

EXECUTIVE SUMMARY

There are many opportunities in art and craft segment especially when we talk about Madubani painting, Bhagalpur silk, Muzzafarpur lacquer ware products. We have special segment of people who prefer to buy these products and the segment is expanding day by day.

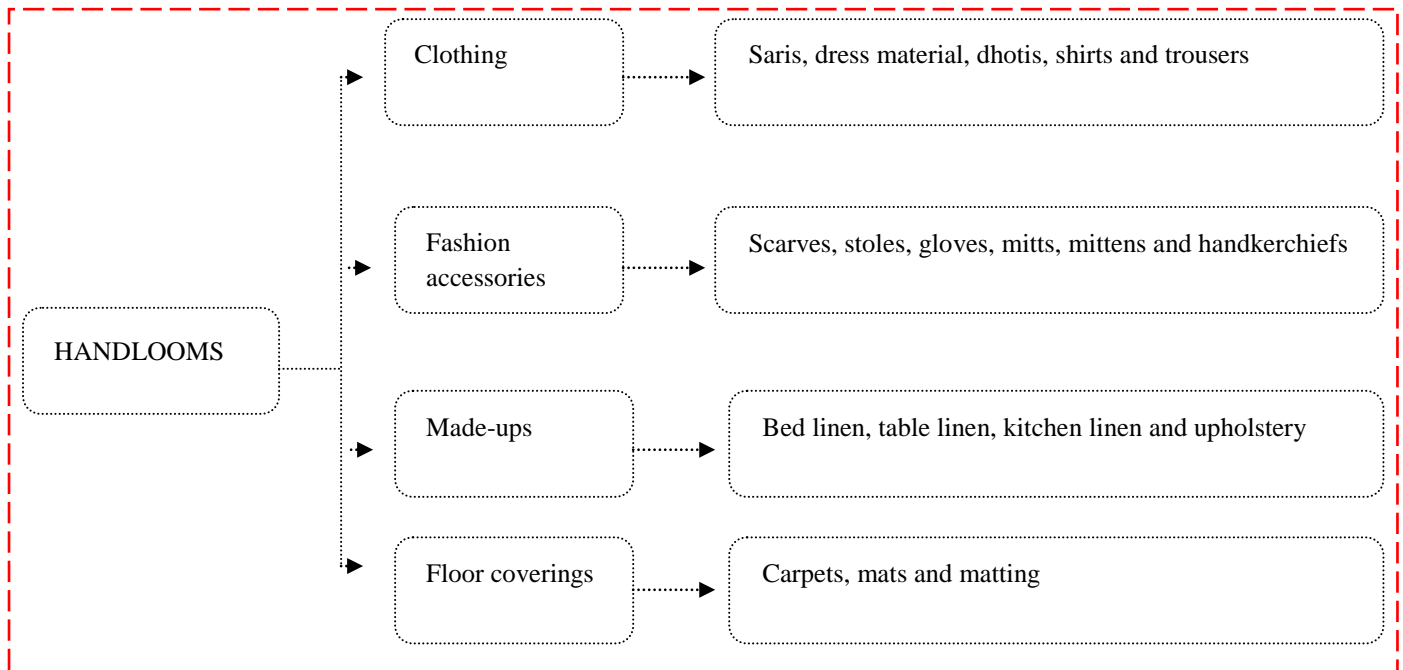
The main problem artisans today are facing is they are not in touch with market directly. There occurs a huge gap between artisans and the market. The artisans are being supported by people from the organization or other people to get in touch with market, because of this they do not get identified by the organization or the people who buy and use their products.

The main challenge artisans are going through is they are not having proper value chain system. In absence of proper value chain system and market channel artisans are not able to sell their product to final customer and they have to be depending on middleman or other channel partner. The middlemen and channel partner do not only eat the profit margin of poor artisans but also not allowing them to have any exposure of changing market trends. The absence of marketing channel is preventing members of PGs from additional production as it's not getting sold timely.

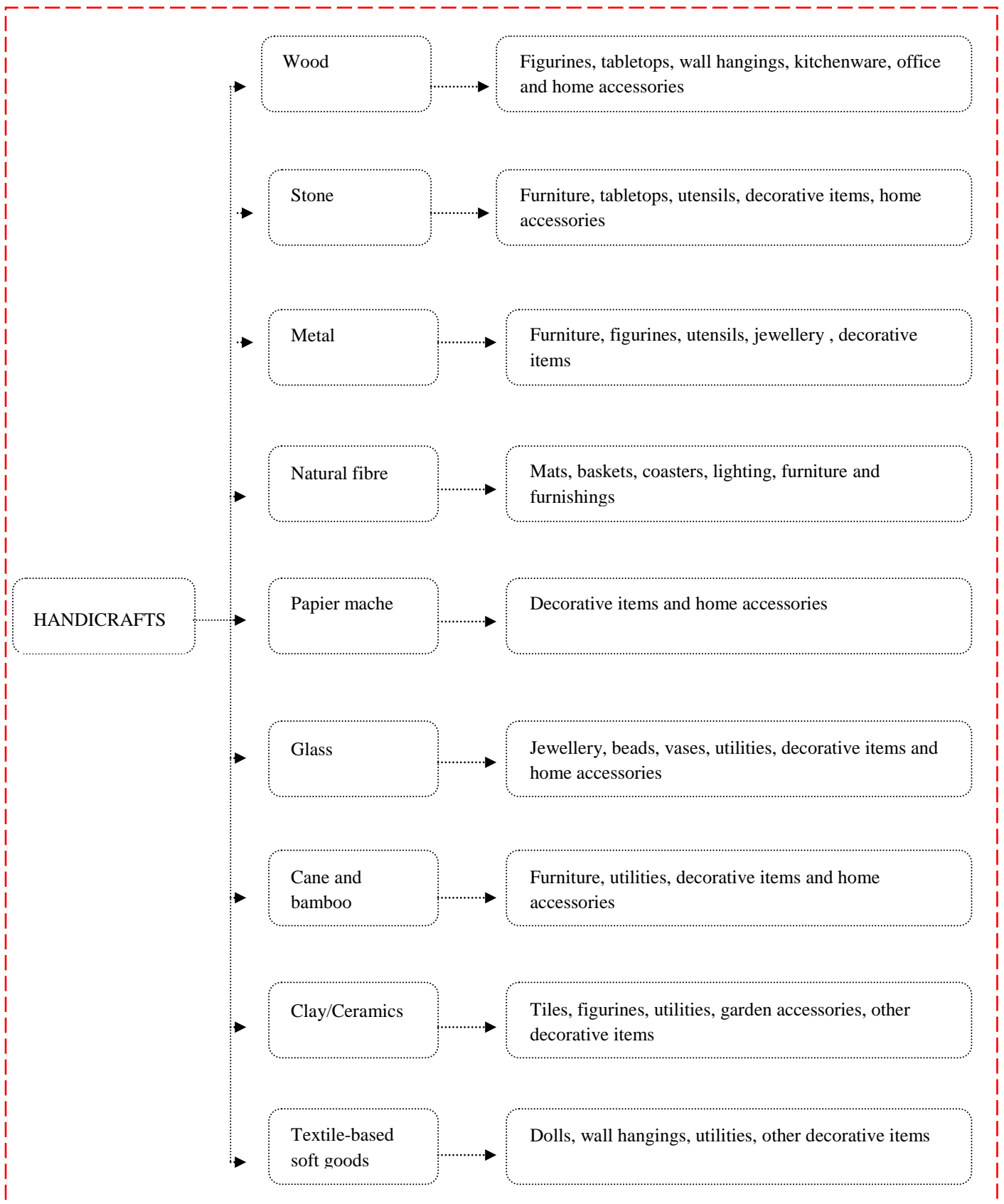
The survey, thus, was conducted to analyse the current value chain system of the artisans and suggesting interventions therein.

INDUSTRY CLASSIFICATION

A broad classification of the Handlooms, based on products are as follows:



A broad classification of the Handicrafts, based on raw materials used, are as follows:



CHAPTER 1

BACKGROUND



1. BIHAR: An Overview

Bihar, the ancient land of Buddha, has witnessed golden period of Indian history. The state with its capital at Patna is situated on the bank of the river Ganga. The state as it is today has been shaped from its partition from the province of Bengal and most recently after the separation of the tribal southern region now called Jharkhand. The new environment driven by state policies, increased foreign investment has brought about a huge change in the state environment which had led to creation of more investment opportunities in the state of Bihar.

1.2 Bihar Fact File

Area:	94,163.00 sq. Kms
Population:	10,38,04,637 (All India Census 2011)
Capital:	Patna
Literacy Rate:	63.82 per cent (73.39 per cent male literacy and 53.33 per cent female literacy)
Temperature:	Summer season - 35-40 Celsius; Winter season – 5-10 Celsius
Major Industries:	Agro-based, Tobacco, Power, Oil, Engineering, IT Source: Government of Bihar

1.3 CLUSTER: Definition

A cluster is defined as a concentration of enterprises producing same or similar products or strategic services and is situated within a contiguous geographical area spanning over a few villages, a town or a city and its surrounding areas in a district and face common opportunities and threats. Accordingly, we have not considered activities which are of daily use services and/or where scope for joint action or passive cooperation is minimal or where the product grouping is too wide for common threats/opportunities to emerge. Clusters may be broadly divided into the following broad categories:

Industrial cluster: Having at least 100 enterprises and/or a minimum turnover of Rs.100 million. Units in these clusters are functioning from factory premises with hired workers. Such clusters have a mix of micro, small, medium, few large and at times all micro units.

Micro-enterprise clusters: Such clusters are all micro units and are mostly done by household based units by mostly utilising home based workers. These include artisanal (handicrafts and handloom) and other micro enterprise clusters. A handloom cluster has a minimum of about 500 looms and that of handicrafts and other microenterprise clusters is estimated to have around 50 units.

2. VALUE CHAIN SYSTEM: Introduction

It is a network of supplier, manufacturing, assembly, distribution, and logistics facilities that perform the functions of procurement of materials, transformation of these materials into intermediate and finished products, and the distribution of these products to customers. Supply chains arise in both manufacturing and service organizations. SUPPLY CHAIN MANAGEMENT (SCM) is a systems approach to managing the entire flow of information, materials, and services from raw materials suppliers through factories and warehouses to the end customer. SCM is different from SUPPLY MANAGEMENT which emphasizes only the buyer-supplier relationship.

Supply chain management has emerged as the new key to productivity and competitiveness of manufacturing and service enterprises. The importance of this area is shown by a

significant spurt in research in the last five years and also proliferation of supply chain solutions and supply chain companies. All major ERP companies are now offering supply chain solutions as a major extended feature of their ERP packages.

2.1 Two Faces of Value Chain System

SCM has two major faces to it. The first can be called loosely as the *back-end* and comprises the physical building blocks such as the;

supply facilities, production facilities, warehouses, distributors, retailers, and logistics facilities. The back-end essentially involves

production, assembly, and physical movement. Major decisions here include:

1. Procurement (supplier selection, optimal procurement policies, etc.)
2. Manufacturing (plant location, product line selection, capacity planning, production scheduling, etc.)
3. Distribution (warehouse location, customer allocation, demand forecasting, inventory management, etc.)
4. Logistics (selection of logistics mode, selection of ports, direct delivery, vehicle scheduling, etc.)
5. Global Decisions (product and process selection, planning under uncertainty, real-time monitoring and control, integrated scheduling)

The second face (which can be called the *front-end*) is where IT and ITEC play a key role. This face involves processing and use of information to facilitate and optimize the back-end operations. Key technologies here include: EDI (for exchange for information across different players in the supply chain); Electronic payment protocols; Internet auctions (for selecting suppliers, distributors, demand forecasting, etc.); Electronic Business Process Optimization; E-logistics; Continuous tracking of customer orders through the Internet; Internet-based shared services manufacturing; etc.

3. BRLPS (Jeevika): Introduction

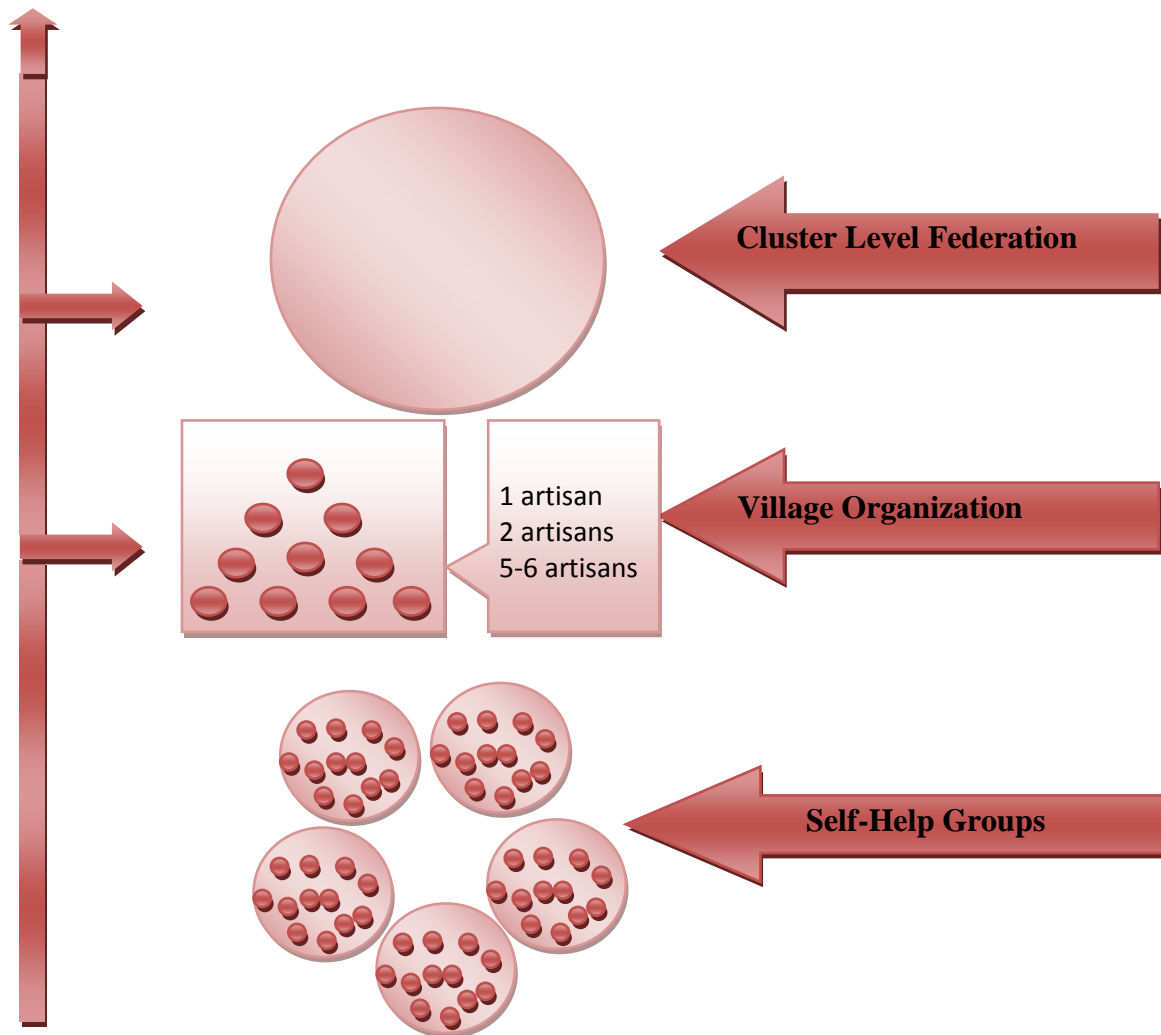
The Government of Bihar (GoB), through the Bihar Rural Livelihoods Promotion Society (BRLPS), an autonomous body under the Department of Rural Development, is spearheading the World Bank aided Bihar Rural Livelihoods Project (BRLP), locally known as JEEViKA with the objective of social & economic empowerment of the rural poor. Subsequently, the Livelihoods Restoration and Enhancement component of Bihar Kosi Flood Recovery Project (BKFRP) was also taken into the fold of JEEViKA.

JEEViKA was established in 2005 by Government of Bihar, GoB with the assistance of World Bank for Poverty Alleviation in the state. The World Bank assisted Bihar Rural Livelihoods Project was launched in 2006. After a successful pilot in 22 villages across 5 blocks in 2006, the project expanded to 18 blocks in 6 Districts in 2007. In 2009, 24 more blocks were added. JEEViKA commenced operations in 11 more blocks of 3 districts in Kosi area under Bihar Kosi Flood Recovery Project in December, 2010. In April 2011, JEEViKA was designated by Government of Bihar as State Rural Livelihoods Mission to roll out National Rural Livelihoods Mission in entire state. JEEViKA has upscaled its interventions in 533 blocks across 38 districts in February, 2014. JEEViKA promotes rural livelihoods and enhances social and economic empowerment of the poor, particularly women. The project has been making significant strides in supporting and nurturing institutions of the poor, its federations and their livelihoods. Objective Social and Economic Empowerment of the Rural Poor through:

3.1 The BRLP objective is to enhance social and economic empowerment of the rural poor in Bihar. This objective is sought to be accomplished by:

- Improving rural livelihoods and enhancing social and economic empowerment of the rural poor.
- Developing organizations of the rural poor and producers to enable them to access and better negotiate services, credit and assets from public and private sector agencies and financial institutions.
- Investing in capacity building of public and private service providers.
- Playing a catalytic role in promoting development of microfinance and agribusiness sectors.

INSTITUTIONAL ARCHITECTURE



COMMUNITY INSTITUTION PRESENCE

231 Cluster Level Federations (CLF)

14212 Village Organizations (VO)

360000 Self Help Group (SHG)

Mobilization 42,00,000 Household (HH)

Presence: 9933 villages

ORGANISATIONAL STRUCTURE

Chief Executive Officer

Chief Finance Officer

DO

BPCU

DPCU

SPMU

Human Resourc

Information Technology

Farm

Off Farm

Non Farm

Knowledge & Governance

Health & Nutrition

State Project Manager

Project Manager

Manager

Young Professional

4. RESEARCH DESIGN

4.1 Sample size: 4 PGs & 2 SHGs including Muzzafarpur (Lehthi & Sujani), Bhagalpur (Silk & Cotton/Khaadi) and Madhubani (Madhubani painting) cluster. The PG/SHGs comprise of 200 artisans in total.

4.2 Sampling type: For the survey, cluster sampling approach was used. The population i.e the handicraft/handloom sector was broken down into many different categories or clusters (e.g. silk weaving cluster, lacer ware cluster). Rather than taking a sample from each cluster, a random selection of clusters was chosen to represent the whole.

4.3 Research instrument: a semi-structured questionnaire was framed for the artisans of the PGs, keeping the objective of the study in mind. Direct interview was also conducted with the artisans & exporters within the cluster.

5. RESEARCH METHODOLOGY

Descriptive & Exploratory research

Primary Research- To study the value chain system of the existing Handicraft/Handloom store in Patna (*Fabindia*).

Secondary Research- The secondary research which is known as the desk research deals with information gathering from internet, books, magazines, news paper articles, etc. interaction with various personalities who are directly or indirectly attached to the craft, local market surveying, variety of clusters products that are available, cost of the products, brands which are selling the product, etc.

6. RESEARCH OBJECTIVE

Objective:

To study, analyze & design the value chain model for the Handicraft/Handloom clusters under JEEVIKA.

Sub-objective:

- i. To Study the existing value chain model of the Producer Groups.
- ii. To identify the limitations of the back-end value chain system of the Producer Groups and recommend intervention.
- iii. To propose Common Facility centre model (for *Bhagalpur* cluster) in order to create better infrastructure that caters to the needs of the local artisans & Producer Groups to boost production and export.

7. The Study Was Carried Out In The Following Steps:

Step 1: Mapping of cluster PGs and the local association/ institutions with whom the activities need to be taken forward. For the in depth understanding of the clusters, support of Jeevika officials, District & Block departments, of different clusters were taken who already have previous linkages with the cluster.

Step 2: Semi-structured questionnaire was developed to collect cluster level information.

Step 3: Secondary Research on the Sector was done to understand the global and national scenario of the sector and also find out benchmark production process.

Step 4: Field visit: Interaction with artisans was done to understand

(a) Cluster products and places,

(b) Value chain system of the cluster PGs

Sampling Strategy: A sample of 6 PGs was chosen, out of which 3 were from Muzzafarpur 2 from Bhagalpur, 1 from Madhubani, for data collection. The distribution of sample can be seen as follows.

Step 5: Data was compiled, synthesised and findings and lessons were drawn to prepare the study report.

Step 6: The findings of the study and recommendations were then validated with the key stakeholders by organising a validation workshop in the cluster. The findings and Stakeholders expressed their agreement on the findings and recommendations.

CHAPTER 3

CLUSTERS PROFILE

I. MUZZAFARPUR

In Muzzafarpur cluster in total 3 different PGs were visited. Those include;

- i) Lacer ware
- ii) Sujani embroidery
- iii) Wool weaving

i) LACQUER WARE

It has been more than a year when PG was formed. Each individual is involved in Lahti making but they are not yet working as a group. The PG has just received the allotted sum for the manufacturing of Lahti.

There are total 43 members in group. Artisans were interviewed to know about their production process and the market they sell in their finished goods.

Material is sourced from Islampur and Seetamadhi is the local market where they sell their products to wholesaler and retailers.

They are planning to procure their raw materials from Balrampur (Jharkhand) as they can avail the raw materials at cheaper rate.

Details of the PG

Name of the PG	Kangana jeevika mahila lahti utpadak samooh
Geographical Spread	Majhauriya Gaon, Jhapaha Block- Bochaha District Muzzafarpur
Number of members	43
Proportion of Units	All the units are Micro units
Type (s) of the Products	Lehthi bangles
Principal markets for the PG Products	Seetamadhi, Saras mela, Jeevika
Annual Exports	No direct exports

Hierarchy within the PG

President- Poonam Devi

Secretary- Anita Devi

Treasurer- Saira Khatoon

Manufacturing Expense:

(under 1 Bhatti)

Bhatti = Rs.1500/-

Tools	Rs.5000/- (Belan, Chimta, Hattha, Khari, Loha plate)
Material	Rs.2000/- (Buradda, Ring, Puri, Lah, Rang) (Material procurement is done for minimum 10 days)
Labour cost	Rs.5000-6000/month
Helper cost	Rs.5000-6000/month
Transportation cost	Rs.100/day (to and fro)
Overtime cost	Rs.5-6 as per the no. of set
Profit	10-14%

PROBLEMS IDENTIFIED:

- The sales record is maintained by the artisans on a daily basis but not in a systemised manner. They do not have yearly data base of their sales which in turn makes it difficult for them to measure their annual growth and the comparative growth.
- The artisans' groups do not have proper or regular market to sell. Their major profit margin comes during the wedding season or the festive seasons in Bihar.

ii) SUJANI EMBROIDERY

Jiyo's Sujani cluster, Sujani Jeevika Swavlambi Sehkari Samiti Limited, was set up in 2011 after working with them for three years.

The women were trained to create exquisite and innovative products for the contemporary markets. Within 3 years, the cluster has expanded from 15 women to 180 women and girls, and is active in the Sarfuddinpur and Bhusra villages of Muzzafarpur, Bihar.

The cluster has created a gorgeous line of embroidered stoles and other wearables by the name of "The College Fee Collection". Jiyo's continuous interventions support education of girls in the cluster who aspire to continue their education.

Details of the PG

Name of the PG	Sujni jeevika swalambi sahkaari samiti Pvt. Ltd.
Geographical Spread	Sarfuddinpur, District- Muzzafarpur
Number of members	30
Proportion of Units	All the units are Micro units
Type (s) of the Products	Home decor, clothing, accessories
Principal markets for the PG Products	JiYO, Jeevika & Saras mela
Annual Exports	No Direct Exports (products are delivered to JiYO for export purpose)

Hierarchy within the PG

President- Chandrani Chaudhary

Secretary- Ram Kumari Devi

Treasurer- Nirmala Devi

Manufacturing Expense:

Raw material cost	Rrs.520/- (ring, needle, thread & cloth)
Transportation cost	Rs.200/-
Labor cost	Rs.250/ to Rs300/-
Room rent	Rs.1000/- (They sell their products in every 2-3 months)

PROBLEMS IDENTIFIED:

- Lack of basic infrastructural facilities
- Lack of capital to showcase their talent
- Lack of exposure
- Difficulty in receiving loans
- No computers in the village
- Lack of market and effective demand
- Irregular employment opportunity.
- Lack of finishing in their products i.e ink marks visibility on the finished products.

iii) WOOL WEAVING

The PG was formed and registered in 2007. 3 - 4 members started the work initially within the group but later from 2010, other members also joined. There are large number of members who have more than 15 years experience and almost 10 of them have more than 35 years of experience.

Details of the cluster

Name of the PG	Roshni Jeevika Kambal Utpadak Samooh
Geographical Spread	Maidapur, Hussainpur Gaon

	District- Muzzafarpur
Number of members	53
Proportion of Units	All the units are Micro units
Name(s) of the Products	Blankets
Principal markets for the PG Products	Nepal, Mela
Annual Exports	Direct export (Nepal)

Hierarchy within the PG

President- Sunita Rai

Secretary- Sunita Devi

Treasurer- Sudha Devi

Manufacturing Expense:

Raw material	Rs. 300/- (raw wool, kerosene, thread) (They procure the raw materials for atleast 4 months) Raw material is sourced from Dhaka and the local market (i.e from Vaishali, Samastipur)
Produce	1 kambal in 2 days
Product Price Range	Rs. 800/- to Rs. 1200/-

PROBLEMS IDENTIFIED:

- Require design support and training.
- They are lagging behind in their production as they do not have a proper production loom for the blankets.

II. MADHUBANI

In Madhubani cluster 1 PG was covered. It was;

- i) Madhubani painting

i) MADHUBANI PAINTING

Initiative Of: JIYO! Creative & Cultural Industries Pvt. Ltd.

Active since May 2008, Shilpsangh, Jiyo's cluster, is a cooperative located in Ranti village, Madhubani district, Bihar. It presently comprises approximately 40 women artists living in nearby villages, have been trained in the art of Madhubani painting. Everyday these women gather to paint with their small working table at Shilpsangh's open studio, just outside their village. The women often paint outdoors - to take advantage of the natural light .The sangh also produces other products that cater to the local market. Together, the livelihoods created by Shilpsangh allows its members to provide for their households in a dignified and sustainable way, while at the same time preserving the art form for future generations.

Details of the PG

Name of the PG	Shilp Sangh
Geographical Spread	Ranti Gaon, District- Madhubani
Number of members	40
Proportion of Units	All the units are Micro units
Type (s) of the Products	Home decor, clothing
Principal markets for the PG Products	Patna, Goa, Mumbai, Delhi, Hyderabad, Ahmedabad, Gaya & Sonpur
Annual Exports	No direct export

Hierarchy within the PG:

President: Narmada Devi

Secretary: Sudha Devi

Treasurer: Neetu Devi

Manufacturing expense:

Raw material	15k – 20k (for around 1 month)
Material (other than fabric)	Rs 150
Accountant	Rs 1,800 - Rs 3,000
Profit (which includes maintenance cost, room rent, cleaning cost)	25% of the sales value

PROBLEMS IDENTIFIED

- They face various problems in designing since they lack the needed exposure in the field of designing.
- They face different problems in the market, such as problems of competition with other sectors with comparatively newer technologically enhanced designs.

III. BHAGALPUR

In Bhagalpur cluster, there are no PGs formed yet. There are SHGs of Silk and Cotton/khaadi weaving. 2 PGs were covered for;

- i) Silk weaving
- ii) Cotton/Khaadi weaving

i) SILK WEAVING

Nathnagar Cluster, Bhagalpur- Nathnagar is a part of the extended township of Bhagalpur and is well connected with Patna and Kolkata and thereby with the rest part of the country. A large number of households are engaged in weaving activity in the region, a few in power looms and most of them in handlooms. The cluster has a very large number of looms though they remain functional based on the orders received. In any case 300- 400 looms are said to be operative at any given time.

The looms presently used in the cluster are pit looms with single box fly shuttle technique. The weavers use 4 to 6 pedals to create textural patterns in the fabric. The weavers of the cluster have been making a variety of silk and cotton fabrics ranging from the famous silk chaddar of Bhagalpur to tussar silk fabrics, dhoti, lungi, gammcha etc. However, the number of cotton looms is more than the silk looms in the cluster.

SHG covered

Name of the PG	Aman Samooh
Geographical Spread	Nathnagar District- Bhagalpur
Number of members	12
Proportion of Units	All the units are Micro units
Name(s) of the Products	Clothing & Home accessories
Principal markets for the PG Products	Bhagalpur (Jai export, Madhuri export, Estand silk) and to 10-12 wholesalers
Annual Exports	No direct export

Hierarchy within the PG

President- Anita Devi

Secretary- Sumitra Devi

Treasurer- Sunita Devi

Manufacturing expense:

1Thaan= 8-9 Kg	Rs 5,000/-
Labour charge	Rs 30/- (for 1 metre)
Transportation cost	Rs 50/- per kg

PROBLEMS IDENTIFIED:

- No frequent orders
- Costly material
- Cheap sales

ii) COTTON/ KHAADI WEAVING

Kharik Bazaar, Mirzafari, Bhagalpur- Kharik is closely linked to Bhagalpur geographically as well as economically. It is located about 30 kilometers away from Bhagalpur off the NH 31.

A large number of households are engaged in weaving activity in the region, a few (master weavers) in power looms and some in handlooms. The cluster has a large number of looms though they remain functional based on the orders received. Only pit looms are being used in the cluster which produces from coarse cotton lungis to fine silk dupattas.

Some of the weavers also produce tussar silk fabrics such as Tussar-Ghichha or Mulberry-Ghichha.

SHG covered

Name of the PG	Durga Jeevika
Geographical Spread	Kharik Bazaar, Mirzafari, District: Bhagalpur
Number of members	12
Proportion of Units	Micro
Name(s) of the Products	Clothing
Principal markets for the PG Products	Darbhanga, Supaul, Purnea, Farbisganj, Sitamhari, Muzzafarpur
Annual Exports	No direct export

Hierarchy within the PG

President- Shobha Devi

Secretary- Vinda Devi

Treasurer- Sonia Devi

Manufacturing expense:

Cotton 1 Bundle- 12 pieces (Buy from the wholesaler locally)	Rs.700 to Rs.1000
Labour cost	Rs.85/Thaan

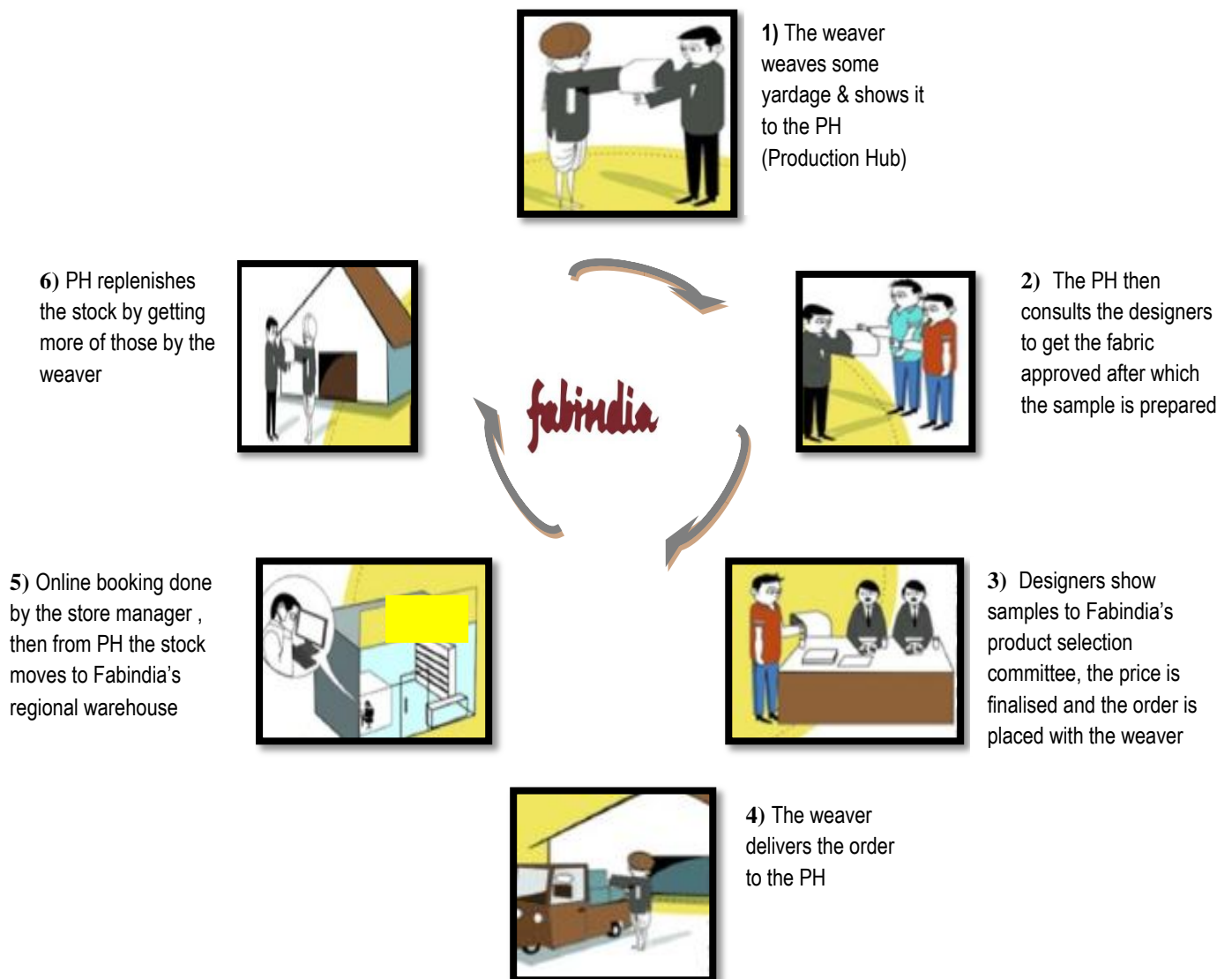
PROBLEMS IDENTIFIED:

- No new designs (Low Market)
- Not aware of market demand
- Produce through their own samples

CHAPTER 4 EXISTING HANDICRAFT/HANDLOOM MARKET

(Supply Chain Model of Fabindia)

In order to achieve the objective of the research, the primary research was conducted under which the study of existing Handicraft/Handloom industry was covered. Two different stores of Fabindia were explored in order to get the requisite data and information regarding the value chain model of the same.



Existing value chain model of Fabindia industry

STOCK FLOW PROCESS

Artisans  PHs

Fabindia's suppliers are mainly from rural India. The supply chain has 2 suppliers,

- i. the artisans
- ii. the fabricators.

The artisans are the weavers or painters/artisans from a rural background so the designers are the ones who are responsible for communicating with the artisans and making them aware of urban needs and trends. The designers have a deep knowledge of textiles as well as the urban sensibilities.

Initially the supplier is given a trial order and based on the performance, they get regular orders.

**The Fabindia supply chain has moved on from a centralized warehouse model to a more decentralized model. To shorten the supply chain and incorporate the artisans within the process in a greater way, Fabindia introduced the concept of community owned companies. The weaver approaches the Supply regional company i.e. PH. At the PH level the designer steps in to help artisans produce something relevant to the target market.*

Total PH	7 states
Location	Delhi, Jaipur, Bangalore, Chennai, Kolkata, Chanderi, Ahmedabad

PH  PSC

The design is then approved by the PSC or the product selection committee. Here the fabrics and the quality of factors like colour fastness are determined and compared to the company set benchmarks. Once the product is selected by the PSC the order is placed after price negotiation with the weaver.

Artisan  PH warehouse

The orders are completed by the weaver and brought to the company warehouse. The fabric is delivered in the form of thaans. However there is no uniformity in terms of the length of fabric incorporate in each of the thaans. It varies from 20m to 50m.

PH  Regional warehouse

The stock then moves from the PH warehouse to the regional warehouse. Once the order has been received at the Regional warehouses it becomes a part of the fabindia online inventory system. The levels of stock and orders for a particular product can thus be monitored online by the retailer.

Regional warehouse  Retailers

As and when the retailers place their orders the products are moved from the PH to the regional warehouses and distributor points. At each regional warehouse a continuous review model for inventory of products is followed. For various kinds of products bins or wallet sizes are defined and the retailer is allowed to stock up only upto a given wallet size.

PHs have evolved the supply chain of Fabindia from a centralized model to a regional supplier companies. Benefits of this novel approach:

- Enabling it to create 100,000 sustainable rural jobs across India
- Access to working capital – the main hurdle to capacity building
- Direct interface with artisans
- Closer to sourcing – shortening the supply chain, better quality and pricing o Enables the purchase of materials in bulk so as to get the best price

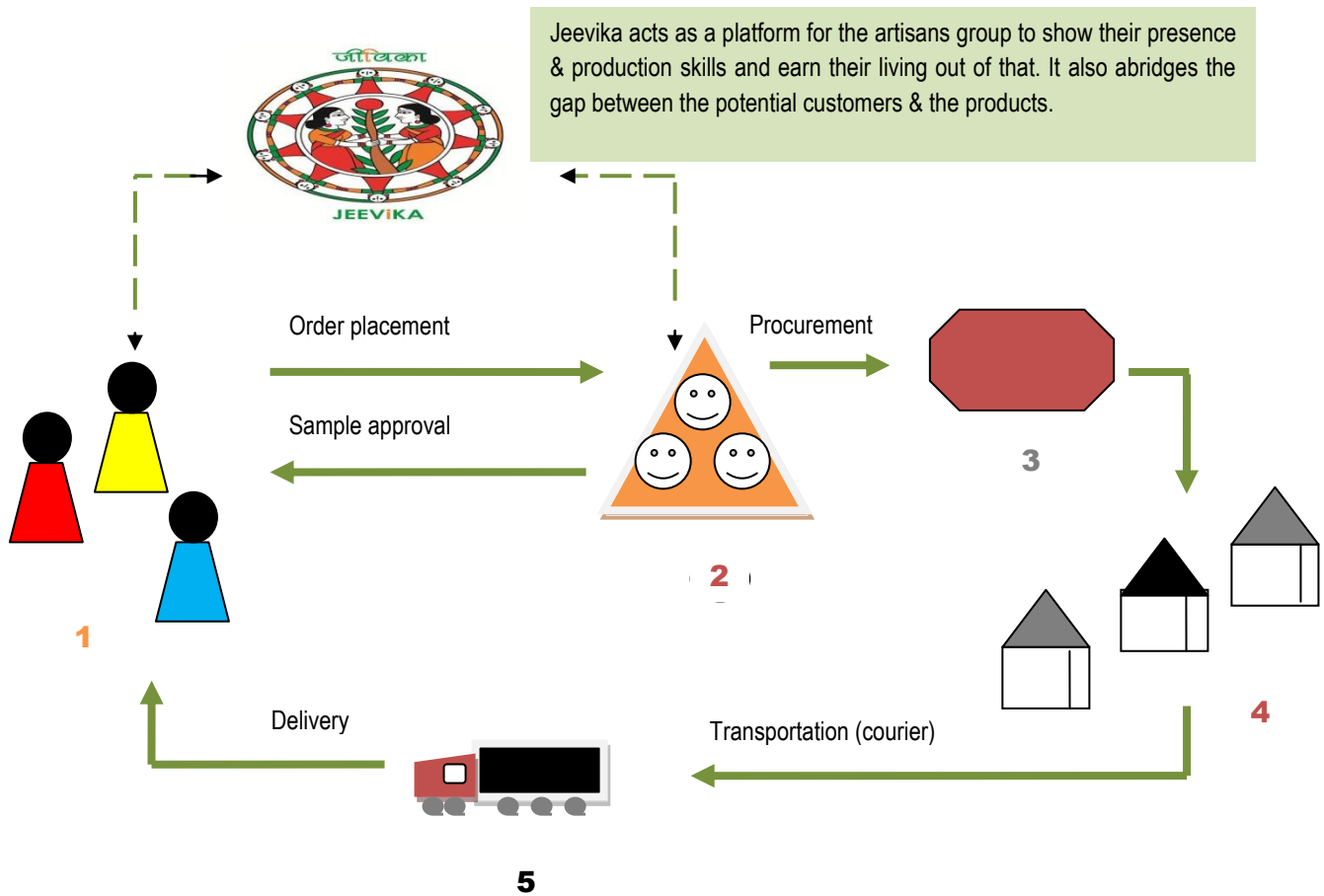
Role of PH:

- The PHs are in direct contact with the artisans and serve as interfaces to the urban markets.
- The PHs are also responsible for getting the artisans credit and capital that they require.
- 17 PHs have been setup in different 7 states of the country to deal with suppliers across the length and breadth of the country.

CHAPTER 5

PRESENT SCENARIO

(existing model of the clusters under BRLPS, Jeevika)



1- Customers

2- Artisans group (PGs/SHGs)

3- Procurement (raw material)

4- Production (Household)

5- Delivery (Courier)

PROCESS FLOW

i. ORDER PROCESSING

JEEVIKA acts as a platform for the artisans of the different clusters and link them with the market/customers for their better living, productivity & livelihood.

Order placement-

The artisans start their production as per the order given by the customers, which include;

- Government institutions,
- Jeevika Head Office,
- Direct consumers
- Trade fairs
- Exhibition
- State emporiums

Order approval-

The samples are approved either by the customers or the artisans themselves. The customers often provide the samples to the artisans group as to what kind of material to be used and what design to be done. But sometimes, the artisans or the master artisans have their own design & artistic skills according to which they make the products.

Procurement-

There is a system called master artisans system that prevails within the clusters of Bihar under which master artisans get the entire production flow done by the local artisans group within the cluster. The master artisans are only liable to purchase the raw products and provide wages to the workers. Raw materials are locally procured (district market) or from the other districts. The local or lower level artisans are only responsible for the production process as they are not well equipped, financially or socially.

Production & packaging-

The master artisans purchase the raw products, hire workers, artisans and take orders from customers. The master then has artisans working for him who often create the products. In this way, a master artisan can increase his livelihood by increased production and sales, while

regular artisans can find employment when they cannot afford the initial costs of the entire chain of production.

The production takes place within or around the living premises of the artisans, like;

- for silk weaving, pit looms are established inside the houses of the weavers
- for lac processing, furnaces are made beside the house
- for madhubani painting, open air rooms are taken on rent where a group of artisans can work together
- for sujini embroidery, rooms are taken on rent for group work

Packaging is done by the artisans' groups themselves.

ii. TRANSPORTATION

Once the goods are ready, they are transported to the buyers place via courier services (road, rail or airways, depending upon the distance & place).

All the expenses are incurred by the artisans themselves (which is included in their product cost).

The goods are taken to the regional courier service providers by the head person of the PGs or SHGs (i.e The President, Secretary, Treasurer) from where the goods are finally dispatched for the delivery.

iii. DELIVERY

The ordered goods are delivered to the destination as per the expected time of delivery.

It generally takes 10-30 days (as per the volume of order).

The payment is also done at the time of delivery to the head person of the PG/SHG (i.e The President, Secretary or Treasurer).

LIMITATIONS OF THE VALUE CHAIN

The present situation of the value chain of the artisans' group is fragmented and faces certain limitations therein.

1. **Poor procurement and processing of raw materials:** Artisans find it challenging to buy quality raw materials at affordable prices. In the absence of raw material banks, they are often forced to rely on local traders who provide them with raw materials against orders available at high prices.
2. **No regular production:** Although techniques and processes vary widely from one craft to the next, crafts production generally takes place in households, with multiple family members engaged in different aspects of the process. Even where organized artisan structures exist, artisans typically produce within community settings. Production is generally seasonal, with crafts activity being suspended during harvest season, as most artisans are also engaged in agriculture to supplement their livelihoods.
3. **Aggregation and intermediary trade issues:** Aggregation involves bringing together products/raw materials from decentralized units to enable economies of scale in transportation, storage and retail. Aggregating products is a challenging task for the artisans due to inadequate infrastructure & communication, and eventually it leads to many of the bottlenecks in the crafts supply chain.

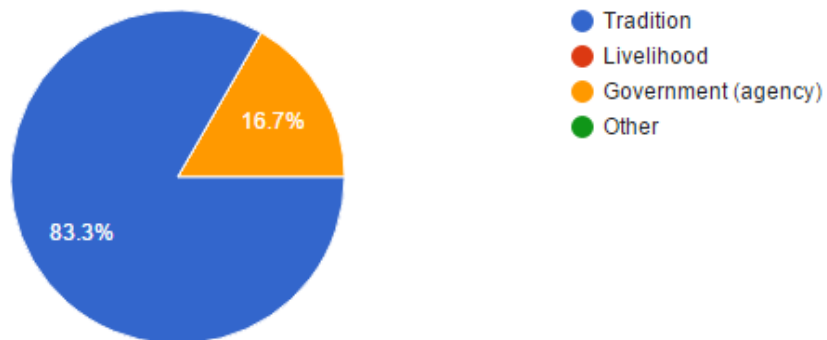
CHAPTER 6 DATA COLLECTION & ANALYSIS

Data was collected from the 6 PGs of 3 different clusters of Bihar namely;

- i. Muzzafarpur
- ii. Madhubani
- iii. Bhagalpur

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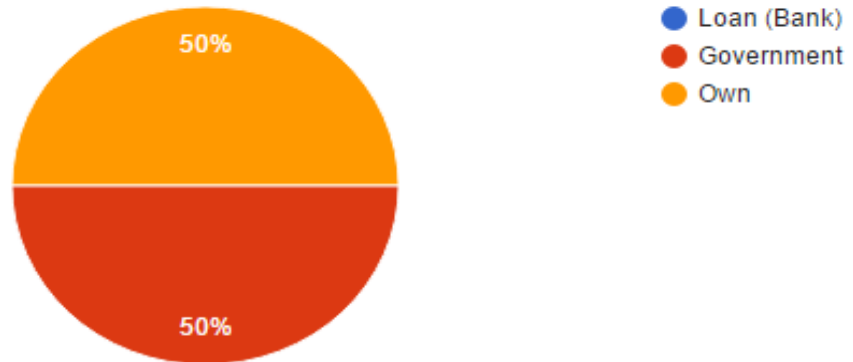
what was the reason to start the handicraft/handloom work? (6 responses)



- Most of the artisans have a traditional background of such handicraft practices and this has been in practice since many years by their ancestors.83.3% of the artisans groups have acquired the art/craft from their culture.
- While 16.7% of them have acquired the skill form the Government institutions or other artisans, in order to earn their living.

Q.2

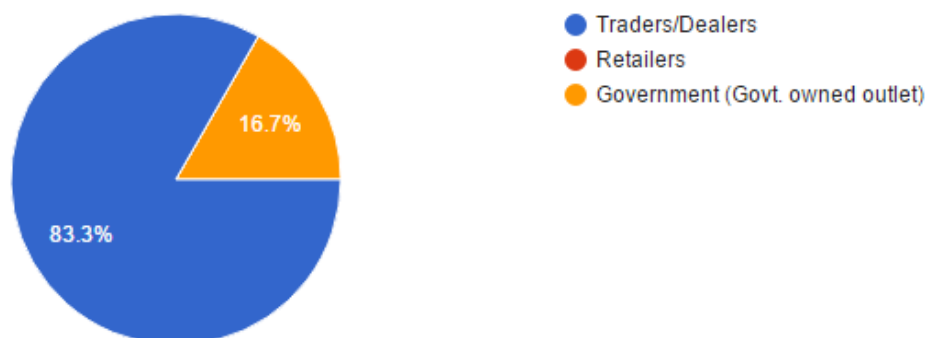
How was the initial capital support availed? (6 responses)



- The initial capital to start the work was taken care by the artisans groups themselves. In the beginning, the groups were not capable of taking loans from banks or other financial institutions.
- However most of the groups acquired the initial investment through the Government bodies (Jeevika, Jiyo) which supported the artisans' groups financially.

Q.3

How is the raw material procurement done? (6 responses)



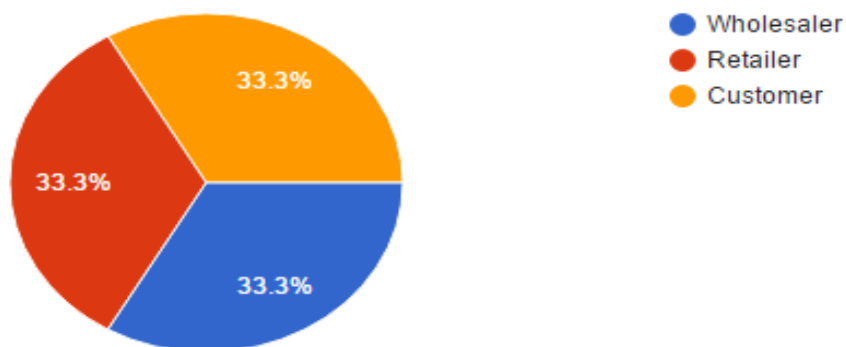
- Majority of the artisans' groups procure the raw material from the wholesalers or the traders locally. They sometimes, have to travel to the district for better quality materials for their products.
- Profit share is one of the reasons why the PGs are including wholesalers/traders in their chain for sourcing as many PGs are still not benefitted with the Government outlets where they could avail materials at subsidised rates.
- While it can be observed that only a few of the PGs (16.7%) are actually getting benefitted by the Govt. subsidies, e.g- Nathnagar PG procure the silk yarn from Kolkata, Ranchi, from the Govt owned outlets.

Q.4 What is the average order per annum?

Name (PG/SHG)	Order (value)	Order (units)
Kangana Jeevika Mahila Lahti Utpadak Samooh	Rs 42,000/- to 45,000/- (approx)	12,000 pcs (approx)
Sujani jeevika swalambi sahkaari samiti Pvt. Ltd.	Rs 50,000/- to 60,000/- (approx) which mostly comprises of JIYO orders	-
Roshni Jeevika Mahila Kambal Utpaadak Samooh	Rs 75,000/- to Rs 80,000/-	150 blankets
Shilp sangh	5-6 lacs	-
Aman Samooh	-	4000 m (yardage)
Durga Jeevika	-	7500m (yardage)

Q.5

How are the products channelled? (6 responses)



- It was observed that most of the artisans' groups, channel their finished products through the local wholesalers. The wholesalers then supply the goods to the retailers in the main district market. This majorly eats up the profit share of the artisans as the expected returns of their skills are not achieved by the artisans.
- A few PG members also channel their finished goods to the retailers as well as directly to the customers (trade fairs, Jeevika officials. They supply the products to the district retailers. They also supply goods to the exporters of the district from where the goods further get supplied to the metro cities (Delhi, Chennai, Bangalore, Mumbai, Kolkata).

PG/SHG	Cluster	Channel
Shilp Sangh	Madhubani	Wholesalers, Retailers, Customers
Roshni Jeevika Mahila kambal Utpadak Samooh	Muzzafarpur	Retailers, Customer
Durga Jeevika	Bhagalpur	Retailers

Kangana Jeevika Mahila Lahti Utpadak Samooh	Muzzafarpur	Wholesaler
Aman Samooh	Bhagalpur	Wholesaler
Sujani Jeevika Swalambi Sahkari Samiti Pvt.Ltd	Muzzafarpur	Customer (Jiyo, Jeevika, fairs)

Q.6, 7 & 8 Which product of the following handicraft/handloom category has;

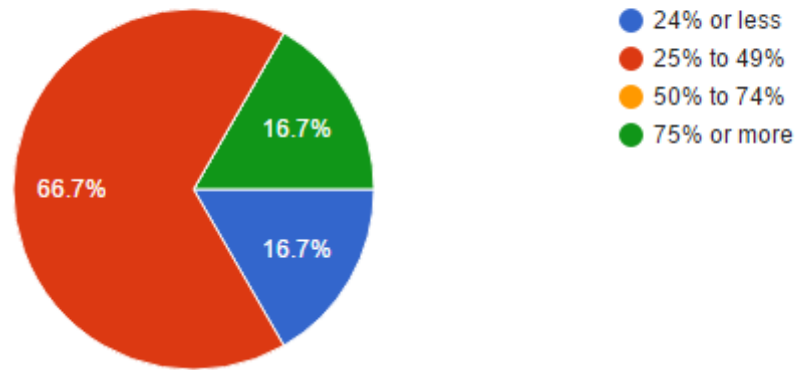
	Most selling (in terms of orders)	Lead time (in days)	Timely delivery (Yes/No) If no, reason?
Lacquerware	Kangana chura set	10-15 days	Yes
Sujani embroidery	Saari	more than 25 days	Yes
Madhubani painting	Wall hanging (silk)	10-15 days	No, sometimes it takes time to procure the materials from the market. Moreover it takes more labor & hard work
Wool weaving	Blanket	7-10 days	Yes
Cotton/khaadi weaving	Shirt (yardage)	16-20 days (600 m)	Yes
Silk weaving	Saari	around 2 months (125 m)	Yes

Q. 9, 10 & 11 Which product of the following handicraft/handloom category has;

	Least selling (in terms of orders)	Lead time (in days)	Timely delivery (Yes/No) If no, reason?
Lacquerware	Kangan set	16-20 days	No, as the final stone work on the bangles are done by other local workers which often takes more time
Sujani embroidery	Pillow covers	10-15 days (set of two)	Yes
Madhubani painting			
Wool weaving	Cap	1-2 days (20-25 pcs)	Yes
Cotton/khaadi weaving	Dhoti	More than 25 days (100 pcs)	No, the finishing process of the finished products like washing is mainly done by the local dhobis which often takes more time
Silk weaving	Curtain	around 1 month (100 m)	No, as during the month of May-June, due to heat the thread gets cut and increases the work of artisans

Q.12

how much is the profit derived from the products sold? (6 responses)

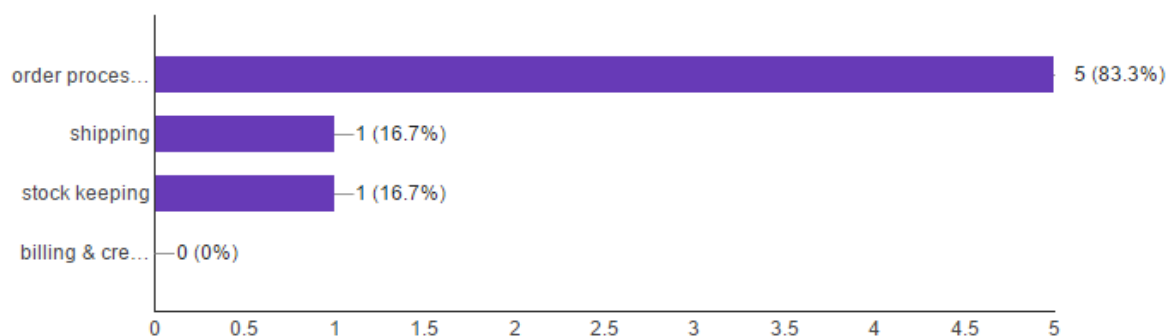


- Through the survey, it was observed that most of the PG members incur more cost of production which in result eats up their profit share.
- Majority of the artisans' groups (66.7%) share 25%-30% of the profit of their production, while only a few of the PG members get profit upto 75% of their production.

Q.13

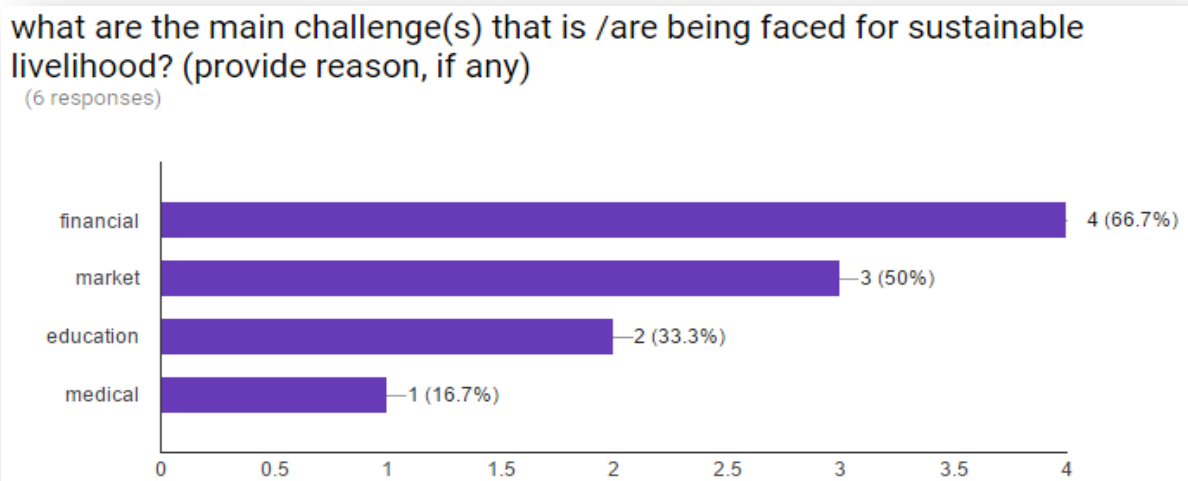
which of the following administrative area(s) is/are the major problem to face? (provide reason, if any)

(6 responses)



- The survey conducted shows that the major administrative area where the PG members are facing difficulty is the order processing of the products. That includes:
 - Washing (after weaving) done by local washer men.
 - Stone work (on bangles) done by other local workers.
- The artisans group also face issues regarding shipment, as many of the artisans have to travel a long way in order to get the orders delivered.
- The groups also have stock keeping issues. They do not have proper warehousing facilities for their inventory & stocks.

Q.14

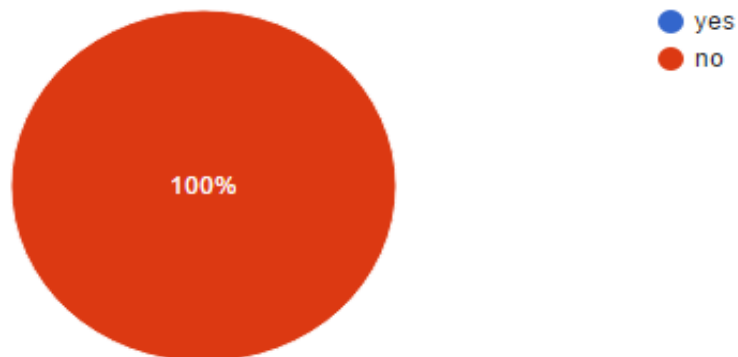


- It was observed that major PGs (66.7%) of the different clusters face financial issues. That includes;
 - Loan amount not being sanctioned on time
 - Loan amount not getting distributed wisely to each member.
- While half of the artisans' group (50%) face market problems. Which includes;
 - No direct market linkages for every PG.

- Presence of middlemen (traders).
 - Unable to meet proper market demand & trends.
-
- Education & medical issues are also the challenges that are being faced by the PGs of the clusters. This includes;
 - No medical facilities nearby
 - No high school facilities within the cluster

Q.15

Is there a proper raw material facility for the group? (6 responses)

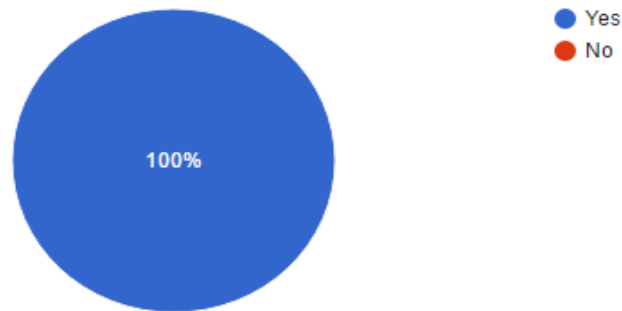


- There are no proper raw material facilities in the PGs of the clusters. The artisans have to travel to the district markets or to the other districts for better quality materials. This takes up more time & money of the artisans’.
- Therefore, through the survey it was observed that a proper raw material facility centres should be established for better & economical procurement.

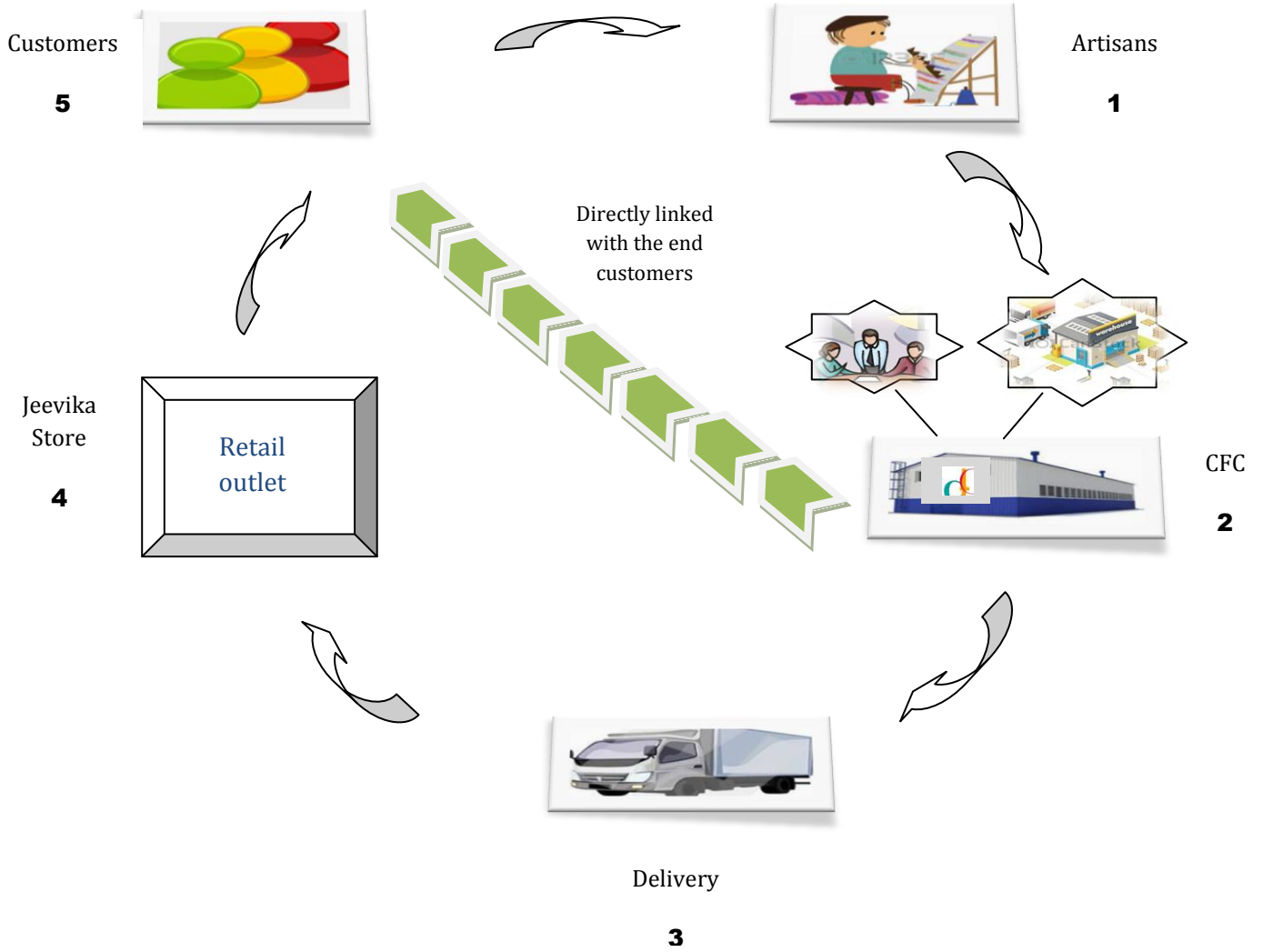
Q.16

Is there a need for CFC? (like raw material availability, product processing facilities, design assistance, workshop, etc)

(6 responses)



- Through the survey it was observed that the clusters do not have the concept of CFC (Common Facility Centre).
- Thus, a common centre should be proposed for such clusters, where the artisans' could avail the best of the work facilities under one roof.



PROCESS FLOW

Market  Artisans

- The Market linkage between the Customers and the artisans would be done by the Government organisation, Jeevika, as discussed previously in the existing model. The government body would be providing a platform for the artisans to display their artistic skills on a bigger scale.
- The orders from the market would be given directly to the artisans without any head weaver intervention.
- The customers could come with their own samples or they could also consult the artisans for the same.

Artisans  CFC

- Once the artisans would get the orders from their market, they would first consult the designer professionals regarding the design, pattern and the latest trend of the products or the material running in the current market.
- The professionals would be well versed with the market demand and the latest trends & designs in the market and eventually would be benefitting the artisans group with better knowledge & skill.

Purpose of CFC

The purpose of the CFC would be to enable the artisans/craftsmen groups transform from individualised labour intensive process to easier production method for enhancement of their economic standard by using better techniques, skills, knowledge & equipments.

Objective:

- To address common issues such as improvement of technology, skills and quality, market access, access to capital, etc.
- To provide facility centres for training, raw material depot, complimenting production processes, quality check, finishing, packaging, warehousing, etc.

- To stock the finished goods for the better & safe final delivery.

CFC  Courier

- The products once finished would be transferred to the CFC within the cluster via transport lorry.
- The ready stocks would be then unloaded in the CFC warehouse area.
- Finally the stocks as per the delivery date, would get dispatched from the CFC via transport lorry to the nearby courier centre.

 Store

Courier

 Customer

- The goods after reaching the courier centre would be transported to the retail store (in Patna) as per the market demand and trend.
- Goods would also be directly supplied to the various customers

CHAPTER 8

COMMON FACILITY CENTRE

Jeevika is finding all possibilities around the handicraft/Handloom sector to start women's handicraft producer groups. Jeevika is providing all possible support to make producer groups self sustainable.

Till now, many artisans have been identified in the Bhagalpur district involved in different crafts consisting of around 12 artisans in each SHG. They have the ability to continue Handloom production for their livelihood. Many other SHG members also willing to adopt these skills for their livelihood.

These all SHGs mostly produce handloom products. They all need to explore new product range according to contemporary market using traditional skill.

For collective working of all the SHGs and creating a unique identity across them there is a need to develop a system of collective working. CFC is a concept of common place for providing selection and storage of inputs of raw material, creating contemporary designs, providing support to all the artisans for generating regular income through the activities. So, there is an urgent need to establish a CFC, so that the artisans can meet and work at common place towards their own economic and social development.

BHAGALPUR

Bhagalpur is acknowledged as **SILK CITY** and is renowned worldwide for its silk production. The silk industry in this city is 200 years old and many generations of silk processing communities exist here that have been producing silk for generations including its well known sericulture, manufacture of silk yarn its weaving into exquisite products. This silk is known as Tussah or Tussar Silk.

Bhagalpur Cluster

The Bhagalpur cluster is the second largest silk fabric producing and exporting hub after the Karnataka state. Bhagalpur silk home furnishing made ups are gradually becoming admired in the Overseas markets. However, the Silk saris produced in Bhagalpur are more popular in the domestic market.

Ghhichha, Katia and other types of tussar silk yarns are produced and further woven into Tussar-Ghhichha (TG), Mulberry - Ghhichha (MG) fabrics. This cluster, which possesses about 400-500 looms, is presently being supported with a holistic package of interventions under the Integrated Handloom Development Scheme (IHDS) of Development Commissioner (Handlooms) Government of India.

PROCESSING (of silk & cotton)

- *Spinning*- the fiber is converted into yarn by using charkha device. This process is done manually.
- *Dying*- yarn is dyed by master artisans locally
- *Warping (Taani)* – 10 workers required
- *Starch*- the warp yarns are coated with starch solution for the good strength purpose
- *Weaving*- the warp yarns and weft yarns are interlaced together to form a fabric.
Done by master weaver, for this two threads are mixed which are Banana thread and poly.
(Weave types are: Herring bone, net bone, boolbool chasma)
- *Finishing*- extra thread is cut while inspection/checking
It is done in order to give the final processing to the fabric.
- *Calendaring*- the fabric is passed through two rollers to give it a firm & crisp finish.

CHAPTER 9

CFC PROPOSED

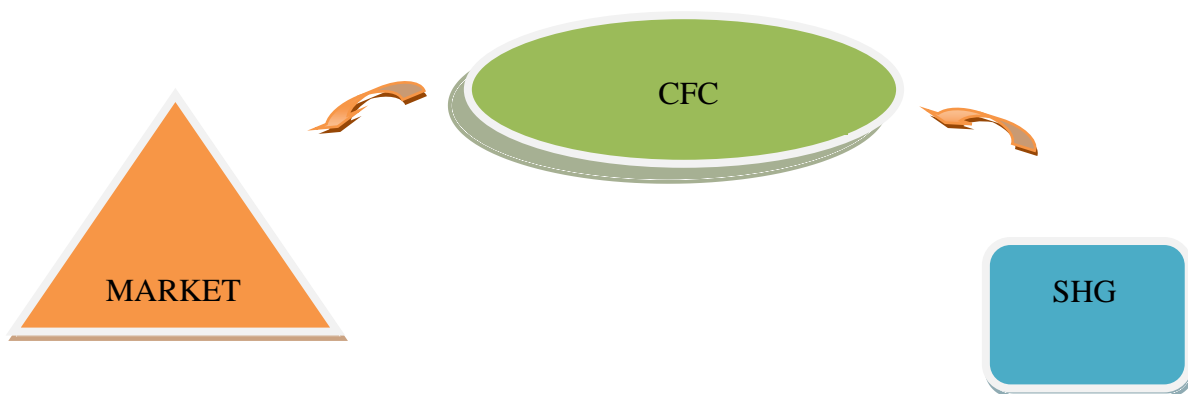
(Bhagalpur cluster)

A CFC is being proposed to be set up at Naugachhiya (sub division) Bhagalpur

12km away from Bhagalpur district headquarter.

8 km away from Mirzafari village

15 km away from Nathnagar village



PROCESS FLOW

EXPECTED ROLE OF CFC:

1. Providing access to common pool of high end & capital intensive machinery/equipments, which are otherwise not available for individual cluster members.
2. Providing easy access to specialized services.
3. The CFC would become a common place for up gradation of skills & provide training to create new work force.
4. The CFC would act as a self sustaining centre with fair trade practices providing services to the cluster member at justified rates. Not only would the services be available at fair rates but there would also be direct savings by way of no transportation & damage.
5. It will also provide common soft inputs like Capacity building, through training, visits, seminars, workshops, etc.

AT BROADER LEVEL THE CFC WOULD LEAD THE FOLLOWING BENEFITS:

1. Support SMEs to access capital incentive facilities (through Govt.), which otherwise were beyond the investment capacity of individual artisans of the cluster.
2. Establish Market Linkage & broaden product and market base.
3. It will also groom the MSMEs for furthering Public Private Partnership in future interventions in the cluster.
4. Facilities valuable & structured interaction between stakeholders through facilities for holding meetings, conferences & seminars.

The CFC would provide the following:

1. Common Production / Processing Centre
2. Design Development Centre
3. Training Centre
4. Raw Material Bank

5. Marketing Display / Selling Centre

6. Work Shops &

7. Warehousing Facilities

INFRASTRUCTURE AT CFC

1. Administrative Block

CFC will be the pilot initiative to facilitate Handicraft activities in Bhagalpur district. Office room should have world class facility to offer better comfort to their customers and visitors.

a. CEO chamber

b. Meeting Room with Projector Facility

c. Account Section

d. Staff Cabin

e. Kitchen

2. Design Studio

Design Studio have major role in establishment of CFC. Design studio will have to prepare to take challenge to develop new contemporary textile designs for domestic, National and International market.

3. Photography Studio

Each time after new product development CFC need Photography studio with latest facility to develop catalogues of different crafts products, promotional Posters for customer linkage a ten/fifteen ft room.

4. QC Lab

CFC also need a separate place to check quality of Raw material and ready product to produce best quality products for the market.

5. Information Desk

CFC need an Information Desk where visitors and artisans can collect information about CFC activities.

6. Showroom/Display unit

CFC need a showroom where new products will be displayed for the customers who directly want to get the products from the centre rather than the retail store.

7. Raw material store room

CFC will facilitate around 7 SHGs and each producer group need best raw material to produce quality products. This space should have to strong enough to fight natural and manual disasters.

- a. Twenty /fifteen ft strong room required to store raw material for all SHGs
- b. Five almirah
- c. Ten adjustable Shelves
- d. Four Trunk 3feet / 4feet

8. Finished products store room

CFC will facilitate aroundSHGs and CFC will collect ready products to supply customers and will have to maintain a stock for instant order.

- a. Ten feet / fifteen feet strong room.
- b. Five Almirah
- c. Eight adjustable Self
- d. Four Trunk 3feet / 4feet

9. Packaging Unit

To do packaging of finished products after QC.

10. Processing Lab

CFC should have;

- a. Colouring/ dyeing Lab
- b. Calendaring room

RAW MATERIAL COST

Cocoon rate (market)	
1 khari (1280 cocoons)	Costs Rs 6,000/-
”	Produce 1.5kg yarn
1.5kg yarn	Convert to 30m-32m of fabric
Yarn rate (market)	
1kg	Costs Rs 5,000/-
1.5kg	Costs Rs 7,500/-

TOTAL COST OF PROJECT:

The total cost of proposed CFC at BHAGALPUR Cluster, is calculated at Rs.1003.83 lacs.

The detail is as follows:

S. No.	Particulars	Amount (in Lac Rs.)
1	Land & Site Development	20.00
2	Building	88.50
3	Other Civil Works	512.47
4	Machinery & Equipment	335.81
5	Fixed Assets	10.50
6	Preliminary	25.00

While the survey was conducted, there were a few limitations which came across. Those include the following;

- i) The sample size was 6 PGs (6 out of 35), which was comparatively less for the study and thus, might give a biased result.
- ii) Some artisans when interviewed, were not open to all the questions asked. Like for example, profit earned, sales per annum. Moreover, some were not even well aware of such data.
- iii) Data collection was a difficult task as the artisans' groups do not keep proper sales records with them.
- iv) While the artisans' groups were being interviewed, a few of them were not available as the artisans are also engaged in other agricultural works for their livelihood.

CHAPTER 11

FINDINGS

Lack of market linkages	While consumers of crafts products are increasingly becoming urbanized, crafts continue to be sold through local markets; artisans have few opportunities to reach new consumers through relevant retail platforms such as department stores and shopping malls.
Dominance of middlemen	Although middlemen are necessary to enable effective market linkages, they often, if not always, exploit artisans by paying them a fraction of their fair wages. This may be due to lack of information on the part of middlemen about true manufacturing costs, or merely due to their ability to coerce artisans, who often lack bargaining power.
Lack of aggregation	Crafts production typically takes places in scattered clusters in rural areas, while markets are usually in urban centers. Currently, there is a lack of organized systems to efficiently aggregate goods from small producers, carry out quality checks, store approved goods in warehouses, and supply them to wholesalers and retailers in urban areas. In lieu of this, retailers have to directly source from select producers, which is often not viable in the long run, resulting in the loss of a large percentage of the market for artisans.
Less Profit	The markets for the craft products can be broadly understood as local, retail shops – high-end as well as mainstream, exhibitions and exports. Among these, local markets are

	<p>still the common markets for many artisans. However, these products are in low supply due to supply chain inefficiencies which results to lower or inadequate profits.</p>
<p>Mismatch in expectation</p>	<p>The next generation of artisans do not want to become artisans as less remuneration makes the sector unattractive</p> <p>Though traditional artisans learn skills from their forefathers and know hard skills, the products that they make are no longer in demand</p> <p>In addition, the traditional form of teaching, training and skill development for the Handlooms and Handicrafts sector has remained absent in the formal education system, including research institutes</p>
<p>Lack of funding</p>	<p>Craft producers suffer greatly from lack of working capital and access to credit and loan facilities. Banks cite poor recovery rates, wrong utilization of funds, lack of marketing facilities for finished products and lack of education on part of the borrowers as reasons for the low proportion of loans made to artisans. In general, this forces artisans to borrow from their local moneylender or trader at high interest rates.</p>
<p>Product Planning</p>	<p>Artisans are involved in making the products without sufficient knowledge regarding market demand. Therefore they tend to ignore their such product categories which could earn them better revenues.</p>

1. Artisans need to be provided with market linkages and intelligence
 - Artisans need to be provided with market linkages for them to earn a sustainable living from craft. Creating an ecosystem where artisans have ready access to raw material, working capital, customer knowledge, design capabilities and reliable sales channels alongside health and insurance benefits is necessary to revive the sector.
2. Making funds readily available and spreading awareness about schemes available
 - The artisans have to be incentivised to make Handlooms and Handicraft their main source of income by lowering cost of raw materials and making loans readily available
 - Corporate houses are to be encouraged to take up development of artisanal communities and revival, preservation and promotion of crafts through adoption of a craft or a cluster as part of their CSR mandate. Further, Handlooms and Handicrafts are to be promoted for corporate gifting purposes
 - Awareness about existing schemes need to be spread among artisans, so that they can benefit from those initiatives.
3. Need to educate the artisans about the raw materials and the products used and also how to market them
 - Training and education on how to produce is essential but with what to produce is equally important. Hence, proper education regarding the use of materials used for production is necessary. Training institutions, government sector should help ensure that such knowledge is being imparted.
 - An effective channel for artisans to gain an understanding of customers and market their products is exhibitions and fairs. Artisan-organised fashion shows should be part of training curriculum, which could teach them event management and marketing skills. For this very purpose educational institutes such as NIFT & NID should actively get along.
4. Availability of proper infrastructure
 - In order to improve productivity and bring in a higher level of consistency in products, development of more sophisticated tools and processes is to be carried out and made available to artisans, e.g., development of common facility centres at various clusters for a better and systemised working

Looking at the Handicraft/Handloom industries of Bihar we can see a distinct growth but on the other hand looking at the potential of the market, the growth is not satisfactory.

The main observations of the study are some issues, with respect to the artisans of different clusters are like-

- i) Lack of proper value chain system
- ii) Inadequate knowledge of the market & demand
- iii) Lack of adequate funding

These are some of the factors that hinder the growth of such industries. If the Handicraft/Handloom industries would take the above issues into consideration it will raise export figures much higher.

The sector is economically important from the point of view of low capital investment, high ratio of value addition, and high potential for export for the state.

Presently the sector is being considered as vocational media and it is also opted for style statement and the leisure pursuit. Today, the crafts and craftspeople have a vital role to play in modern society- not just as part of its cultural and traditional, but as part of its economic future.

ANNEXURE

Questionnaire

1. What was the reason to start the handicraft work?

- Tradition
- Livelihood
- Government (agency)
- Other.....

2. Initial capital support was availed through?

- Loan
- Government
- Own

3. You procure the raw material through?

- Traders
- Retailers
- Government

4. What is the average order per annum?

- (in terms of value)
- (in terms of product)

5. The Products are channelled through?

- Wholesaler
- retailer
- customer

6. Which of the following is the most selling product? (tick mark)

Lac				
Kangan set	Dulhan kangan	Patiala chura set	Naagin chura set	Fibre kangan
3 piece	Plain set	Teen nagiya	Jaipuri set	Kangana chura set
Silk				
Saari	Dupatta	Stole	Seat Cover	Curtain
Sujani				

Saari	Cushion Covers	Dupatta	Jacket	Kurta		
Bed Sheet	Handkerchiefs	Pillow Covers	File Folder	Curtains		
Cotton/khaadi						
Dhoti	Towel	Shirt	Kurta	Covering Sheet		
Wool						
Kambal	Muflar	Bandi	Cap	Mat		
Painting						
Saari	Dupatta	Stole	Cushion Cover	Wall Hanging (Paper/Cloth)	Pillow Cover	Table Cloth

7. What is the lead time for the above product(s)?

- 10-15days
- 16-20 days
- 21-25 days
- More than 25 days

8. Is the above product timely available?

- Yes
- No

9. Which of the following is the least selling product? (tick)

Lac				
Kangan set	Dulhan kangan	Patiala chura set	Naagin chura set	Fibre kangan
3 piece	Plain set	Teen nagiya	Jaipuri set	Kangana chura set
Silk				
Saari	Dupatta	Stole	Seat Cover	Curtain
Sujani				

Saari	Cushion Covers	Dupatta	Jacket	Kurta		
Bed Sheet	Handkerchiefs	Pillow Covers	File Folder	Curtains		
Cotton/khaadi						
Dhoti	Towel	Shirt	Kurta	Covering Sheet		
Wool						
Kambal	Muflar	Bandi	Cap	Mat		
Painting						
Saari	Dupatta	Stole	Cushion Cover	Wall Hanging (Paper/Cloth)	Pillow Cover	Table Cloth

10. What is the lead time for the above product?

- 10-15days
- 16-20 days
- 21-25 days
- More than 25 days

11. Is the above product timely available?

- Yes
 - No
- If No, then reason?

12. How much of the profit is derived from the products sold?

- 24% or less
- 25% - 49%
- 50% - 74%
- 75% or more

13. Which of the following administrative area(s) is the major problem to face?

- Order processing
- Shipping
- Stock keeping
- Billing & credits

Reason, if any?

14. What are the main challenge(s) that are being faced for sustainable livelihood?

- Financial
- Market
- Education
- Medical

15. Is there a proper Raw material facility for the group?

- Yes
- No

16. Is there a need for CFC?

(like raw material availability, processing (calendaring) facilities, workshop)

- Yes
- No

REFERENCES

- www.india-crafts.com , on 5-05-16 at 8:10 pm
- www.indiahandicraftstore.com , on 5-05-16 at 8:32 pm
- www.craftsinindia.com , on 6-05-16 at 12:00 am

- www.india-crafts.com , on 7-05-16 at 2:05 pm
- http://agritech.tnau.ac.in/sericulture/seri_faqs.html , on 3-04-16 at 2:35 pm

- [https://en.m.wikipedia.org/wiki/Morus_\(plant\)](https://en.m.wikipedia.org/wiki/Morus_(plant)) , on 3-04-16 at 2:50 pm
- <http://googleweblight.com> , on 3-04-16 at 3:05pm
- <http://freespace.virgin.net/liam.mullan/maths/samples.html> , on 9-05-16 at 11:58 pm
- <http://evaluationtoolbox.net.au/index.php> , on 3-05-16 at 10:55 am
- <http://www.google.co.in/search> , on 19-04-16 at 9:52 pm
- <http://www.smeda.org/index.php> , on 19-04-16 at 10:00 pm
- <http://www.fibre2fashion.com/industry-article/printarticle/5361> ,on 2-04-16 at 11:31am
- <http://www.usanfranonline.com/resources/supply-chain-management/steps-to-improve-your-supply-chain-procurement-and-maximize-supply-chain-efficiency/#> , on 11-05-16 at 9:43 am
- <http://social.yourstory.com/2013/06/crafting-a-livelihood-a-snapshot-of-the-indian-artifacts-sector-2> , on 5-05-16 at 12:35 am