INTRODUCTION
Silk enjoys a special status among the textile fabrics. In the myriadfold domain of Textile Fabrics, it can undoubtedly be called "Primum Interpares". This is so because of its unique properties; which combine lightness with warmth, sheerness with strength and delicacy with resilience. The sparkling glow, smooth lustre and bewitching beauty have rightly made silk the queen of fashion markets; the darling of damsels and a sine-qua-non for blessed damosels bound for their nuptial ceremonies. Silk is one of the few commodities which enjoy world-wide importance, with history dating back to a few thousand years. Despite the fact that silk and silken products are expensive; and suit only the pockets of the affluent classes, the fact remains that it has tremendous importance for the poor as well; who derive their livelihood from this industry. This is clearly reflected from the fact that the major share of the product value of silk goes to the poor farmers who rear silkworms and produce cocoons. The percentage distribution of money from silk fabrics is: cocoon producer, 54.60 per cent; silk reeler, 6.60 per cent; twister, 9.70 per cent; weaver, 11.30 per cent; trader, 17.30 per cent (Balasubramanian, 1986:23).

Sericulture (end product of which is silk) has been identified as an occupation of a low investment, high output;
source of income and employment. It is ideally suited to the
economy of developing countries like India, which face the
baffling problem of creating gainful employment to the ever
exploding labour force, especially in rural and semi-urban
areas. Presently sericulture is rated as the second largest
employer of the country; next only to handloom industry
(Ullal and Narasimhanna, 1987:5). Out of 5.76 lakh villages in
India, sericulture is practised in about 50,000 villages,
providing employment to about six million persons most of
them belonging to the weaker sections of the society
(Conwalker, 1991:9).

It is heartening to note that India has made a
remarkable achievement in the field of silk production. In
fact it is now the second largest silk producing country in
the world; next only to China. Silk production has registered
a significant increase during a period of nearly two decades.
This is reflected from the fact that in the year 1972-73 the
production was 2600 tonnes, which touched to 11,000 tonnes
in the year 1989-90; registering an increase of 323.09 per
cent. Of this total produce, the major share is consumed in
the domestic markets. Nevertheless, the foreign exchange
earnings from the sale of silk and silken products in the
foreign markets has been increasing at an impressive rate. India's export earnings from silk goods touched a new high of Rs. 400.61 crores during 1989-90, recording an increase of 21.43 per cent over the previous year's level of Rs. 330.15 crores (Central Silk Board, 1990:55). Moreover, India is the only country in the world producing on a commercial scale all the four known varieties of natural silk namely, Mulberry, Tassar, Eri and Muoa (Batra, 1979:553). However, over 90 per cent of the silk produced is mulberry silk, which also is relatively better organised and is steadily increasing. The production of mulberry raw silk is mainly confined to the states of Karnataka, Andhra Pradesh, Tamil Nadu, West Bengal and Jammu and Kashmir, which together account for about 93 per cent of the country's total mulberry silk production (Central Silk Board, 1988:7).

Notwithstanding the fact that there has been a large quantitative improvement in India's silk production, the quality of this silk has remained very poor. Major part of the Indian silk is categorised as 'H' grade— the poorest quality in the international market (Kumar, 1989:43). In fact India is an importer of high quality raw silk for producing exportable quality fabrics. The quality of raw silk produced
in the country, even the best, has been found to be far inferior to the gradeless imported from China (Ramakrishnan, 1990:9). Production of high quality bivoltine silk conforming to international standards of quality specifications is of paramount importance in India. With a view to overcome this deficiency, it is imperative that bivoltine popularisation programmes be taken on a war footing in all the states of Indian Union where there is a potential for the same. Against this backdrop, it would be worthwhile to assess the position of silk industry in the State of Jammu and Kashmir.

The state assumes special significance in the field of silk production. This is the only traditional univoltine belt in India, capable of producing silk comparable to the qualities of exquisite imported raw silk of standard quality in the international market. Kashmir introduced far better silk both in quality and quantity than Italy and Japan about 60 years ago (Patel, 1976:149). The climate of Kashmir is temperate and congenial for rearing both univoltine and bivoltine silkworm races for cocoon production. These cocoons are far superior to the multivoltine ones produced in the rest of the country. However, it is disheartening to note that the silk industry of Jammu and Kashmir, which has seen a
glorious past, has been on decline. The industry has been passing through a phase of low productivity, low capacity utilization and high specific material consumption. This, couched with continuous losses, has made the industry economically unviable. The raw silk production decreased from 97,914 kgs. in 1961-62 to 16,000 kgs. in 1989-90, showing a decrease of 83.66 per cent. This was mainly due to continued monopolistic control and the denial of remunerative returns to the cocoon rearers. Absence of effective management further contributed to the decline of the industry. Seized with this phenomenon, the Government and other concerned agencies initiated a series of measures from time to time to help this industry to come out of this rut. In this context a recent step taken by the Government is demonopolization.

The silk industry of Jammu and Kashmir has been demonopolised; Mulberry protection Act Scrapped and the minimum support price for cocoons raised by about 100 per cent (per ko.) in May 1988. Following this the horizon seems to be bright now and sericulture is expected to regain its past glory ushering into an era of prosperity. Nevertheless, much depends upon the returns generated by the sericulture
and silk industry. Sericulture in Karnataka has made bio
strides, because it provides much more income to the rearers
as compared to other occupations. Therefore, it is felt
necessary to study the cost and returns from silk production
for assessing the returns potential of silk production. No
such study has been undertaken so far in the State of Jammu
and Kashmir as could throw light on the cost and returns from
silk production. As such, the present study endeavours to
fill this gap and make a modest contribution in this
direction. The study seeks to assess the costs and returns
of silk production under management perspective and probe
objectively into the factors which are threatening the
economic viability of the industry, so that an economic
antidote is identified for the malady.

Objectives:

The study has been undertaken with the following
specific objectives in view:—

1. To examine the state of costs and returns in
   sericulture and silk production,

2. To assess the management efficiency of the
   silk industry,

3. To explore the role of effective management in
   augmenting returns, and
4. To suggest suitable measures for making the activity of silk production economically more viable.

Hypotheses:

In consonance with the aforesaid objectives, the following hypotheses have been laid down for verification and confirmation:

1. Sericulture has a lot of potential for generating more income and employment,

2. Scientific management of mulberry gardens and cocoon rearing leads to substantial increase in net returns,

3. Silk industry is passing through a phase of low productivity and low capacity utilization, and

4. Inefficiency of management contributes significantly towards poor performance of the silk industry of Kashmir.

Scope of the Study:

The scope of the present study is limited to the study of costs and returns in sericulture, raw silk production and in production of silk fabrics by public sector in Kashmir. The selection of the subject is supported by the below mentioned reasons:
1. The silk industry has been one of the oldest industry of Kashmir.
2. The climatic conditions of Kashmir are temperate and congenial for producing high quality of silk, yet the industry is on decline.
3. Sericulture is an important agro-based industry which generates more income and employment, and
4. The industry has been demonopolised and the minimum support price for cocoons increased by about 100.00 per cent (per kg.) to make the silk production more remunerative.

Reference Period:

The reference period for the present study has been the year 1999-90. With a view to get reasonably accurate and reliable data, the field survey was conducted soon after the end of cocoon rearing season during the month of July 1999. Besides, the period of ten years, from 1990-91 to 1999-90 has been selected for the purpose of detailed analysis of production trends, productivity levels and financial results of the silk industry. The selection of this period stands justified by the fact that whereas the silk production in
India as a whole increased substantially, the same declined significantly in Kashmir during this period.

**Research Methodology:**

With a view to test the above mentioned hypotheses, both primary and secondary data have been used. The primary information has been collected through a multi stage stratified random sampling design, by administering a well designed and pretested questionnaire to the sampled rearers, managers and workers. The data relating to the costs and returns in sericulture has been obtained from rearers through a structured questionnaire (See Appendix-I). The data regarding the management efficiency of the silk industry has been obtained from the managers and workers of the silk producing units of Kashmir through another structured questionnaire (See Appendix-II). For the purpose of questionnaire administration, the rearers have been referred to as respondent group-I and managers and workers have been referred to as respondent group-II in the present study.

For the purpose of data collection from rearers, two blocks- Kelar and Kakapura from District Pulwama and two blocks- Kupwara and Chandigam from District Kupwara have been
purposively chosen. The choice is based on the following considerations:

1. These blocks are characterised by a rich history of cocoon rearing.
2. Cocoon rearing is carried on an extensive and commercial scale in these four blocks.

From each block five villages were selected, which are relatively more important in terms of large number of rearers having their own mulberry gardens. In Kelar block the villages, Peerpora, Bhe-Chidren, Arithal, Aheam and Kushipora and from Kaknora block, Khadermoh, Narval, Chooam, Pahoo and Reshipora villages were selected for this study. From Kuowara block, the villages Sofipora, Guleam, Thrihoam, Gushi and Druomulla were selected and from Chandioam block the villages selected were, Kulioam, Lalour, Puthushy, Sooam and Vovora. A list of all cocoon rearers of these selected villages was prepared along with the information about area under mulberry, with the help of sericulture assistant of the area. The rearers with mulberry gardens below the age of two years were not included in the list. At the final stage ten per cent sample of the cocoon rearers was drawn at random. This gave a sample of 4 blocks,
For the purpose of studying the impact of effective management on cost and returns, the rearers have been classified as progressive rearers (advanced) and non-progressive rearers (less-advanced). The progressive rearers are such rearers as maintain their mulberry gardens properly and carry out silkworm rearing scientifically. A properly maintained mulberry garden is one which is properly laid out and fenced and adequately irrigated, fertilized, pruned and hoed at an appropriate time to ensure production of quality mulberry leaves. In addition to this, progressive rearers use adequate labour force, proper equipments and also disinfect their rearing houses and equipments at the proper time for providing an optimum environment for silkworm rearing. As against this, non-progressive rearers are those rearers whose mulberry gardens are not properly maintained and they rear silkworms in an unhygienic way, without following sanitation prescribed for good rearing.

The respondents interviewed were arranged in three categories: Those having the size of mulberry gardens below four kanals (to be called category A), those having between 4-8 kanals (to be called category B) and
those having 8 and above kanals (to be called category C).

So the final number of rearers considered was 179 and their
distribution is as under:

<table>
<thead>
<tr>
<th>Size category</th>
<th>Progressive rearers</th>
<th>Non-progressive rearers</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>25</td>
<td>59</td>
</tr>
<tr>
<td>B</td>
<td>30</td>
<td>39</td>
</tr>
<tr>
<td>C</td>
<td>12</td>
<td>15</td>
</tr>
<tr>
<td>Total</td>
<td>67</td>
<td>112</td>
</tr>
</tbody>
</table>

Data pertaining to the management efficiency was collected from three industrial units viz; Kashmir Filatures, Pajbac Silk Factory and the Handloom Silk Weaving Factory. These are the only silk producing units of Kashmir division in the public sector. Kashmir Filatures produce raw silk whereas the other two units produce silk fabrics. In all a sample of 31 managers representing 50.00 per cent of the total managers and 128 workers, representing 10.00 per cent of the total workers, were selected at random for questionnaire administration. The information was obtained directly through personal interviews, using a well structured interview

1. Kanal = 1/3th of an acre.
schedule. Out of the total respondents 90.00 per cent had completed more than 9 years of service. A questionnaire battery consisting of effective management characteristics pertaining to different areas of management was used. The respondents were asked to point out whether the degree of presence of a particular characteristic was poor or good. Besides, the questionnaire also contained some factors which were assumed to be mainly responsible for the ineffective functioning of the management of the silk industry and contributing significantly towards its poor performance. The respondents were asked to choose as many factors as they liked, which in their opinion contribute primarily to the ineffective functioning of the industry under study. Since the purpose of the study have been to find out the most critical and crucial factors, the respondents were asked to avoid choosing all the factors. Frequencies of items were developed on the basis of appearance of items.

Over and above the primary data, the secondary data utilized in the study have been obtained from the officers of the Department of Sericulture, Government of Jammu and
Kashmir; Directorate of Evaluation and Statistics and Economics and Statistics, Government of Jammu and Kashmir; Silk Producing Factories of Kashmir; Central Silk Board, Bangalore; the Institute of Social and Economic Change, Bangalore; National Documentation Centre, I.C.S.S.R., New Delhi; Hatna Tata Library, Delhi University, Delhi; the Institute of Economic Growth, Delhi; Indian Institute of Public Administration, New Delhi; besides, from various books, journals and Government reports.

Data Processing and Analysis:

The data collected through primary and secondary sources has been tabulated and subjected to some sophisticated process for analysis and interpretation. Besides, the absolute numbers, the methods of percentage comparison, index numbers, summary statistics like averages, coefficient of variation, ranking based on overall scores has been used for detailed analysis. Coefficient of rank correlation has been used to study the relationship between different variables in case of progressive rearers. Besides, coefficient of rank correlation has also been used to study the association between the perception of managers and workers pertaining to problem-profile of the silk industry.
T-test has been applied to test the significance of an observed correlation coefficient. One way chi-square ($X^2$) analysis has been used to find out the significance between the responses of poor and good frequencies pertaining to the degree of efficiency of management. Thus, with the help of suitable statistical techniques the data has been critically scanned and indices of effectiveness and efficiency worked out wherever possible.

Limitations of the Study:

Following are the main limitations of the study:-

This investigation is limited to the study of costs and returns in silk production under management perspective. For this purpose, some important qualities of effective management pertaining to general, financial, personnel and marketing management has been ascertained for examination of managerial effectiveness. The study excludes the deeper enquiry into these characteristics under the said areas of management. Moreover, the study pertaining to the area of production management has not been included. This is because, the enterprises under study have different production systems and patterns, which needs a detailed analysis for each unit separately.
The main limitation of the study is that the production of silk fabrics in private sector is not included. This is because, the private sector produces only silk fabrics in limited quantity and not the raw silk, which forms the raw material for silk fabrics.

Even the primary data collected for this investigation is not without its limitations. The primary data was obtained by the field survey method, from the rearers (respondent group-I) recollecting information from their memory. Maintenance of records is not prevalent in the areas under study and the rearers have a tendency to overestimate the cost of inputs. Sometimes rearers deliberately provide wrong information regarding the cost of different inputs. Despite the strenuous efforts of the investigator, partial or even non-response might have occurred owing to unwillingness of some respondents to divulge information pertaining to management efficiency of the industry. This is because, human beings are wise enough to manipulate their answers in consonance with their preferences and social values. Therefore, some element of bias in the opinion/perception of the respondents cannot be ruled out.
The secondary data used in the present study has been mostly obtained from the official records of the Department of Sericulture, Kashmir Filatures and Silk Weaving Factories. This data was mostly in raw form, even the Balance Sheets for most of the years under study were not audited. Therefore, the general limitation of this kind of secondary data originating from these offices, particularly their incompleteness and inaccuracy, cannot be ruled out.

However, sufficient care has been taken to see that these limitations do not have any significant material change in the overall findings of the study.

Design of the Study:

In the light of the hypotheses already set and the research approach adopted, the entire analysis in the present study has been worked out in the following chapters.

I. Silk Industry in Jammu and Kashmir:

This chapter aims at analysing the growth and development of silk industry in Kashmir right from its inception to date. A detailed study of the
develooment of silk industry of Jammu and Kashmir has been attempted in the light of the development of the silk industry in India.

II. Cost-Benefit Analysis in Sericulture:

Sericulture provides the basic raw material for the silk production. Therefore, this portion of the study examines the position of costs and benefits from sericulture and highlights the employment generation by sericulture activities. Besides, the impact of effective management of mulberry gardens and silkworm rearing on income and employment generation has also been studied.

III. Costs and Returns in Silk Production:

This chapter examines the cost and returns in raw silk production and in the production of silk fabrics. A detailed study of the cost structure, and profitability of the silk producing units has been made. The factors which escalate the cost of production in the silk enterprises under study have been identified and analysed in detail. The chapter also highlights the other bottlenecks which are responsible for the uneconomic functioning of the silk producing units.
IV. Managerial Effectiveness:

This part of the study is devoted to the study of managerial effectiveness in the silk industry of Kashmir. Various characteristics of effective management pertaining to different areas of management (General, Financial, Personnel and Marketing) have been examined and analysed in detail. The chapter also highlights the crucial and critical factors which have made the management helpless and contributed significantly to the poor performance of the industry.

V. Findings, Conclusions and Suggestions:

The main findings and conclusions have been summarised in this chapter. In the light of these findings and conclusions appropriate suggestions and policy implications have been chalked out.