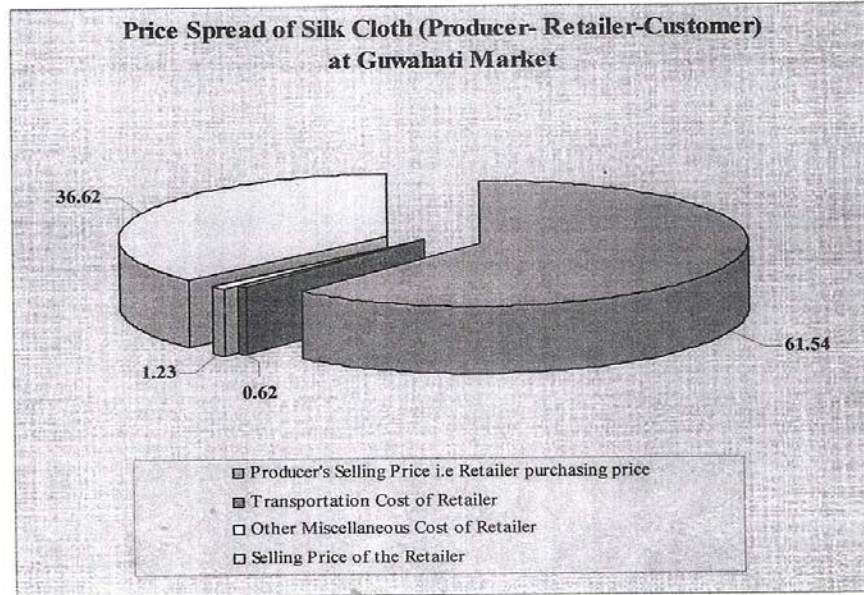
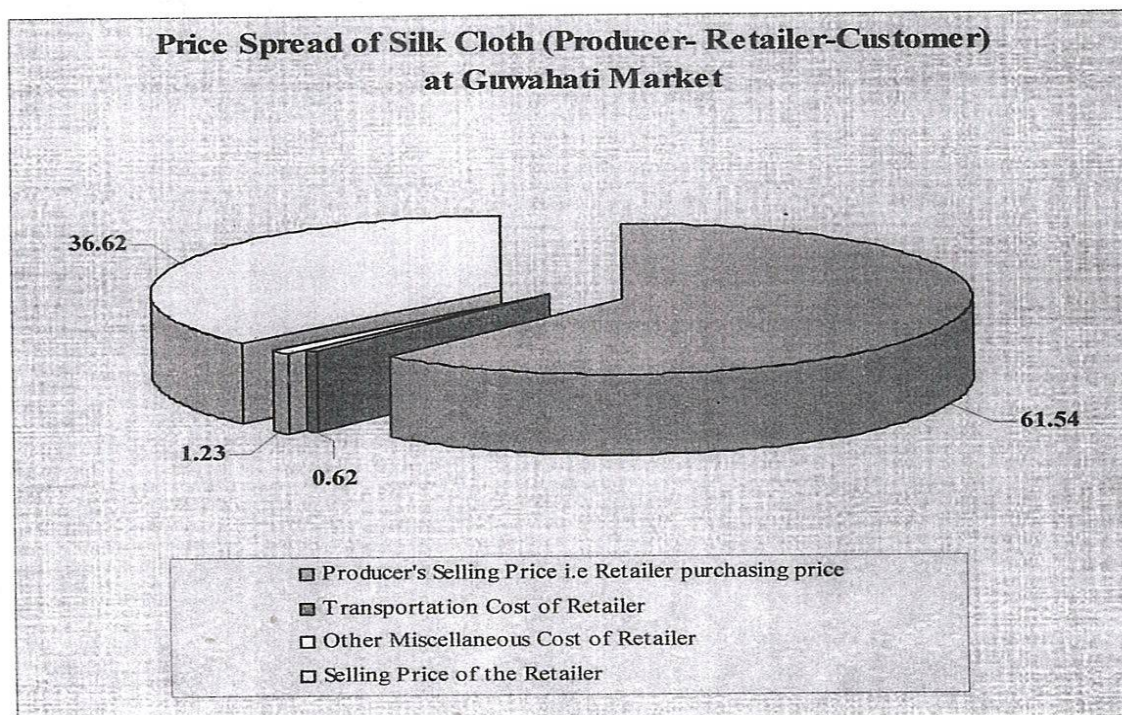


Table - 5.5 (c)

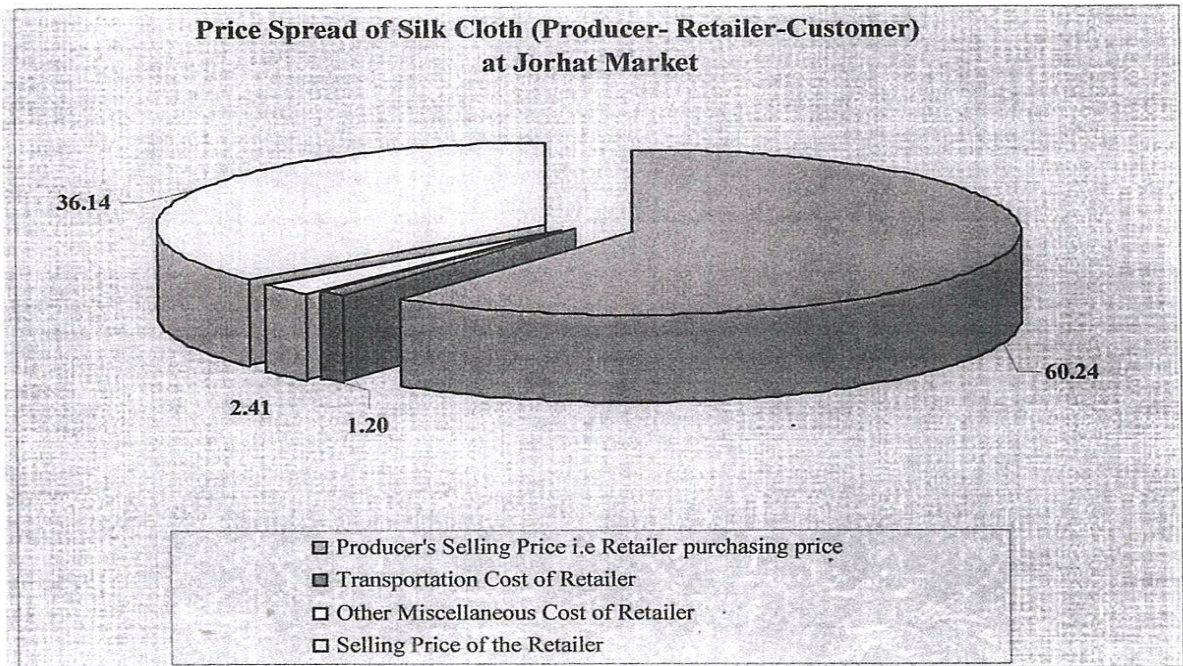
**Price Spread of Silk Cloth (Producer- Retailer-Customer)**

<b>Jorhat Market</b>				
Sl. No.	Market Functionaries and Costs Involved	Average Price (Rs)	Margin at Different Level (Rs)	Percentage
1	Producer's Selling Price i.e Retailer purchasing price	2557.47	2557.47	60.24
2	Transportation Cost of Retailer	51.15	51.15	1.20
3	Other Miscellaneous Cost of Retailer	102.30	102.30	2.41
4	Selling Price of the Retailer	4245.40	1534.48	36.14
5	Total		4245.40	100.00

**Fig - XII(b)****Table - 5.5 (c)****Price Spread of Silk Cloth (Producer- Retailer-Customer)**

<b>Jorhat Market</b>				
Sl. No.	Market Functionaries and Costs Involved	Average Price (Rs)	Margin at Different Level (Rs)	Percentage
1	Producer's Selling Price i.e Retailer purchasing price	2557.47	2557.47	60.24
2	Transportation Cost of Retailer	51.15	51.15	1.20
3	Other Miscellaneous Cost of Retailer	102.30	102.30	2.41
4	Selling Price of the Retailer	4245.40	1534.48	36.14
5	Total		4245.40	100.00



**Fig - XII (c)**

### **Channel – III : Producer –Wholesaler - Retailer – Customer**

In this channel Wholesaler has playing the major role. Among all the marketing channels, this one is the most prominent channel operating in silk cloths trading of Sualkuchi. The wholesalers are the persons behind who are responsible for deflating producer's share and inflating the prices of silk cloth items in the markets. They usually booked the finished products in bulk while the cloths are still in looms by paying some lump sum amount as advance to the weaver households. Sometimes they also place orders of weaving specific items with specific designs and buy the finished products in lots. After collecting the goods (finished silk cloth items) from the weaver households, the wholesalers store the items in their custody. The retailers purchase their chosen items from the wholesalers and sell those to the customers through their silk cloth shops. Channel – III of silk cloths marketing has been studied in all three sample markets , viz; Pathsala, Guwahati & Jorhat markets and presented in Table 5.6 (a), Table 5.6 (b) and Table 5.6 (c) respectively. It is found that the producer's share of consumer's



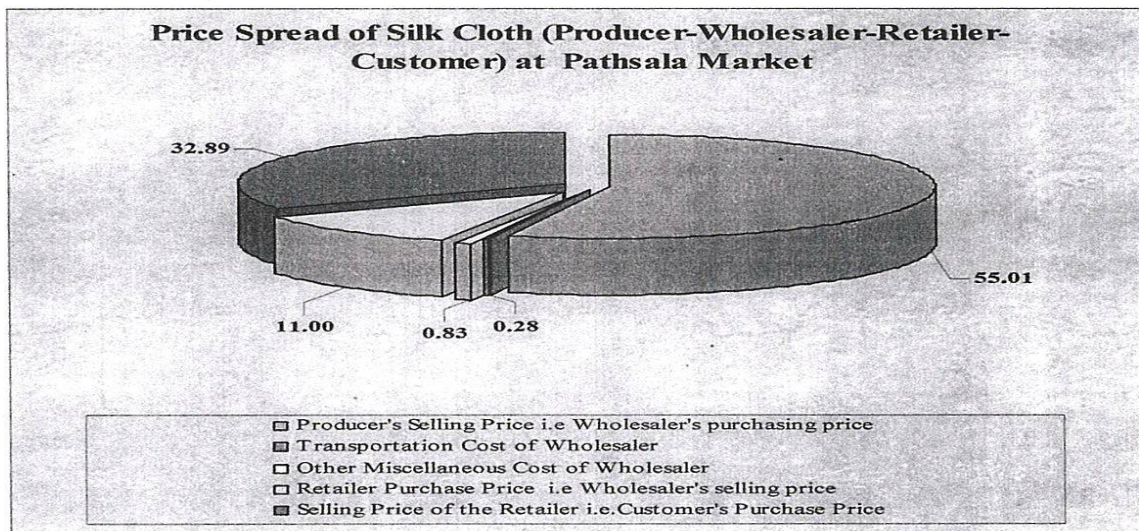
(customer's) rupee for the silk cloths sell in Pathsala market is 55.01%, for the silk cloths sell in Guwahati market is 54.56% and for the silk cloths sell in Jorhat market is 53.63%; where as the respective shares of consumer's (customer's) rupee to Wholesalers and retailers are 11.00% & 32.89 % in Pathsala market, 10.91 % & 32.89 % in Guwahati market and 10.73 % & 32.43 % in Jorhat market.

The price spreads of Channel – III of the sample markets have also been shown in Fig –XIII (a), Fig –XIII (b) and Fig –XIII (c).

**Table - 5.6 (a)**  
**Price Spread of Silk Cloth (Producer-Wholesaler-Retailer-Customer)**

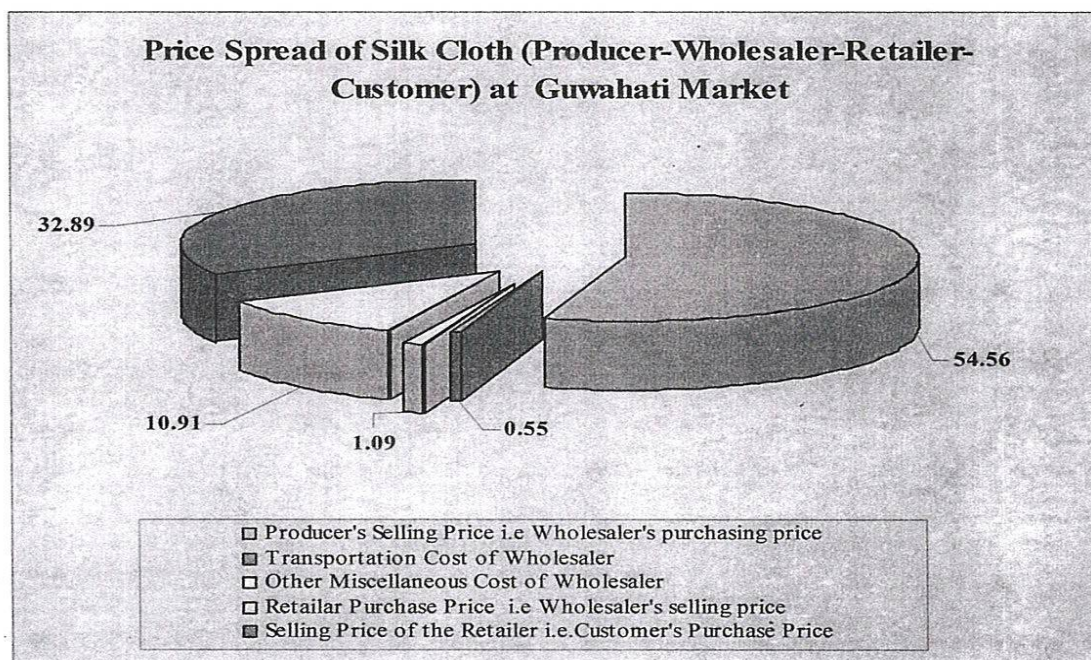
		Pathsala Market		
Sl. No.	Market Functionaries and Costs Involved	Average Price(Rs)	Margin at Different Level	Percentage
1	Producer's Selling Price i.e Wholesaler's purchasing price	2557.74	2557.74	55.01
2	Transportation Cost of Wholesaler	12.79	12.79	0.28
3	Other Miscellaneous Cost of Wholesaler	38.37	38.37	0.83
4	Retailer Purchase Price i.e Wholesaler's selling price	3120.44	511.55	11.00
5	Selling Price of the Retailer i.e. Customer's Purchase Price	4649.46	1529.02	32.89
6	Total		4649.46	100.00

**Fig - XIII(a)**



**Table - 5.6(b)****Price Spread of Silk Cloth (Producer-Wholesaler-Retailer-Customer)**

		<b>Guwahati Market</b>		
Sl. No.	Market Functionaries and Costs Involved	Average Price(Rs)	Margin at Different Level(Rs)	Percentage
1	Producer's Selling Price i.e Wholesaler's purchasing price	2557.74	2557.74	54.56
2	Transportation Cost of Wholesaler	25.58	25.58	0.55
3	Other Miscellaneous Cost of Wholesaler	51.15	51.15	1.09
4	Retailer Purchase Price i.e Wholesaler's selling price	3146.02	511.55	10.91
5	Selling Price of the Retailer i.e. Customer's Purchase Price	4687.57	1541.55	32.89
6	Total		4687.57	100.00

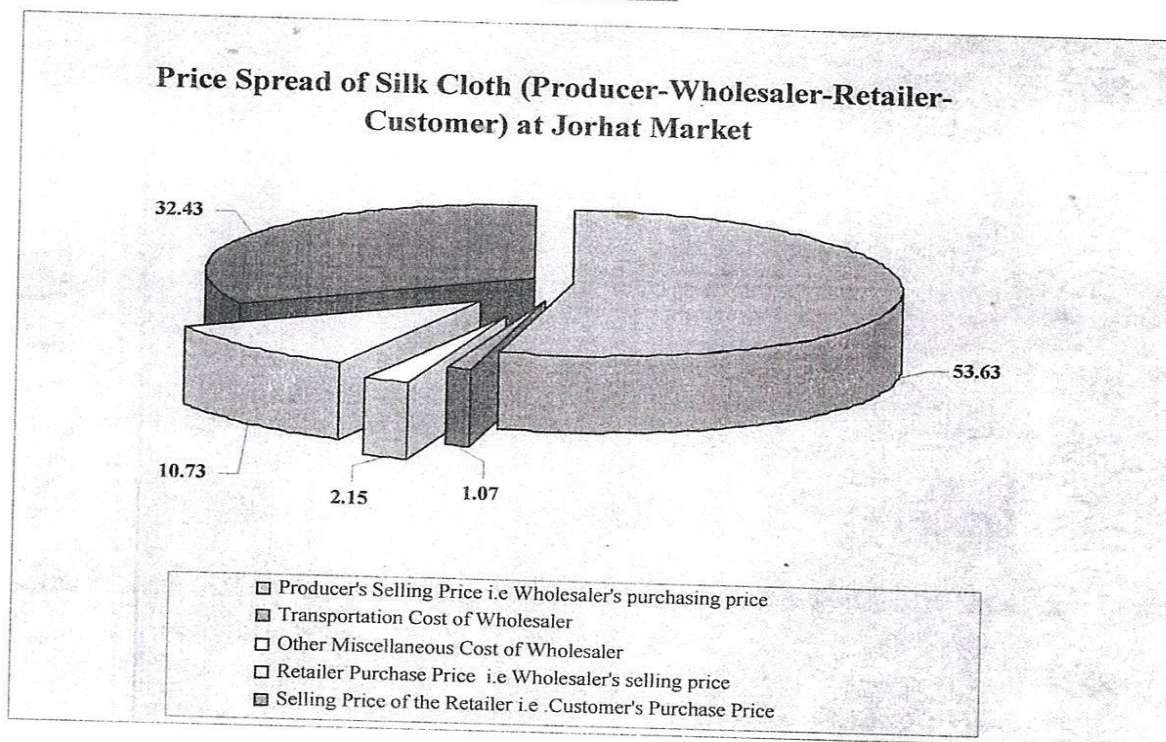
**Fig - XIII(b)**



**Table - 5.6 (c)**  
**Price Spread of Silk Cloth (Producer-Wholesaler-Retailer-Customer)**

Sl. No.	Market Functionaries and Costs Involved	Average Price(Rs)	Jorhat Market	
			Margin at Different Level(Rs)	Percentage
1	Producer's Selling Price i.e Wholesaler's purchasing price	2557.74	2557.74	53.63
2	Transportation Cost of Wholesaler	51.15	51.15	1.07
3	Other Miscellaneous Cost of Wholesaler	102.31	102.31	2.15
4	Retailer Purchase Price i.e Wholesaler's selling price	3222.75	511.55	10.73
5	Selling Price of the Retailer i.e. Customer's Purchase Price	4769.67	1546.92	32.43
6	Total		4769.67	100.00

**Fig - XIII(c)**



**Channel – IV : Producer –Commission Agent - Retailer – Customer**

The Commission Agent plays an important role in marketing system of Channel – IV. As stated, Commission Agents are local traders who collect the silk cloths from the looms of the weaver households on commission basis and supply those to the retailers. Table 5.7 (a), Table 5.7 (b) and Table 5.7 (c) show the price spread of Channel – VI in Pathsala, Guwahati and Jorhat markets respectively. In this Channel the share of consumer's (customer's) rupee to producers is 55.27% for the silk cloths sell in Pathsala , 54.93% for the silk cloths sell in Guwahati and 54.58% for the silk cloths sell in Jorhat markets. The Commission Agents get a share of 11.05% of consumer's (customer's) rupee in Pathsala, 10.99% in Guwahati and 11.30% in Jorhat market, where as the share of retailers is 32.57% in Pathsala, 32.43% in Guwahati and 31.51% in Jorhat markets.

Fig - XVI (a), Fig- XVI (b) and Fig- XVI (c) present price spread in respective markets of Channel – IV.

**Table - 5.7(a)****Price Spread of Silk Cloth (Producer-Commission Agent-Retailer-Customer)**

Sl. No.	Market Functionaries and Costs Involved	Pathsala Market		Percentage
		Average Price(Rs)	Margin at Different Level(Rs)	
1	Producer's Selling Price i.e Commission Agent's price	2557.74	2557.74	55.27
2	Transportation Cost of Commission Agent	12.79	12.79	0.28
3	Other Miscellaneous Cost of Commission Agent	38.37	38.37	0.83
4	Retailer Purchase Price i.e Commission Agent's selling price	3120.44	511.55	11.05
5	Selling Price of the Retailer i.e. Customer's Purchase Price	4627.62	1507.17	32.57
6	Total		4627.62	100.00



Fig - XVI(a)

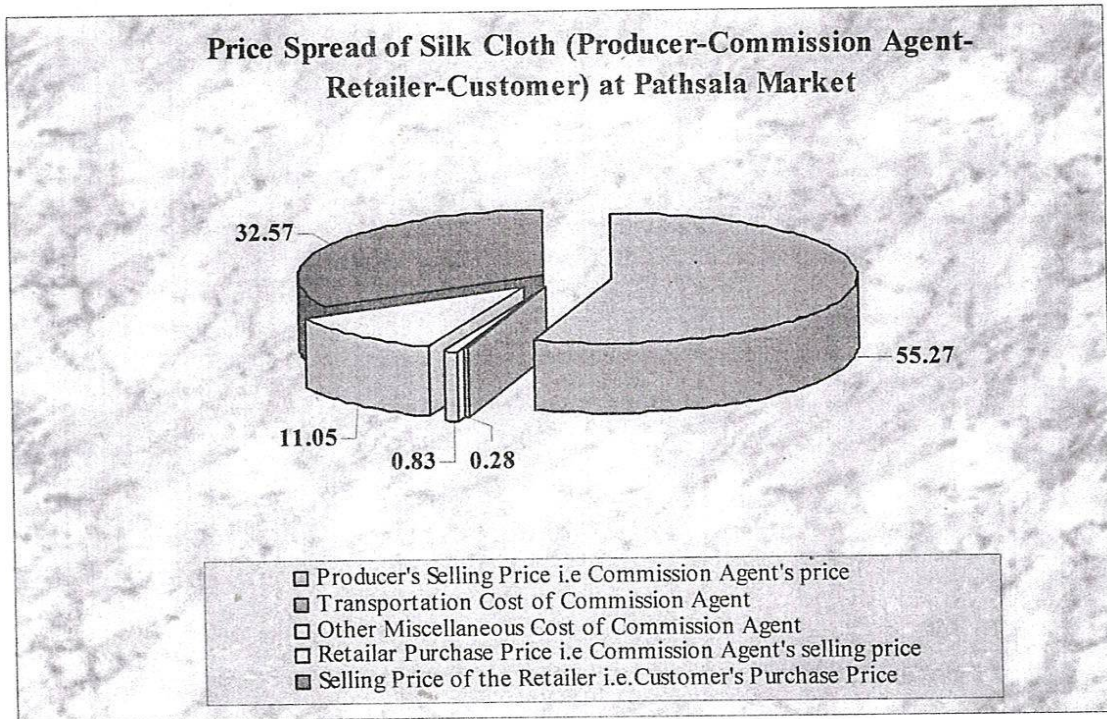


Table - 5.7(b)

Price Spread of Silk Cloth (Producer-Commission Agent-Retailer-Customer)

Sl. No.	Market Functionaries and Costs Involved	Average Price(Rs)	Guwahati	Market
			Margin at Different Level(Rs)	Percentage
1	Producer's Selling Price i.e Commission Agent's price	2557.74	2557.74	54.93
2	Transportation Cost of Commission Agent	25.58	25.58	0.55
3	Other Miscellaneous Cost of Commission Agent	51.15	51.15	1.10
4	Retailer Purchase Price i.e Commission Agent's selling price	3146.02	511.55	10.99
5	Selling Price of the Retailer i.e. Customer's Purchase Price	4656.11	1510.09	32.43
6	Total		4656.11	100.00



Fig - XVI(a)

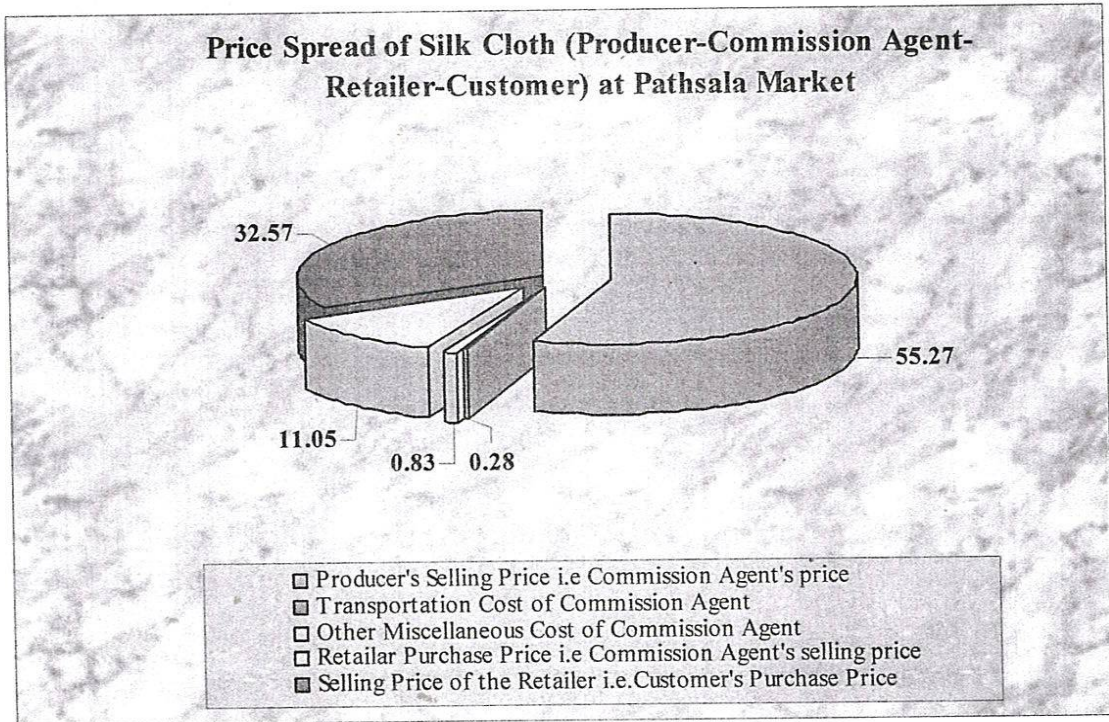
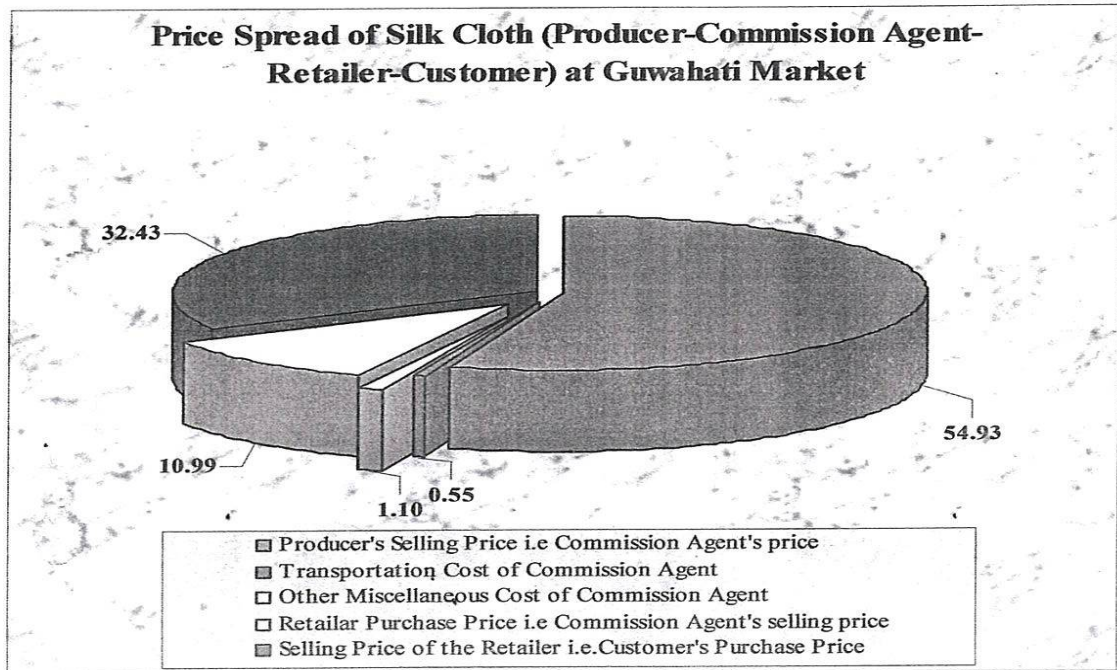


Table - 5.7(b)

Price Spread of Silk Cloth (Producer-Commission Agent-Retailer-Customer)

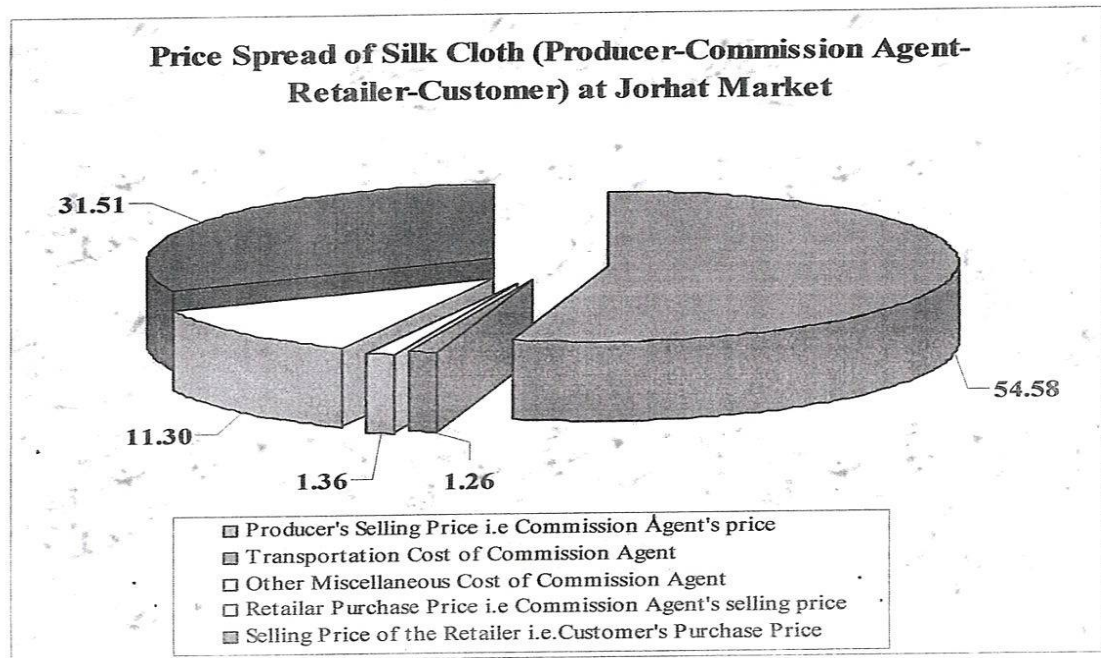
Sl. No.	Market Functionaries and Costs Involved	Average Price(Rs)	Guwahati Market	
			Margin at Different Level(Rs)	Percentage
1	Producer's Selling Price i.e Commission Agent's price	2557.74	2557.74	54.93
2	Transportation Cost of Commission Agent	25.58	25.58	0.55
3	Other Miscellaneous Cost of Commission Agent	51.15	51.15	1.10
4	Retailer Purchase Price i.e Commission Agent's selling price	3146.02	511.55	10.99
5	Selling Price of the Retailer i.e. Customer's Purchase Price	4656.11	1510.09	32.43
6	Total		4656.11	100.00

Fig - XVI(b)Table - 5.7(c)**Price Spread of Silk Cloth (Producer-Commission Agent-Retailer-Customer)**

Sl. No.	Market Functionaries and Costs Involved	Average Price(Rs)	Jorhat	Market
			Margin at Different Level(Rs)	Percentage
1	Producer's Selling Price i.e Commission Agent's price	2557.74	2557.74	54.58
2	Transportation Cost of Commission Agent	58.83	58.83	1.26
3	Other Miscellaneous Cost of Commission Agent	63.94	63.94	1.36
4	Retailer Purchase Price i.e Commission Agent's selling price	3209.96	529.45	11.30
5	Selling Price of the Retailer i.e. Customer's Purchase Price	4686.55	1476.58	31.51
6	Total		4686.55	100.00



Fig - XVI (c)



**Channel - V : Producer - Co-operative Society - State Government - Customer**

In this Channel of marketing system of silk cloths in Sualkuchi, Co-operative Society plays the pivotal role. As stated in earlier chapter, functioning of Co-operative Societies in the area is very noteworthy and par excellent. The weaver community of Sualkuchi is highly benefited by the good working system of various Co-operative Societies of the locality. The members of well organized Co-operative Societies deposit their finished products of various silk cloth items into the Societies and the Societies in turn supply those to the Textile Department of Assam State Government. The State Government later sell these cloths in the Emporiums located in different places. In this Channel producers get the share of consumer's (customer's) rupee @ 56.82% for cloths sell in Pathsala, 56.34% for the cloths sell in Guwahati and 55.40% for the cloths sell in Jorhat markets. The share of consumer's (customer's) rupee to the Co-operative Societies for the cloths sell in Pathsala is 8.52%, from Guwahati 8.45% and from Jorhat 8.45%. The State Govt.'s shares of consumer's (customer's) rupee in this



Channel are 33.81%, 33.52% and 32.96% for Pathsala, Guwahati and Jorhat markets respectively.

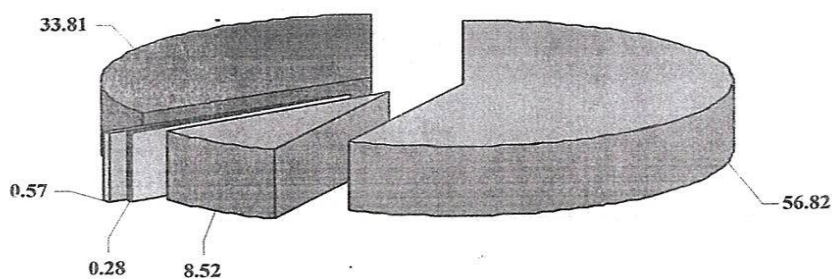
Table 5.8(a), Table 5.8(b) and Table 5.8(c) as well as Fig-XVII(a), Fig-XVII(b) and Fig-XVII(c) have shown the price spread of marketing Channel-V of respective markets.

**Table - 5.8 (a)**  
**Price Spread of Silk Cloth (Producer-Co-op. Society-State Govt. -Customer)**

		Pathsala Market		
Sl. No.	Market Functionaries and Costs Involved	Average Price(Rs)	Margin at Different Level(Rs)	Percentage
1	Producer's Selling Price i.e Co-op.Society's Purchasing Price	2557.74	2557.74	56.82
2	Co-op.Society's Selling Price i.e State Govt.'s Purchase Price	2941.40	383.66	8.52
3	Transportation Cost of State Govt.	12.79	12.79	0.28
4	Other Miscellaneous Cost of State Govt.	25.58	25.58	0.57
5	Selling Price of State Govt. i.e.Customer's Purchase Price	4501.62	1521.86	33.81
6	Total		4501.62	100.00

**Fig - XVII (a)**

**Price Spread of Silk Cloth (Producer-Co-operative Society-State Govt.-Customer) at Pathsala Market**



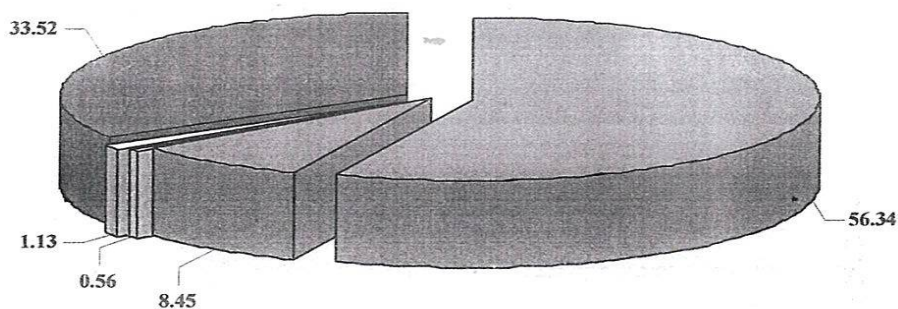
■	Producer's Selling Price i.e Co-op. Society's purchasing Price
■	Co-op. Society's Selling Price i.e State Govt.'s Purchase Price
■	Transportation Cost of State Govt.
■	Other Miscellaneous Cost of State Govt.s
■	Selling Price of the State Govt. i.e. Customer's Purchase Price

**Table - 5.8(b)**  
**Price Spread of Silk Cloth (Producer-Cooperative Society-State Govt-Customer)**  
**Guwahati Market**

Sl. No.	Market Functionaries and Costs Involved	Average Price(Rs)	Margin at Different Level(Rs)	Percentage
1	Producer's Selling Price i.e Co-op. Society's purchasing Price	2557.74	2557.74	56.34
2	Co-op. Society's Selling Price i.e State Govt.'s Purchase Price	2941.40	383.66	8.45
3	Transportation Cost of State Govt.	25.58	25.58	0.56
4	Other Miscellaneous Cost of State Govt.	51.15	51.15	1.13
5	Selling Price of the State Govt. i.e. Customer's Purchase Price	4539.99	1521.86	33.52
6	Total		4539.99	100.00

**Fig - XVII(b)**

**Price Spread of Silk Cloth (Producer-Cooperative Society-State Govt.-Customer) at Guwahati Market**



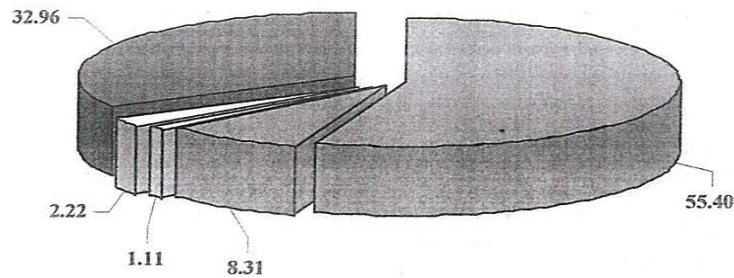
■	Producer's Selling Price i.e Co-op. Society's purchasing Price
■	Co-op. Society's Selling Price i.e State Govt.'s Purchase Price
■	Transportation Cost of State Govt..
■	Other Miscellaneous Cost of State Govt.
■	Selling Price of the State Govt. i.e. Customer's Purchase Price

**Table - 5.8 (c)**  
**Price Spread of Silk Cloth (Producer-Cooperative Society-State Govt.-Customer)**  
**Jorhat Market**

Sl. No.	Market Functionaries and Costs Involved	Average Price(Rs)	Margin at Different Level(Rs)	Percentage
1	Producer's Selling Price i.e Co-op. Society's purchasing Price	2557.74	2557.74	55.40
2	Co-op. Society's Selling Price i.e State Govt.'s Purchase Price	2941.40	383.66	8.31
3	Transportation Cost of State Govt.	51.15	51.15	1.11
4	Other Miscellaneous Cost of State Govt.	102.31	102.31	2.22
5	Selling Price of the State Govt. i.e. Customer's Purchase Price	4616.72	1521.86	32.96
6	Total		4616.72	100.00

**Fig - XVII (c)**

**Price Spread of Silk Cloth (Producer-Cooperative Society-State Govt.-Customer) at Jorhat Market**



- |   |   |
|---|---|
| ■ | Producer's Selling Price i.e Co-op. Society's purchasing Price  |
| ■ | Co-op. Society's Selling Price i.e State Govt.'s Purchase Price |
| ■ | Transportation Cost of State Govt.                              |
| ■ | Other Miscellaneous Cost of State Govt.                         |
| ■ | Selling Price of the State Govt. i.e. Customer's Purchase Price |



**Channel – VI: Producer – Co-operative Society- Wholesaler - Retailer – Customer**

The prominent market functionary of this Channel is Wholesaler. The Co-operative Societies very often sell the produces of their member weavers to the Wholesalers in lots as it is very much convenient for them. After purchasing the lots in Sualkuchi, Wholesalers from different places bring the bulk of silk cloths to their local places. The retailers of the locality purchase their chosen items from the Wholesalers and marketed to the customers through the retail silk cloth shops. The producers' shares of consumer's (customer's) rupee for cloths sell to the Pathsala, Guwahati and Jorhat markets are 54.73%, 52.70% and 52.15% respectively. The share of consumer's (customer's) rupee for Wholesalers is 5.20% in Pathsala, 7.91% in Guwahati and 8.93% in Jorhat markets. The retailers of the respective places get 32.45% ( in Pathsala), 31.33% (in Guwahati) and 30.87% (in Jorhat).

Table 5.9(a), Table 5.9(b) and Table 5.9(c) have presented the price spreads of Pathsala, Guwahati and Jorhat markets respectively. The diagrammatic presentations of price spreads of Channel-VI are shown in Fig- XVIII (a), Fig- XVIII (b) and Fig- XVIII (c) for respective markets.

**Table - 5.9(a)**

**Price Spread of Silk Cloth (Producer-Co-operative Society-Wholesaler-Retailer-Customer)**  
**Pathsala Market**

Sl. No.	Market Functionaries and Costs Involved	Average Price(Rs)	Margin at Different Level(Rs)	Percentage
1	Producer's Selling Price i.e. Co-op. Society's purchasing Price	2557.74	2557.74	54.73
2	Co-op. Society's Selling Price i.e. Wholesaler's Purchase Price	2813.51	255.77	5.47
3	Transportation Cost of Wholesalers	12.79	12.79	0.27
4	Other Miscellaneous Cost of Wholesalers	25.58	25.58	0.55
5	Selling Price of the Wholesaler i.e. Retailer's Purchasing Price	3094.87	242.99	5.20
6	Transportation Cost of Retailers	30.95	30.95	0.66
7	Other Miscellaneous Cost of Retailers	30.95	30.95	0.66
8	Selling Price of the Retailer i.e. Customer's Purchase Price	4673.25	1516.48	32.45
9	Total		4673.25	100.00

Fig - XVIII (a)

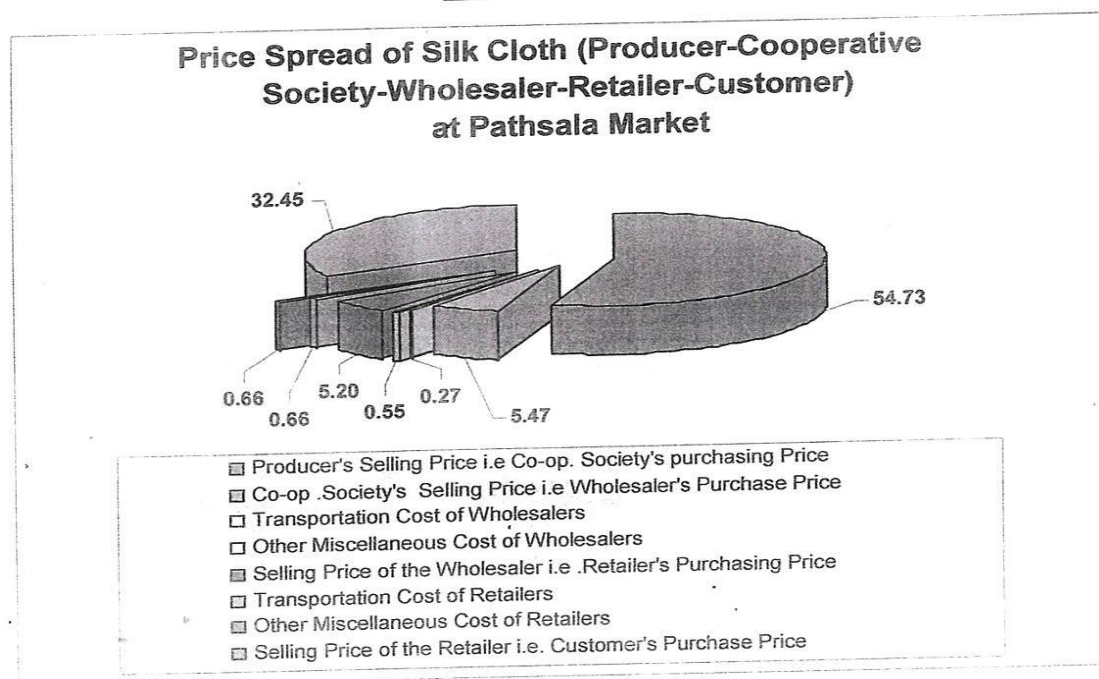


Table - 5.9(b)

Price Spread of Silk Cloth(Producer-Co-op. Society-Wholesaler-Retailer-Customer)  
Guwahati Market

Sl. No.	Market Functionaries and Costs Involved	Average Price(Rs)	Margin at Different Level(Rs)	Percentage
1	Producer's Selling Price i.e Co-op. Society's Purchasing Price	2557.74	2557.74	52.70
2	Co-op. Society's Selling Price i.e Wholesaler's Purchase Price	2813.51	255.77	5.27
3	Transportation Cost of Wholesalers	12.79	12.79	0.26
4	Other Miscellaneous Cost of Wholesalers	25.58	25.58	0.53
5	Selling Price of the Wholesaler i.e. Retailer's Purchasing Price	3235.54	383.66	7.91
6	Transportation Cost of Retailers	32.36	32.36	0.67
7	Other Miscellaneous Cost of Retailers	64.71	64.71	1.33
8	Selling Price of the Retailer i.e. Customer's Purchase Price	4853.31	1520.70	31.33
9	Total		4853.31	100.00

Fig - XV(b)

**Price Spread of Silk Cloth (Producer-Co-op. Society-Wholesaler-Retailer-Customer) at Guwahati Market**

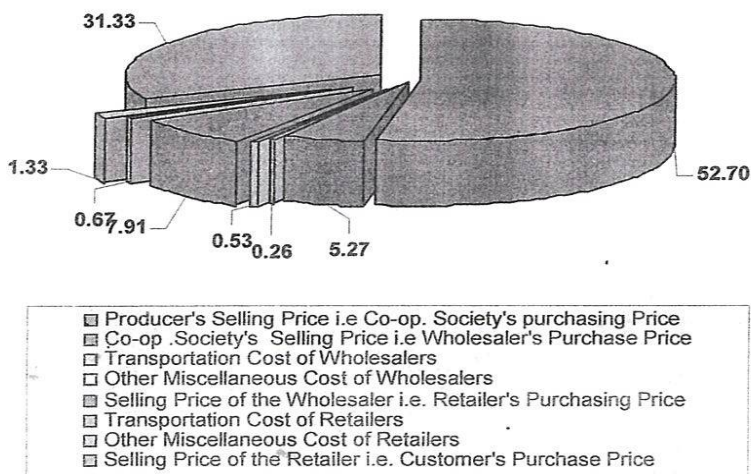


Table - 5.9 (c)

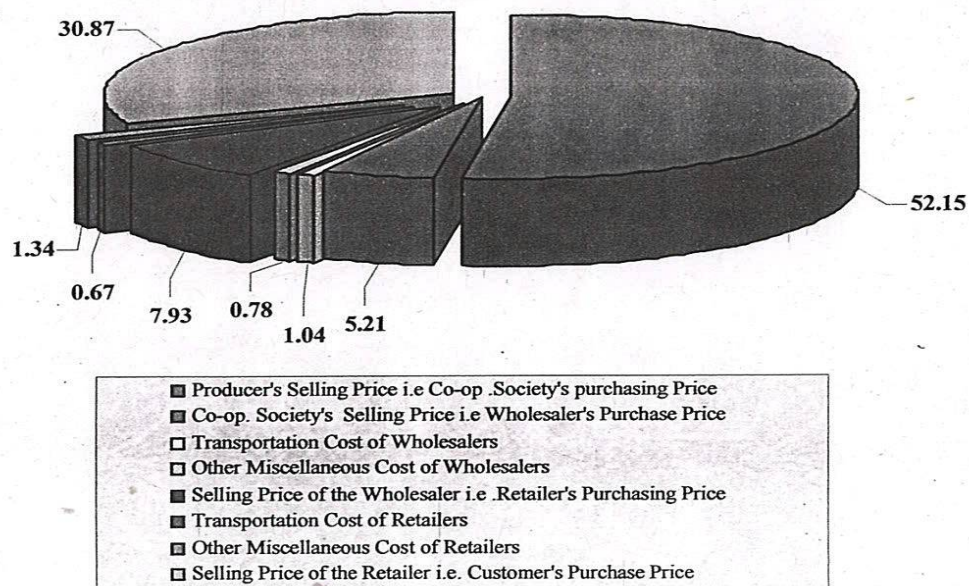
**Price Spread of Silk Cloth (Producer-Co-op. Society-Wholesaler-Retailer-Customer) Jorhat Market**

Sl. No.	Market Functionaries and Costs Involved	Average Price(Rs)	Margin at Different Level(Rs)	Percentage
1	Producer's Selling Price i.e Co-op. Society's purchasing Price	2557.74	2557.74	52.15
2	Co-op. Society's Selling Price i.e Wholesaler's Purchase Price	2813.51	255.77	5.21
3	Transportation Cost of Wholesalers	51.15	51.15	1.04
4	Other Miscellaneous Cost of Wholesalers	38.37	38.37	0.78
5	Selling Price of the Wholesaler i.e. Retailer's Purchasing Price	3291.81	388.78	7.93
6	Transportation Cost of Retailers	32.92	32.92	0.67
7	Other Miscellaneous Cost of Retailers	65.84	65.84	1.34
8	Selling Price of the Retailer i.e. Customer's Purchase Price	4904.80	1514.23	30.87
9	Total		4904.80	100.00



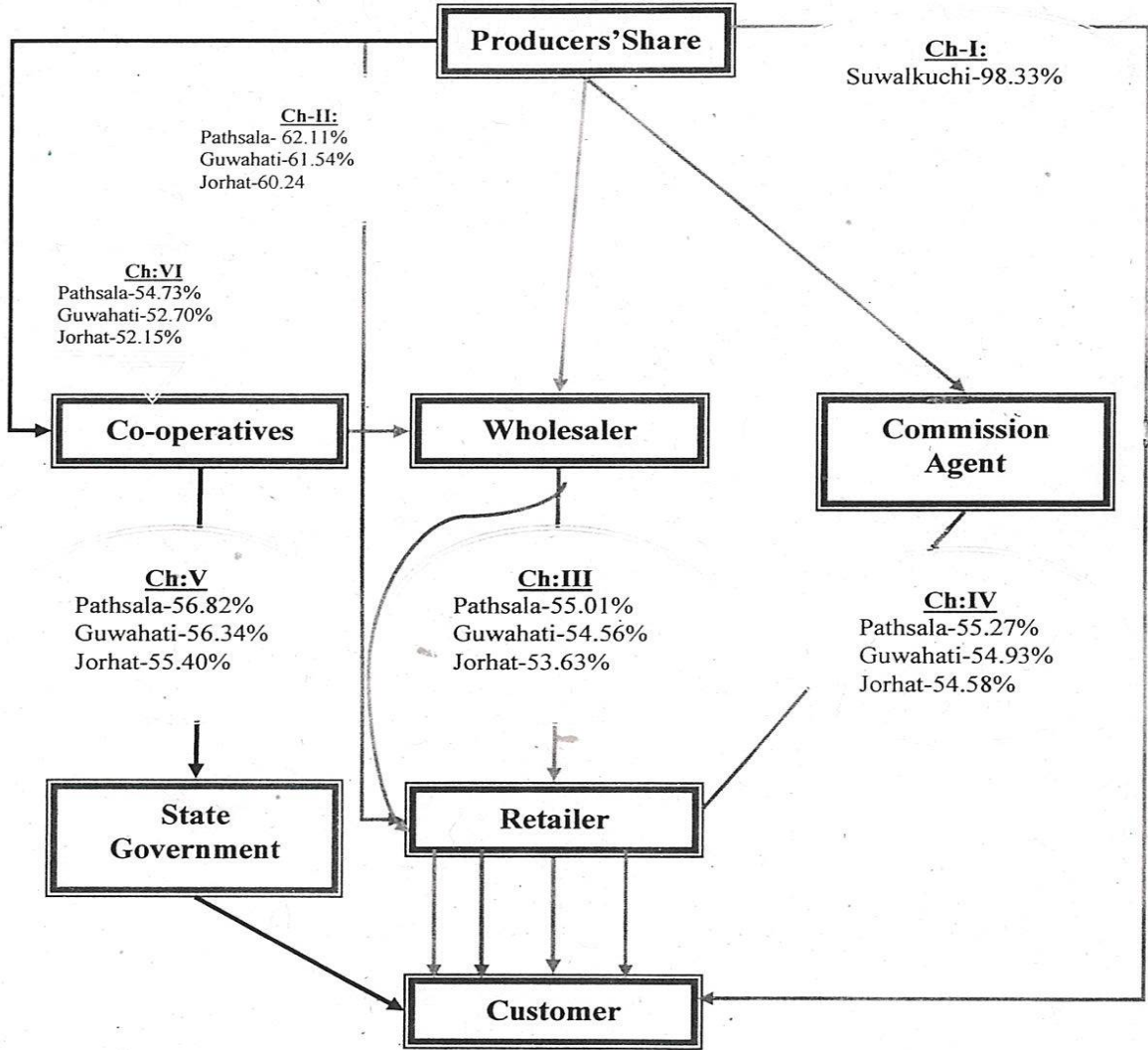
Fig - XV (c)

**Price Spread of Silk Cloth (Producer-Co-op. Society-Wholesaler-Retailer-Customer) at Jorhat Market**



Producers' Shares of Consumer's rupee in each of the six marketing channels operating in Pat and Muga silk clothes trading of the sample households in four markets viz; Sualkuchi market, Pathsala market, Guwahati market and Jorhat market are shown the Flow Chart (A) in Fig:XIX .

**Fig: XIX-Flow Chart (A)**  
**Producers' Share of Consumer's Rupee( Price Spread ) in Muga and Pat Silk Cloths Trade at Four Different Market Places via Six Marketing Channels**



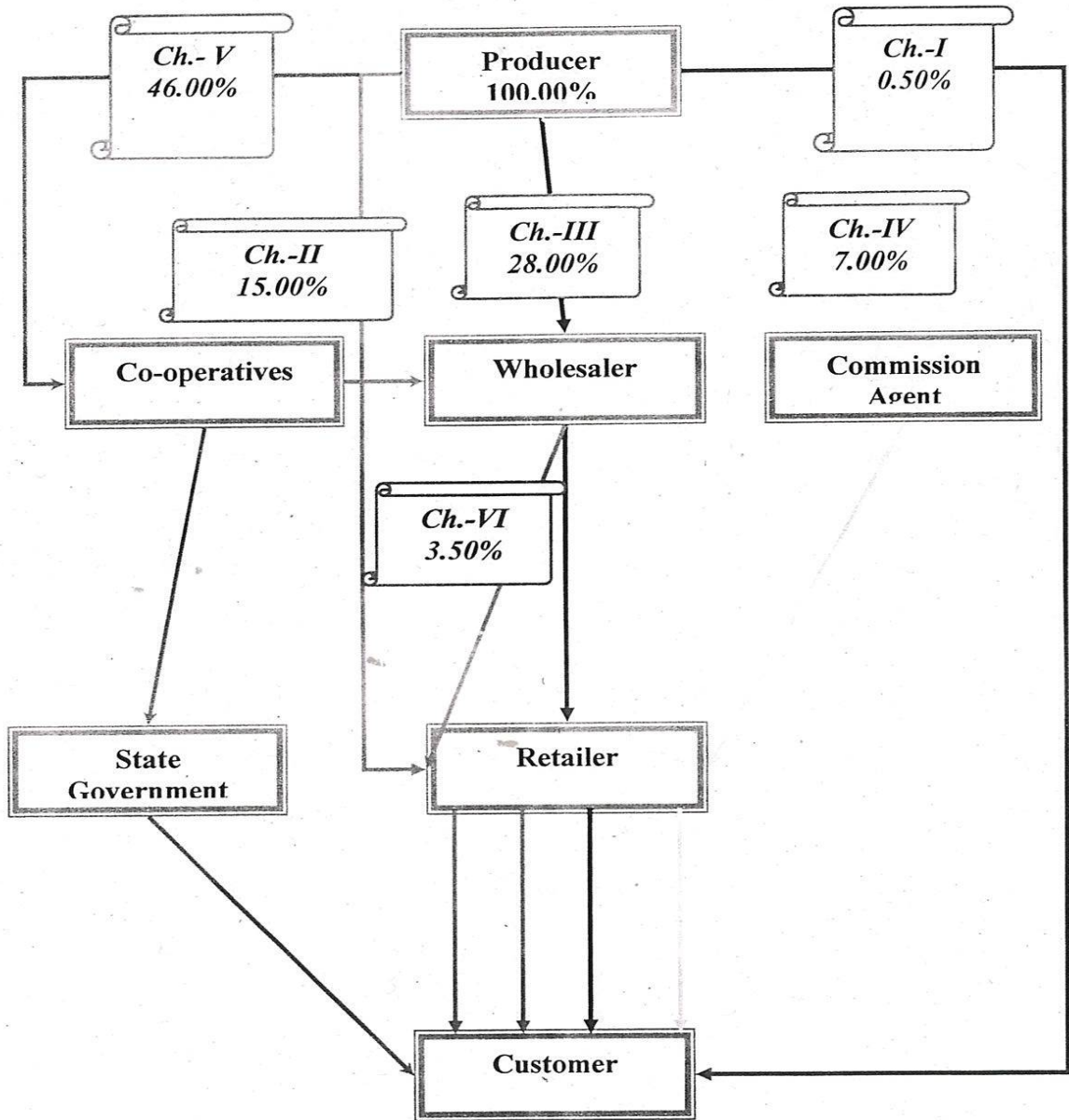
Market efficiency of six different Marketing Channels in four markets on Pat and Muga Silk Cloths trade of the sample households has been examined and presented in Table-5.10. It is also shown in Flow Chart (B) at Fig: XX. The sample silk cloths producers reported that 49.50% of their produce were sold to the Co-operative Societies; of which 46% were purchased by the State Government and rest 3.50% were purchased by the Wholesalers from the Co-operative Societies. The sample households directly sold 28%

**Table-5.10**  
**Market Efficiency of Different Channels Based on Marketing Transaction of Pat**  
**and Muga Cloth of Sample House Holds**

Channel	Amount of Transaction	PC %	Share of Producer At Suwalkuchi Market	Effectiveness of Channel (%)	Share of Producer At Pathisala Market	Effectiveness of Channel (%)	Share of Producer At Guwahati Market	Effectiveness of Channel (%)	Share of Producer At Jorhat Market	Effectiveness of Channel (%)
Channel-I	658859.06	0.50	645681.87	0.49	-	-	-	-	-	-
Channel-II	19765771.65	15.00	-	-	12276520.77	9.32	12163855.87	9.23	11906900.84	9.04
Channel-III	36896107.08	28.00	-	-	20296548.50	15.40	20130516.02	15.28	19787382.23	15.02
Channel-IV	9224026.77	7.00	-	-	5098119.60	3.87	5066757.90	3.85	5034473.81	3.82
Channel-V	60615033.06	46.00	-	-	34441461.78	26.14	34150509.63	25.92	33580728.32	25.48
Channel-VI	4612013.39	3.50	-	-	2524154.93	1.92	2430531.05	1.84	2405164.98	1.83
Total Amount	131771811.00	100.00	645681.87	0.49	74636805.58	56.64	73942170.48	56.11	72714650.18	55.18



Fig: XX- Flow Chart (B)



Market Efficiency of Six Different Marketing Channels in Four Markets

of their produces to the Wholesalers and 15% to the retailers. They also sold 7 % of their produces to Commission Agents, who are local traders. It has been noticed that only 0.50% of produces of the sample weaver households were directly sold to the customers who visited Sualkuchi market to purchase some Pat and Muga cloths either for personal use or for some ceremonies.

## CHAPTER – VI

### Summary, Suggestions and Conclusion

Silk fibre is made of the protein secreted from the silk glands of silk worms. It is a high valued but low volume commodity. India ranks the second largest producer accounting for nearly 16 per cent of World's raw silk production. There are four major types of silk worms, namely, Mulberry, Tasar, Muga and Eri. The Indian silk industry has an unique distinction of producing all four major types of silk. Mulberry silk is produced throughout the country from Kashmir to Kerela and Gujarat to Assam, while Tasar silk is produced in large scale by Orissa, Bihar, Madhya Pradesh and Uttar Pradesh. Muga and Eri Silks are produced in North-Eastern States only.

Silk culture in Assam is probably originated in the Vedic age, as there are references of rearing of silk worms by the Assamese people for production of various silk clothes even in the age of 'Ramayan'. Such references are also found in the Kautilya's '*Arthasastra*'.

Silk weaving was once a household affair in Assam. Now a days it is a sustainable farm-base economic enterprise positively favouring the rural poor in the unorganized sector. Rearing of mulberry, muga and eri silk worms has been playing an important role in the economic development of a large section of rural population of the State. Oak tasar silk production in Assam is of recent origin as it was introduced in 1972.

In Assam, at present about 2.8 lakh looms run commercially in true sense of the term, about 5.70 lakh looms run on semi commercial basis for earning subsidiary income and rest being domestic looms run at leisure hours to meet the family requirement of a few items of fabrics. The handloom industry of Assam is basically silk oriented.



Although the State is enriched with all four varieties of silk products, the present study is confined to only mulberry and muga silks weavers of Sualkuchi which is the centre of the silk weaving of the State. Sualkuchi is better known as the *Silk Village of Assam*. History has references of Sualkuchi as production centre of silk cloths even in the reign of King Dharam Pal in the 11<sup>th</sup> Century.

One hundred weaver households of Sualkuchi are drawn randomly as samples of the study on the basis of number of looms possessed by each family as : Up to five looms, Five to ten looms, Ten to twenty looms, Twenty to thirty looms, Thirty to forty looms and Forty & above looms with the help of ratio proportionate technique from each stratum. In order to study the marketing channels of finished products of Muga and Pat Silks, 3 (three) wholesalers are purposively selected from Sualkuchi market on the criteria of having retailers under them in 3 (three) different city/towns, viz; Guwahati city, Pathsala town and Jorhat town. The study relates to the year 2006-2007.

#### **Findings of the Study :**

Human resource is the major component of a society. Total number of family members of the sample-households was 531 comprising of 55.93 percent (297) males and 44.07 percent (234) females; the sex ratio being 788 females per 1000 males. There are 29.57 per cent population below 15 years of age group and 3.77 per cent in 65 years & above age group. The rest 66.66 per cent constituted the main work force of the sample households of which the highest number of population was found in the 25 years to 35 years age group (21.28%).

Level of literacy among the family members of the sample households showed that literacy rate of sample households was much higher than that of the State's literacy rate. As per 2001 Census, the literacy rate of Assam is 63.25 % and it is 58.91 % in case of Sualkuchi as a whole. The literacy rate of the sample households was much higher at 87.76 %.

Out of the total population of 531, highest number was found as workers comprising 37.85 per cent of total population. There were 121 male workers (22.78 per cent of total population) and 60 female workers (15.07 percent of total population) in

sample families. In the category of helper, there were 68 male helpers (12.81 per cent of total population) and 78 female helpers (14.69 per cent of total population) i.e.; 27.50 per cent of total population in the sample households. In non worker category, it stood at 34.65 per cent of total population. It is found that there were more males (20.34 per cent of total population) than females (14.31 per cent of total population) in non worker group.

One of the remarkable features in the weaving industry of Sualkuchi is, the use of hired workers on contractual basis. There is a common and prominent practice among the weaver households of the area that batches of young girls and boys mostly from Bodo community are employed as weavers on annual/piece work wage basis.

The land holding pattern of sample households depicts somewhat contrasting picture with rest of the rural Assam. Assam being an agricultural state, agriculture is the source of livelihood for more than 70 % of the state's total population. But, Sualkuchi, the silk village of Assam, shows that it is actually an industrial village as agriculture has not playing any role in the village economy. All 100 sample households do not cultivate any crop. They are totally dependent on others for their basic needs of food items.

It is found that total net income from weaving of 100 sample households was Rs. 3, 78, 44,201.91 during the year under reference (2006-07). Apart from weaving, 12 sample households earned Rs. 2, 52,000.00 from business, trade, commerce and transport. Most of these activities related directly or indirectly with silk cloth production of the area. However, it was also reported that some family members of the sample households have government or private salaried jobs as their source of income. The annual earnings of those service holders stood at Rs. 6, 68,304.00 in the reference year. Two (2) households have live stocks (poultry birds and ducks) farms and earned Rs. 21,600.00 from that source. Total income from subsidiary sources of the sample households was Rs. 9,41,404.00 during the year 2006-07.

**Major Findings relating to Silk Weaving :**

In the sample area, various types of handlooms are used. Handloom is a manually operated simple machine which is locally called as '*Tat Shal*'. Among the sample weave households, there were a total of 1725 number of looms comprising of 63.48% Pat looms (1095 numbers) and 36.52% Muga looms (630 numbers). Pat looms were exclusively used for production of Mulberry silk cloths and Muga looms were used for production of Muga silk cloths. Predominance of Dobby loom is clearly visible in the sample households. Of the total 1725 nos. of looms of the sample weaver households, 92.58% were Fly shuttle fitted with a Dobby machine followed by 5.68% Fly shuttle looms with a Drawbuoy. The rest 1.74% looms were other varieties Fly shuttle looms. The annual gross income (value of total produces) of sample households from silk cloths production in the year 2007 was Rs. 13,17,71,811.12 of which 56.00% came from Mulberry cloths and the rest 44.00% contributed by Muga cloths. The average income per sample household was over thirteen lakh per annum (Rs. 13, 17,718.11). Highest income was coming from production of Pat Set amounting 22.35 % of total income followed by Pat Jora which earned 20.39 % of total income. Muga silk cloths are costlier than Pat silk cloths. As such, demand for Pat cloths is higher than Muga cloths. As a result, in general, silk weaver households give more emphasis on production of Pat cloths than the Muga cloths. Total number of products inclusive of all varieties of items produced in the looms of the sample households was 51,519 in the year under reference.

Handloom weaving is a labour intensive enterprise. Total number of mandays required in the year for production of 51,519 nos. of silk cloth items from 1,725 looms of the sample households was 3,67,407 mandays; the shares of family labour and hired labour being 73,481 mandays (20.00% of total mandays ) and 2,93,926 mandays ( 80.00 % of total mandays ) respectively. Proportion of male and female family labour was 40:60 where as it was 20:80 in case of hired labour. The estimated wages to the family labours was Rs. 73, 48,145.00 of which Rs. 29, 39,250.00 (40.00%) for male and Rs.44,08,887.00 (60.00%) for female family labours. Total wages paid to the hired labours in the year stood at Rs. 2,93,92,583.00 of which



Rs. 58,78,517.00 ( 20.00 % ) for male weavers and Rs. 2,35,14,066.00 ( 80.00 % ) for female weavers. Total cost, combining all workers( both family labour and hired labour ) was Rs. 3,67,40,729.00; amounting 24.00 % ( Rs. 88,17,775.00) for males and 76.00 % ( Rs. 2,79,22,954.00%) for female weavers.

Total costs of production of silk cloths of sample households were Rs.93927609.21. Of the total cost of production, 39.12 % was spent on wages of labour, 38.18 % incurred on purchasing raw materials, 20.90 % on accessories & provisions and rest 1.80 % managerial cost.

Total value of silk cloths produced in the looms of the sample households was Rs. 13,17,71,811.12 in 2006-07 of which 56.00 % came from sale proceeds of Mulberry cloths and the rest 44.00 % contributed by Muga cloths. Total cost of production stood at Rs. 9,39,27,609.21; the shares to total expenditure were 52.03% of Pat cloths and 47.97% of Muga cloths. The net income of the sample households calculated by deducting total cost of production from total value of all silk cloths weaved in the looms of the sample household was found at Rs. 3,78,44,201.91 consisting of 66.02 % (Rs. 2,49,86,326.07) from mulberry silk cloths and 33.98 % ( Rs.1, 28, 57,875.84) from Muga silk cloths. The over all annual average income per loom found at almost twenty two thousands (Rs.21, 938.67); the average income from per Pat loom and Muga loom being Rs.22, 818.56 and Rs. 20,409.33 respectively.

Analysis of marketing channels indicated that there were six marketing channels operating in silk cloths trading in Sualkuchi, viz; (1) Producer – Customer, (2) Producer – Retailer – Customer, (3) Producer – Wholesaler – Retailer – Customer, (4) Producer – Commission Agent – Retailer – Customer, (5) Producer – Co-operative Society – State Govt. – Customer and (6) Producer– Co-operative Society – Wholesaler - Retailer – Customer.

Market efficiency of six different Marketing Channels in four sample markets on Pat and Muga Silk Cloths trade of the sample households has been examined. The sample silk cloths producers reported that 49.50% of their produces were sold to the Co-operative Societies; of which 46% purchased by the State Government and rest

3.50% purchased by the Wholesalers from the Co-operative Societies. The sample households sold 7% of their produces to Commission Agents, who are local traders. It has been noticed that only 0.50% of produces of the sample weaver households were directly sold to the customers who visited Sualkuchi market to purchase some Pat and Muga cloths either for personal use or for some ceremonies

It is found that Silk cloths weaving of the sample households is an economically viable enterprise as the Benefit Cost Ratio (BCR) is found at 1.40. Category-wise BCR of Pat cloths production of the sample households is 1.51, where as BCR of Muga cloths production is 1.29.

#### **Problems and Prospects of Silk Cloths Weaving :**

The discussions made in the preceding chapters make it apparent that the economic activities of the sample households of Sualkuchi are centre around silk cloths production. However, in the course of silk cloths production, numerous difficulties have been faced by the sample weaver households. Some of the problems faced by them are cited here :

(1) There has always been a shortage of local weavers since around last one decade. As a result most of the sample households have to depend upon migrated weavers. They have to pay a large amount of money as wages to these hired weavers. Bodo young girls from neighbouring Goreswar, Tamulpur and Tangla who are expert in silk cloth weaving have demanded high wages for their works. It is reported that heavy amount of expenditure had to be borne by sample households as wages paid to the hired labours. There are sporadic cases of cheating; e.g; the hired weavers usually demand advance payment and after receiving the advance amount some times some of them left the works in half done stage in some pretexts or other. So, availability of skilled weavers and high financial involvement associated with it are major problems faced by the sample households.

(3) The price of Muga yarn has escalated so high that pure fabric has become unaffordable to a common man/woman. The Tasar yarns, those dyed in muga colour, have very similar outward physical properties; but, in reality Tasar yarns are much inferior to Muga yarn so far the inner qualities are concerned. It is very difficult even for an expert to find out the differences. Being cheaper in price, a trend of gradual replacement of Muga yarn by Tasar yarn is taken place in fabric production. Unless the Muga yarn production is not increased substantially, the price of Muga yarn will be increased further and the sample weaver families opined that the day is not very far when entire Muga culture will be jeopardized.

(3) Most of the raw materials, viz; mulberry silk yarn, golden and silver guna and cotton art threads etc. are imported from outside the State. Mulberry yarn is mostly come from Bangalore and guna & cotton art threads used in making motifs and designs in silk cloths are brought from Surat, while the Muga cocoons are brought from Upper Assam and Garo Hills areas. Sporadic price rise of the yarns due to artificial short supply during the peak season makes the cost of production of Muga into much higher side of the competitive selling price in the market. It has very often been observed that the non availability of good yarn, relatively higher price of the same quality yarn because of unfair profit motive of the trader, middlemen etc. create hurdle for the weavers to run the industry smoothly and to have desired economic return.

(4) Notwithstanding some degree of changes toward modernization has taken place in silk culture of Sualkuchi, there are still immense scope of improvement. No sustainable attempt from any quarter for upgrading the technologies with sophistication in reeling, spinning, winding and weaving as well as in diversifying the products to match the today's global market has been made for the sample households.

(5) It is observed that though the weavers of Sualkuchi have all the skills and urges of producing high quality world class silk cloths with eye catching designs, they still lagging far behind of entering the international market. Lack of proper guidance and marketing channels to outside the country are the hurdles yet to be overcome by the sample weavers of the area in particular.



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(6) Another irritating problem faced by the sample households is the erratic electricity power supply in the area which interrupts the working hours of the weavers. Though the handloom industry of Sualkuchi do not used electrical equipments, the weavers work in their looms till 10 pm to 11pm at night. Frequent power cut (load shedding) by the Assam State Electricity Board has compelled many of the sample households to look for alternative power supply like purchasing Gen Set or hiring power from Gen Set of neighbouring co-weavers.

#### **Prospects of Silk weaving :**

Silk industry of Sualkuchi has undergone many changes. "Change is the unchangeable law of nature. The present times, variously described as Post industrial society, Looming space age, Technocratic age, Electronic era, Super industrial society etc .have thrown new challenges for present and future generations" (Kar and Sarmah,1999). This is true in case of the age old silk culture of Assam also. To cope with the challenges of time, the silk industry of Assam must try to explore advance ways to upgrade the traditional silk culture as a whole. Despite the present advancement, there are still some aspects to be looked after for uplifting economic condition of the sample weaver households in particular and for further progress of the silk industry of the State in general that are discussed below.

(1) Introduction of Dobby machine has brought remarkable changes in traditional designs of Assamese silk textiles produced in Sualkuchi. However, to boost the volume of production, there are ample scope of introducing simple power loom besides semi automatic handlooms, sizing plant etc. A few years back, the Central Silk Board of India demonstrated some sophisticated reeling and spinning machines for Muga, Mulberry and Eri yarns with the motive of impart training to local artisans. Introduction of semi automatic handlooms and simple power looms and plant training has expected to bring about a revolution in the silk industry of Sualkuchi.as well as in the State. There are immense scopes of such a technological revolution. Concerted efforts through extensive extension and monitoring programmes to change the attitude of the

people for adoption of available intermediate technologies, including indoor rearing of muga are expected to help the silk industry of Sualkuchi in particular and the State as a whole.

(2) A revolutionary change in the history of silk culture of Sualkuchi textile took place during the third decade of the 20<sup>th</sup> Century. Weaving of cloths in Fly Shuttle was started with the help of Jacquard machine. It made easy to design floral decoration. It is found that although some of the weaver families of Sualkuchi have adopted Jacquard machine technology in their looms, the sample households are not yet used Jacquard machine. Use of Jacquard machine will bring much improvement in the design making of the silk cloths of the sample households.

(3) Initiative taken by the Central Silk Board in the field of relatively more efficient machine in place of traditional equipment "Bhir" for reeling muga yarn should be escalated and steps may be taken to expand this culture among the muga weavers of Sualkuchi. The sample households, in spite of their knowledge about the efficiency of the new machine, have expressed their financial inability to go for such costly machine. Cost of such machine is reported as in between Rs. 5,000/- to Rs. 10,000/- where as the cost of "Bhir" is less than Rs.500/-. Such machine, if provided in subsidized price, many of the weaver households are willing to go for it. They also opined that even if subsidized rate is not feasible, provision of finance will be of great help for the weavers of the area in adopting more efficient machines. Necessary assistance in procuring the costly muga reeling machine will be high impetus for the muga cloth weavers.

(4) There are ample scopes of a harmonious combination of traditional designs with new ideas by taking the help of computer technologies to workout brilliant and more appealing modern patterns in the silk cloths weaved by the expert weavers of Sualkuchi. This will help in impressing more customers both in local and outside markets. The urgent need for initiating some coordinated research and training in this direction will help the silk cloth weaving industry of Sualkuchi to a great extent. The State Government has, however, very recently (July, 2008) taken steps by inaugurating



one research cum training centre in Sualkuchi. Such a research cum training centre is expected to cater a long pending necessity of the area.

(5) The handloom textile industry of Sualkuchi is one of the most valuable assets of Assamese culture and tradition. Increased need of modernization in terms of infrastructural facilities demands introduction of more varieties of looms that are at present in operation in advanced textile towns of the country like Salen (Tamil Nadu) and Panipath (Haryana).

(6) A textile museum at Sualkuchi established by Government patronage will be an appropriate step to keep alive the unique tradition and culture of silk industry of Assam which in turn may attract tourists into this area.

(7) Some of the accessories made of bamboo and wood used in handloom for weaving various cloths at Sualkuchi are now replaced mostly by similar accessories made out of materials like plastic and iron. All these changes have contributed positively towards the growth and development of the industry. This welcoming trend of transformation may be encouraged by ensuring ample supply of such items.

(8) Co-operation is one of the principal means of bringing changes of fundamental nature within the economy. "A sound Co-operative base will go a long way to do away with many of the problems associated with Assamese textile industry; and thereby can bring an overall development in this regard" (Chetia, S., 2006). The present well organized and efficiently functioning Co-operative Societies of Sualkuchi have a role to accept the challenges of rural development by reaching the weaker section of the society. The role of grass root level Weaving Co-operative Societies as an umbrella organization should function as a prime mover for the process of rural development. The Co-operative Societies have to look after the fact that the hired weavers got the actual wages for their labour. On the other hand, selling of finished silk cloth items via Co-operative Societies must be ensured remunerative returns to the poor weavers of the area.

(9) Availability of Bank finance to the willing weaver families will open up the path of speedy adoption of modern technologies, especially sophisticated tools and

equipments as well as machineries in weaving of silk cloths. Lack of finance which is the major obstruction in case of the poor weaver families in adopting new technologies, should be mitigated by providing institutional finance to the willing weaver families and that in turn will improve both quality and quantity of the silk cloths of the area.

**Suggestions/Action Points :**

Keeping in view the emerging process of transformation in the age old silk industry of Sualkuchi, following suggestions are offered:

(i) Introduction of semi automatic handlooms and simple power looms have expected to bring about a revolution in the silk industry of Sualkuchi as well as in the State. (**Attention: Department of Handloom and Textile, Govt. of Assam and Directorate of Industries, Govt. of Assam**)

(ii) Use of Jacquard machine will bring much improvement in the design making of the silk cloths of the sample households. (**Attention: Department of Handloom and Textile Govt. of Assam**)

(iii) Relatively more efficient machine in place of traditional equipment "Bhir" for reeling muga yarn should be escalated and steps may be taken to expand this culture among the muga weavers of Sualkuchi. (**Attention: The Central Silk Board of India, GOI and Department of Handloom and Textile Govt. of Assam**)

(iv) A harmonious combination of traditional designs with new ideas by taking the help of computer technologies should be worked to evolved brilliant and more appealing patterns in the silk cloths weaved by the expert weavers of Sualkuchi. A research cum training centre in this regard is expected to cater a long pending necessity of the area. (**Attention : The Central Silk Board of India, GOI and Department of Handloom and Textile Govt. of Assam**)

(v) Adoption of modern technologies, especially use of sophisticated tools and equipments as well as machineries in weaving requires reasonable amount of money. Lack of finance in case of the poor weaver families should be mitigated by providing institutional finance to the willing weaver families of the area. (**Attention : All**

**Nationalized Banks, NABARD, Directorate of Handloom and Textile, Govt. of India and Department of Handloom and Textile, Govt. of Assam)**

(vi) Appropriate steps should be taken to safe guard the golden yarn Muga. Unless the Muga yarn production is increased substantially, the price of already much costly Muga yarn will be increased further and there is every possibility that the day is not very far when entire Muga culture will be jeopardized by way of replacing it by low cost Tasar yarn. (**Attention: The Central Silk Broad of India, GOI and Department of Sericulture, Govt. of Assam**)

(vii) Supply of Electricity to the Silk village should be improved as it will help the weavers of Sualkuchi to get uninterrupted lengthy working hours. (**Attention: The Assam State Electricity Board**)

(viii) The Co-operative Societies should look after the fact that the hired weavers get proper wages for their labour. On the other hand, remunerative returns must be ensured to the poor weavers of the area for selling their finished silk cloth items via Co-operative Societies. (**Attention: Registrar, Co-operative Societies, Assam, GOA**)

(ix) Establishment of a Yarn Bank of Pat and Muga yarns with reasonable prices at Sualkuchi will fulfill a much needed requirement of the silk cloths weavers of the area. It will rescue the silk weavers from the clutch of the traders who very often have raised the rate of the yarns with unfair profit motive. (**Attention: Department of Sericulture, Govt. of Assam and Central Silk Broad of India, GOI**)

(x) To keep alive the unique tradition and culture of silk industry of Assam and to attract tourists into the area, a textile museum should be established at Sualkuchi. (**Attention: Department of Handloom and Textile and Department of Tourism, Govt. of Assam**)

**Conclusion:**

Every thing made of hand is precious and has excellent market value. The age old traditional fabrics have the highest status in handloom textiles. Silk cloths produced in Assam are milestones in this regard. It would be very much encouraging and



reassuring, if efforts are made to preserve different textile items, traditionally produced in Sualkuchi along with the unique colourful patterns. The people of Sualkuchi of both sexes, irrespective of caste & creed and level of educational attainment have been actively involved in perpetuating and upholding the tradition. The people, by and large, seem to have a sense of pride in actively associating themselves with this tradition and have their own ideas as to how to develop and modernize this pursuit to keep pace with the need of the hour. But, in spite of the vast potentials, skills, artistic designs, beautiful crafts and colour combination for the silk cloths, silk culture of Assam in general and silk culture of Sualkuchi in particular have lagging behind mainly due to the factors like : insufficient effort by the development agencies, financial shortage, lack of suitable market for finished products and shortage of proper training facilities . There is no doubt that if both State and Central Governments join hands with various Handloom development organizations and undertake the responsibilities of providing necessary marketing outlets, production activities and other infrastructure for the weavers, silk products of Assam can make a mark in National as well as International handloom scenario.

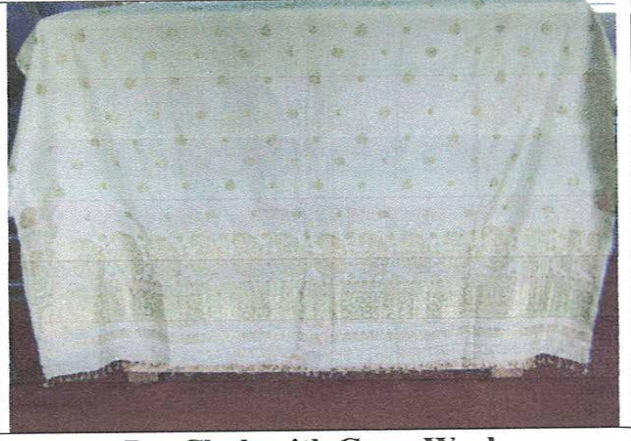
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**Photographs of Pat and Muga Cloths with Various Designs Produced  
in the Looms of Sample Households**



**Pat Muga Mixed Cloth**



**Pat Cloth with Guna Work**



**Muga Cloth**



**Pat Cloth with 'Kesh' Design**



**Pat Cloth with Peacock Design**



**Pat Cloth with Cotton Thread Motif**



Looms and Equipments Used by Sample Weaver Households



An Assamese woman engaged in winding from Latai to Bobbin with help of Charkha



Dyeing in Hanks : A man at work



Fly Shuttle Loom : A view



A view of a Dobby Loom



The Process of Denting (*Ras Bharuwa*)



An Assamese woman engaged in winding from stand to Latai



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