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Management orientation and emerging challenges of Muga silk entrepreneurs in Assam, India

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Abstract

Muga silk is a variety of silk that has a beautiful golden colour and a shiny texture. Muga silk is highly valued by the elite class due to its intricate production method, making it the priciest among all silk varieties. Assam state contributes 95% of the total muga production in the country. It holds immense significance in the cultural heritage of the state and highly profitable export item from Assam. The growth and development of the enterprise largely depend on the efficiency and effectiveness of its management practices. The study was carried out with 100 entrepreneurs of Kamrup district under the state Assam with a view to assess the management orientation of muga silk entrepreneurs. The study revealed that Muga silk entrepreneurs in the region are managing their enterprises efficiently and generating substantial profits, reflecting a commendable level of managerial competence. The empirical findings further indicated that key determinants—namely entrepreneurial experience, mass media exposure, and annual income—exerted a positive and statistically significant influence on the management orientation of the enterprises. In addition, structural factors such as type of business and source of finance were also found to have a significant impact on the management orientation of the entrepreneurs. These results underscore the importance of both individual and institutional variables in shaping managerial effectiveness and enterprise performance in the Muga silk sector. The study further identified and quantified the managerial constraints faced by Muga silk entrepreneurs using the Problem Confrontation Index (PCI). The findings revealed that irregular supply of Muga yarn from farm units and local vendors emerged as a major operational bottleneck. Other critical constraints included lack of technological upgradation, unavailability of weaving machine parts in local markets, shortage of hired weavers, intense competition from power-loom silk enterprises, and frequent price fluctuations of Muga yarn. These challenges significantly impede the smooth functioning and sustainability of Muga silk enterprises, indicating the need for targeted policy interventions, improved input supply mechanisms, and technological support to strengthen the sector.

Keywords: Management orientation, Muga, Entrepreneurs, Assam

1. Introduction

Handloom weaving is an integral part of the rural culture and economy of Assam (Chakravorty *et al.* 2010) ^[1]. Muga silk is a variety of silk that has a beautiful golden colour and a shiny texture. It is produced specifically in the region of Assam in India and is known for its durability and resilience. The practices of Muga silkworm rearing from searching of seed cocoons to the production of reeling cocoons are laborious (Phukan *et al.* 2006) ^[2]. The fabric made from this fibre is extremely durable, which creates a strong demand for it in both domestic and global markets (Freddi *et al.* 1994) ^[3]. The silk is often used to create traditional garments and is highly valued for its beauty and quality. In Sualkuchi, skilled weavers make beautiful textiles like mekhela-chaddar, sarees, blouse pieces, kurtas, gamuchas, and other clothes. The silk weavers skillfully create and manufacture traditional designs native to the state, catering to the diverse needs of customers for various occasions like Bihu, weddings, and religious ceremonies (Phukan *et al.* 2006) ^[2]. Commercial silk production is the major occupation of the villagers, with 73.78% of households engaged in weaving (Anonymous, 2020) ^[4]. In 2007, Muga Silk was given the "Geographical Indication"

recognition under the legal framework of the Geographical Indication of Goods (Registration and Protection) Act 1999, and in 2014 it was granted the GI logo to maintain its trademark rights. This helps with the production and commercialization of this unique silk worldwide (Goswami *et al.* 2016) ^[5]. Muga silk is highly demanded in Assam, but due to the shortage of silk yarn production, weavers are mixing it with local tasar silk, Chinese tasar silk or tasar-like polyester silk. This ultimately leads to a decline in the quality of authentic silk used for commercial purposes (Talukdar, 2009) ^[6]. Global warming, climate change, excessive use of pesticides, and the decline of muga silkworm rearing and traditional muga plantations in Assam have caused a significant decrease in the production of muga yarn and fabric in comparison to other types of silk in India (Mahanta *et al.* 2023) ^[7]. Currently, the dominance of low-cost fabrics in the textile market is posing a major concern for owners of loom. According to a report in The Assam Tribune, the weavers and small-scale handloom entrepreneurs of Sualkuchi, also known as the "Silk centre of Assam," faced numerous challenges and showed remarkable resilience in 2013. Due to which the states Silk business is steadily getting worse. The main entrepreneurs

in the handloom industry are the grainer, reeler, weaver, and fabric maker. They are responsible for investing capital, employing workers, and coordinating their activities to ensure the success of the business. Presently silk and hand loom sectors provide job opportunities to more than 25 lakh people in the state. The main strength of handloom sector in Kamrup district is its largest and skilled labour force (Gogoi *et al.* 2017) ^[8]. There is a vital need to enhance this strength and address factors that weaken the silk sector across the state (Bajpeyi *et al.* 2010) ^[9]. Efficient Management is one of the crucial factor for growth and development of this enterprise (Shivananadagowda *et al.* 2023) ^[10]. This present study evaluates the management orientation of muga silk entrepreneurs in this region and also tried to comprehend the issues and for the sustainable growth and development of the enterprise.

2. Materials and Methods

The experiment was conducted during August 2022 to February 2024 at Kamrup district of Assam, India. A convenient sampling technique was adopted for the present study. Kamrup district of Assam was selected purposively because the production of silk handloom weaving in Assam is centered in Kamrup district, accounting for approximately 70% of the state's silk post-cocoon activities. Silk activities after cocooning happen in Sualkuchi and Bamundi sectors of Kamrup which are important Silk Weaving clusters in North-East India. This cluster plays a central role in the trade and production of silk products. Approximately 75% of Muga cocoons and over 50% of Eri cocoons produced in Northeast India are concentrated in Kamrup district of Assam for trading, production, weaving, and marketing of silk cloth. Sualkuchi recognized by UNDP as the “Manchester of the East”, is located in the Kamrup district of Assam is Asia's largest silk weaving cluster (Chakravorty *et al.* 2010) ^[11]. The Kamrup district of Assam is consist of 14 blocks and out of which Sualkuchi, Rani, Rampur and Boko were selected purposively for the study because muga silk weaving is highly concentrated in these areas. Among the selected 4 blocks highest muga silk entrepreneurs are concentrated in Sualkuchi followed by Rani, Rampur and Boko. Hence, following a convenient sampling Sualkuchi (50), Rani (20), Rampur (15) and Boko (15) were selected for the study. The profile variables selected for this study were age, family type, education level, annual income, organizational pattern, experience, source of finance, mass media exposure, social participation, type of business and exposure to training. Meanwhile, the descriptive variables selected for the study were management orientation. Management orientation is operationalized in terms of managing their enterprise activities such as production, planning, and marketing to earn income. The overall management orientation was measured on the basis of mean of the obtained scores. Moreover, the study also highlighted the problems faced by the muga silk entrepreneurs which was ranked by using Problem Confrontation Index (PCI). The data were collected with the aid of a structured schedule specially designed for the study after the pilot survey through the process of personal interview.

3. Results and Discussion

3.1. Management orientation of mugs silk entrepreneurs

Effective management is a critical determinant of enterprise success, as it facilitates the attainment of predetermined

goals, ensures optimal utilization of resources, and enhances cost efficiency. In the present study, management orientation was conceptualized as a composite construct encompassing key functional dimensions of planning, production, and marketing and expressed in low, medium and high categories.

Table 1: Distribution of respondents according to their overall management orientation

Category	Score range	Number	Percentage
Low	Upto 55	12	12.00
Medium	56–59	55	55.00
High	Above 60	33	33.00
Total		100	100.00

From table1 it is evident that, majority (55.00%) of entrepreneurs had overall medium management orientation followed by 33.00% and 12.00% of the respondents high and low overall management orientation respectively. Further analysis indicates that across all three functional dimensions—planning orientation, production orientation, and marketing orientation—the majority of respondents were categorized under the medium level. Consequently, the composite assessment also reflects a predominance of the medium category in overall managerial orientation among the entrepreneurs.

3.2. Determinants of management orientation of the muga silk entrepreneurs

The table 2 presents the relative contribution of selected independent variables towards management orientation of muga silk entrepreneurs and the result reveals that experience, mass media exposure and annual income of the entrepreneur have recorded a significant regression effect on the management orientation in presence of other causal variables. The experience, mass media exposures have contributed the highest direct effect in delineating the management orientation of the enterprise followed by the variable annual income of the entrepreneurs. The experience of the entrepreneur had recorded a significant substantive impact on the management orientation of the enterprise. The experience profile of an entrepreneur exposes to an interactive milieu along with diverse surroundings and events. Long term experience not only reflects in rational decision making regarding their business but also helps in building up management orientation desire and destiny to maximize the profit of his enterprise. The results of the present study are in agreement with the findings of Faruque, S and Guha P (2024) ^[11] who similarly reported that experience significantly influence management orientation among entrepreneurs. Mass media act as channels through which small enterprises are provided with information on the service and products available to them as well as general business and market information. Moreover, it can play important role in improving the provision of the essential inputs to the enterprise. Similarly, the variable annual income also had found wielding substantive effect in the management orientation. The annual income is one of the key factor that determine the success of an enterprise (Adhikary *et al.* 2010) ^[12]. A healthy income of the entrepreneurs helps the enterprise to cover their expenses, invest in growth opportunities and ensure long term viability. A higher level of income not only helps a micro-entrepreneur in using skill labor and efficient utilization and

management of resources but also provides a safeguard for unwanted business failure (Goswami, K *et al.* 2017) ^[13]. Moreover, higher income helps an entrepreneur in expanding their operations, product development and infrastructure improvements to attract and retain customers. That is why these variables had been found a significant regression effect in characterizing the management orientation of the enterprise in presence of other predictor variables. The finding was in conformity with the findings of Bortamuly *et al.* (2013) ^[14].

The findings of the study revealed that the type of business had a positive and significant influence on the management orientation of entrepreneurs. Small-scale enterprises, in particular, were found to offer greater opportunities for entrepreneurial engagement, employment generation for local communities, and a higher capacity for risk-taking. These enterprises generally require lower capital investment, which allows entrepreneurs to operate with greater independence and flexibility in decision-making, thereby facilitating more effective management of their ventures. The independent work environment associated with small enterprises further contributes to the development of stronger managerial orientation among entrepreneurs.

The study also indicated that the source of finance had a positive and significant influence on management orientation at the 0.05 level of significance. Entrepreneurs relying on their own sources of finance demonstrated a higher degree of managerial control compared to those dependent on external financing options. Own financing encourages careful planning, prudent financial management, and sustained effort to minimize financial losses. Additionally, it promotes disciplined cash-flow management, which is crucial for the long-term stability and performance of the enterprise. These findings highlight the importance of enterprise size and financing structure in shaping the managerial orientation of entrepreneurs. This finding is in conformity with the results reported by Parvin *et al.* (2017) ^[15]. The consistency of the present results with earlier studies strengthens the validity of the observed relationship.

The coefficient of determination (R^2) value of 0.76 indicates that the predictor variables collectively explained 76 per cent of the total variation in the dependent variable, i.e., management orientation. This suggests that the selected independent variables have substantial explanatory power in predicting the management orientation of the entrepreneurs.

Table 2: Multiple regression analysis of management orientation of the Muga silk handloom entrepreneurs along with nine predictor variables

Sl. No.	Independent variable	Regression coefficient (bi)	Standard error (bi)	t-value	R^2	Adjusted R^2
1	Education level	0.572	0.387	1.477	0.765	0.741
2	Experience	0.702	0.166	4.227**		
3	Source of finance	0.671	0.291	2.303*		
4	Organizational pattern	0.676	0.457	1.478		
5	Training received	0.472	0.513	0.919		
6	Type of business	1.851	0.541	3.421**		
7	Social participation	0.085	0.328	0.259		
8	Mass media exposure	0.405	0.095	4.228**		
9	Annual income	0.003	0.008	4.005**		

Note

* indicates significant at 5% level of probability

** indicates significant at 1% level of probability

3.3. Problems faced by silk muga entrepreneurs in the region

The table 3 presents the problems faced by silk muga entrepreneurs where an attempt was made to identify the problems in production, marketing, and management as

perceived by the entrepreneur and Problem Confrontation Index (PCI) for each category of problems was computed. The problems were then ranked on the basis of high PCI to low PCI for each problem that are tabulated according to their severity.

Table 3: Problems faced by entrepreneurs in terms of marketing, production and management

Sl. No.	Problems	Extent of problem confrontation				PCI	Rank
	Production problems	High	Medium	Low	Not at all		
1	Irregular supply of muga yarn from muga farms units and local vendors	72	13	5	10	247	I
2	Lack of technology upgradation	65	10	15	10	230	II
3	Unavailability of weaving machine parts locally	55	14	10	21	203	III
	Management problems						
1	Lack of hired weavers	60	20	15	5	235	I
2	Lack of storage facilities	45	30	5	20	200	II
	Marketing problems						
1	Tough competition with powerloom silk enterprise	65	16	10	9	237	I
2	Price fluctuation of muga yarn	61	13	24	2	233	II
3	Availability of low-quality similar silk in market	48	35	15	2	229	III
4	Lack of government support and knowledge about proper platform to advertise product globally	45	30	5	20	200	IV
5	Customers are unaware of product features like quality, color etc	44	17	19	20	185	V
6	Limited access to market information	0	0	25	75	25	VI
7	Low profit from the enterprise	0	0	20	80	20	VII

3.3.1. Production problems

As regards the computed PCI values for the production problems, “Irregular supply of muga yarn from muga farms units and local vendors” had the highest value of 247 and was ranked first which was considered as frequently faced problem by entrepreneurs followed by “Lack of technology upgradation (230)” and “Unavailability of weaving machine parts locally (203)”. The production of muga yarn and fabric in Assam has significantly decreased due to global warming, climate change, the rise in tea growers in Upper Assam, the excessive use of pesticides, and due to which there is a decline of muga silkworm rearing and traditional muga plantations. This decline is particularly noticeable when compared to other types of silk production in India. Lack of technology upgradation is the matter of concern in the handloom industries specially muga silk enterprise. The weavers' hesitation and lack of willingness to take risks when it comes to technology conversions. In order to create a superior product, it is crucial that the irregularities in the warp or weft, the knots, and the iridescence are consistent and uniform. Achieving this level of perfection can only be made possible by utilizing advanced technology. The reeds used in the looms, plastic bobbins are imported all the way from Mumbai and Amritsar. Moreover, the designs along with the essential nylon cords and ropes, are sourced directly from the renowned city of Banaras. No entrepreneur has established any of these industries in Assam, despite the fact that millions of rupees are being spent on importing these items. The findings of the study support the study conducted by Goswami and Jain (2011)^[16] which concludes that irregular and timely supply of yarn, unavailability of machine parts, lack of technology up gradation are the problems faced by handloom industry and significantly influences the production.

3.3.2. Management problems

It can also be observed that among the computed PCI values for management problems, “Lack of hired weavers” had the highest value of 235 and was ranked first as frequently faced problem as perceived by the entrepreneur followed by “Lack of storage facilities (200)”. The scarcity of weavers who come from outside the silk village is placing the loom owners at risk. Furthermore, many local residents are not inclined to pursue weaving as a means of employment, given the alternate job prospects offered in other locations. This is one of the major problems faced by the owners or entrepreneurs of silk factories. The finding of the study support the findings of Paneersalvam and Rathakrishnan (2010)^[17]; Aggarwal *et al.* (2016)^[18] and Tanusree (2015)^[19] where they found lack of hired or skill weaver is a serious problem in handloom industry. A significant number of individuals abandon their careers in weaving due to insufficient facilities. According to a few respondents, the issue of the scarcity of skilled weavers, whether hired or from the family, would have never surfaced if the younger generation had chosen weaving as their profession. Unfortunately, the educated youths of today have a preference for other career options. Many entrepreneurs faced the problem of storage. There is not sufficient place to store the products developed. Also, there is not sufficient place to store cocoons and yarns as well. This finding was in conformity with the findings of Goswami and Jain (2011)

where they stated that infrastructure can greatly impede the growth of small business.

3.3.3. Marketing problems

It can be observed that among the computed PCI values for marketing problems, frequently faced problem by entrepreneurs such as “Tough competition with powerloom silk enterprise” had the highest value of 237 and was ranked first followed by “Price fluctuation of muga yarn (233)”. The handloom industry is encountering tough competition from the power loom sector. The findings of the study support the findings of by Raju, G.N. and Rao, K.V. (2014)^[20] and Paul (2019)^[21]. Both the problem of price fluctuation and competition with powerloom silk industries were reflected in the findings of the study conducted by Aggarwal *et al.* (2016). Moreover, the younger generation has a growing preference for power loom products due to their comfortable fabric, wide range of designs and colours, and affordable prices. Over time, a noticeable trend in consumers' preferences has emerged. The availability of Muga cocoons is also a critical issue for the Muga looms. The supply of cocoons relies heavily on the harvest in the Muga growing areas, which in turn is greatly influenced by weather conditions. Indeed, the quantity of Muga looms is directly correlated with the quality of the cocoon supply. According to the respondents, the inconsistent availability of yarn and Muga cocoons poses a significant challenge to the smooth operation of muga silk enterprise.

The third important marketing problem faced by the entrepreneurs was “Availability of low-quality similar silk in market (229)” followed by “Lack of government support and knowledge about proper platform to advertise product globally (200)”, had the value of 237 and was ranked forth. Muga silk is highly demanded in Assam, but due to the shortage of silk yarn production, weavers are mixing it with local tasar silk, Chinese tasar silk or tasar-like polyester silk. This ultimately leads to a decline in the quality of authentic silk used for commercial purposes. Moreover, the handloom sector lags far behind in terms of promoting and advertising its products compared to other competing textile sectors such as mills and knitted wear. The conventional method of promoting products through exhibitions and fairs has a short-lived impact on customers' minds. They quickly move on to purchasing other competing products that are constantly reminded to them. There is a complaint regarding the limited availability of handloom products, which poses a hindrance for customers who wish to purchase them in their area with ease and convenience. Similar kind of findings were reported in the study conducted by Vimalkumar (2018)^[22] which supports the present findings.

4. Conclusion

More than half of the entrepreneurs had overall medium management orientation and experience, mass media exposure and annual income of the entrepreneur had positive significant impact on the management orientation of the enterprise. Entrepreneurs were performing production related operations, without compromising the quality but there is room for improvement in terms of boosting production and meeting customer demands. Moreover, entrepreneurs were concerned about market and customer centered approach which is reflected in their income from

this enterprise.

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