

Recent Entrepreneurial History of Handloom industry in Andhra Pradesh

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Abstract: It is virtually impossible for any industry to remain relevant for centuries, but the handloom industry in India has survived since time immemorial. It is popularly believed that this industry has survived due to the monetary and regulatory interventions of the government. It is true that millions have been spent by the various governments in the last 100 years, but the industry has also had the innate doggedness to survive and remain relevant to the current textile needs of the country. Textile entrepreneurs (also known as master weavers) have played an important role in making handloom extremely competitive. It is their tenacity to subsist when markets are down and their ability to innovate when the markets are up that has played a crucial role in the survival of the industry. Government of India has acknowledged that 66% of the weavers function under the master weaver segment, but little is known about their functioning. This paper addresses the limited knowledge about these master weavers and throws light on their functioning.

Background

Recent census shows that the handloom industry, which makes fabric using archaic hand-operated looms, continues to furnish employment to over 2.9 million people in India (NCAER, 2010); of these 66% employment in north east (NE) and 34% in the remainder of the nation. Weavers in the NE due to the remoteness of the location weave for domestic purposes. Of those in the rest of the country, the current census finds only 10% work for institutions such as the cooperatives, Khadi and Village Industries Commission (KVIC) whereas 66% work for master weavers¹ (MW) and the rest are independent weavers. The government spends millions of Rupees to promote handloom but the support is channelized through the above institutions. Considering the employment they provide (66% of Indian weavers work for master weavers) and considering importance master weavers played in success of many handloom clusters, very little is known about them or how they function.

Taking into account its long history, handloom industry in India has various sub research areas that have interested academicians. One of the earliest discussions was that initiated by Marx (1853): he argued that the British rulers in India have systematically de-industrialized India and primarily, the focus of this article was on handloom. This de-industrialization argument continues to remain a part of the academic discussion (Bagchi, 1976; Harnetty, 1991; Clingingsmith and Williamson, 2008). Acting on the some strong voices that resulted from

¹ One may get confused between master weaver and master craftsmen in European guilds. The term in India only indicates that he is an entrepreneur and uses the 'putting out' system for production.

Marx's article, the British Government and subsequently the Indian government have developed policies to support the handloom sector and one of the main activities of the support was the formation of weavers' cooperative. Analyzing and criticizing some of the governmental activities forms another set of academic debates (Jain, 1985; Srinivasulu, 1996, 1997, Mukund and Sundari, 1998; Mooij, 2002). A third area of interest for scholars has been in understanding the overall picture of the industry either in the past or in the present (Mukund and Sundari, 2001, Meher, 1995; Roy, 2002). Some years earlier, attempts were made to identify multiple marketing patterns in handloom industry which led to a special issue of Economic and Political Weekly (August 5-17, 2006 Vo.41 No.31).

Most papers on handloom have predominantly taken a macro perspective by focusing either on the industry as a whole or on collectives such as cooperatives or weaving clusters. This paper would like to address the sparse literature that has taken a micro perspective, especially focusing on the master weaver. Works such as Cable et. al (1986), Mukund and Sundari (2001) and Sundari and Niranjana (2006) Dev et al. 2008 fall into this category.

The lack of literature on master weavers could perhaps be because it is implicitly assumed by policy makers as well as researchers that master weavers being private entrepreneurs are exploitative in nature while cooperatives being public institutions are good. But is it really so simple? If one were to go by the statistics of providing employment, the master weaver segment provides livelihoods to about 66% of the weavers. If the criticism against the master weavers is that they pay low wages to the weavers or that they are exploitative in nature, they must be commended for providing continuous employment to the weavers.

One of the prime reasons for the survival of this industry, in the recent past, is due to the role master weavers. They have demonstrated their ability to subsist when markets are down and their ability to innovate when the markets are up that has significantly influenced the survival of the industry. The rest of the paper discusses how master weavers have had some influence on the survival of the industry. To begin with, I would like to discuss the broad macro changes that the handloom industry has experienced since India's independence, which has enabled the success of the master weaver industry. Following which, I will draw upon narratives of four

master weavers, who have either brought about radical innovations or have taken these radical innovations to the markets thereby enabling the industry to grow and prosper.

Macro changes to the handloom industry

India has always been known for its cotton fabric. The earliest textile finds were at Mohenjo-Daro, an archaeological site of the third millennium BC (Gillow and Barnard, 1999). The hand-produced cloth used extremely simple technology and serviced both domestic as well as export markets.

Cooper and Gillow (1996, pg. 2) Explain the reasons why Indian handloom fabric dominated the world market for thousands of years: *'Having mastered the techniques of cotton processing in the days of the Indus valley civilization, long before any culture, India then assimilated the process of silk manufacture, brought from China by way of Assam. Above all, however, the hallmark of Indian textile genius was its mastery of dyes and the use of mordant to make them fast and to form different colour combinations. This was to lead to the growth of an enormous textile industry with a vast geographical spread... the flexibility with which Indian craftsmen were able to adapt their designs to suit any particular market, combined with their technical mastery, gave them the advantage they needed to make Indian textiles a vital component of both seaborne and overland Asian trading. The coming of Europeans, following in the wake of Vasco DA Gama, only intensified textile production and spread Indian cloth over a wider area, as by now it was not only vital to the spice trade, but was also sold in West Africa, the Levant, the West Indies and the Americas.'*

It was only after the industrial revolution that the demand for Indian handloom cloth declined. By the 1850s the British had established themselves firmly in India and royal patronage for the weavers began to shrink rapidly. This was the first blow. The second came with the growth of railways that enabled British-made factory-produced cloth to be sold across the country. The final blow, however came from frequent famines due to which many people including weavers perished. Those that survived were in no position to purchase fabric.

At the turn of the 20th century, the British government started two development programs to improve the condition of the weavers. This move was aimed at countering the nationalists who

blamed colonialist policies for the state of Indian industry in general and the handloom sector in particular. The first program was to organize the weavers into cooperatives and the other was to improve technology. Around this time, cheaper mill cloth started to be produced in India as well and by 1907, mill-made fabric, both from India and abroad, captured more than half the market share. However, about three decades later the growth had tapered off, leaving mills with a 57% share while the handloom sector retained 30% (Harnetty, 1991; Roy, 1999). Over the years, even through the government initiated many more programs the survival of this traditional sector cannot be attributed entirely to them. The handloom industry had demonstrated tremendous resilience which had been strengthened by its fight to overcome obstacles such as famine, competition from mill cloth, and the decline of the nobility (Specker, 1989; Harnetty, 1991).

Harnetty's research (1991) on the 19th century handloom industry shows that there are at least two reasons for its survival. One is that the industry adapted itself to mill-made yarn because of which there was considerable qualitative improvement in the finished product, which in turn positively impacted marketability. Most importantly, Harnetty attributed the continued existence of handloom to the unchanging clothing habit of women. According to him, while men's clothing was dramatically transformed in the nineteenth century, that of women remained the same. In addition to this, the handloom sector countered competition from the mill sector by reaching out to new market segments (Roy 1999, Specker, 1989, Harnetty, 1991, Yanagisawa, 1993). In the late 19th century Indians were taken as indentured labour to Africa and Southeast Asia and a new demand for handloom was created in these regions (Yanagisawa, 1993, pg. 3) which contributed significantly to the survival and development of the industry.

Technology Innovation in handloom

In the early half of the 20th century, the looms were of the throw-shuttle type - an extremely primitive form where two people had to operate the shuttle by hand by throwing it from one end to the other, while a third person operated the pedal. In the second half of the century weavers started to use the fly shuttle, where one person could operate the loom, which naturally improved the production by about 4 times. On the other hand, within the context of technology development, fly shuttle was patented in the 18th century. Hence it took over a

hundred and fifty years before the fly shuttle started to appear in India. Even today, most looms in India are pit-looms, where the weaver sits on the ground with his feet in the earthen-pit to operate the loom. Few weavers have migrated to the more comfortable frame looms, where the weavers sit on a stool and operate the loom. The subsequent innovations in the weaving – using the dobby or the jacquard to produce more intricate weaving patterns – are relatively new in the Indian handloom industry but are known to the world for close to two centuries. The reason for the slow uptake of technology in the handloom sector is because the technology is greatly linked to the markets it serves. Considering that many weavers were poor and master weavers reluctant to invest for the sake of innovation, it was only when an innovation enabled better sales, was it adopted or in some cases subsidies provided by the government may have also played a role in technology adoption.

Market Innovation in handloom

Handloom industry was the major producer of fabric in this country until the early 1900s. While most of the production was for the common people, some handloom areas produced unique designs on silk fabric that were worn by the nobles and the royal families. There was no need for any innovation because the fabric that most people used was of poor quality with minimal designs.

After the country got independence from the British, the royalty declined, but with the Nehruvian policy of socialism, industrialization did not take place quickly and this enabled handloom to survive. Furthermore, since handloom industry supported millions of people in rural areas and due to the influence of Gandhian thought, the new Indian government could ignore the employment capabilities and therefore enacted reservation policies that eventually stunted the growth of the industrial fabric. It can be said that the period between the 1940s and 1970s, the handloom industry survived due to the governmental support provided through various governmental institutions.

Since the 70s, there have been a number of changes that have started to identify the strengths of the handloom industry to weave unique products that were not possible to make use machines. However, as the country started to develop and people started to have higher

purchasing power, the need for silk fabric and more expensive products started to grow. Although the handloom process is very slow compared to the mechanized looms it can be used to weave exquisite and complex designs, which the mechanized looms cannot. It is this combination of the ability to produce exquisite designs required by the Indian women and the growth in the markets for finer fabric that ensured the survival of the industry. However, the demand for handloom remained relatively with the silk sari clusters such as Kanchipuram in the south and Benares in the north, Patola in the west, etc.

In the 80s, there were a number of instances that sparked the growth of non-silk handloom industry. First a number of Festivals of India were held across multiple countries. The idea of these festivals was to promote India's cultural heritage. Musicians, dancers and craftsmen from various parts of the country were taken to these countries. Craftsmen received opportunities to interact with designers both from India and abroad. In addition to getting exposure to various large stores in the West, these craftsmen were exposed to Indian designers. Some of them such as Archana Shah developed these linkages and started her outlet Bandhej in Ahmedabad. This was the start of the Indian consumer/designer/craftsmen nexus that provided the context in with the weavers, discussed in the next section, were able to take advantage of.

Although Indian markets started to grow, it was not evenly distributed across the country. For instance, the design preferences of people in the eastern part of the country are unlikely to be the same as that of the western part. There has to be a certain element of customization to the regional design preferences. Also appropriate networks have to be nurtured stores in various parts of the country so that the products reach the final consumers and the preferences of the consumers reach the master weavers. With master weavers being small, they have to develop routines to deal with more powerful store owners. The failure of the cooperatives could be attributed to the fact that they did not spend time and effort to develop networks connecting the producers and the retail stores. Because of this disconnect, the products from the cooperatives were lesser marketable than the master weaver products.

Cases of innovative master weavers

Individuals who bring about innovations into their environments are known as change 'change agents' (Rogers xxxx). In one way or the other the individuals mentioned in this section have been change agents. They were either instrumental in bringing about the innovation or were instrumental in taking the innovation to the market. Some of these innovations are at a local level than at the global level. For instance, jacquard which is mentioned in one of the cases has been around since the early 19th century, but for this cluster, the weavers were exposed to this innovation for the first time.

For this study, a combination of narrative and descriptive data was used. Quantitative data for this study was collected from the clusters of Mangalagiri, Chirala, Gadwal and Pochampalli in Andhra Pradesh. The qualitative data were collected from 25 master weavers from five different clusters (the above four along with Uppada). Four master weavers, each from Mangalagiri, Chirala, Gadwal, and Pochampalli; and nine master weavers from Uppada were interviewed. Since the Uppada cluster was logistically the easiest to access, many of the initial interviews were conducted here. Quantitative data were collected using a set of questions regarding various aspects of a master weaver's operation and details of his social network. A twofold process was used to develop the questionnaire. In the first part of this process, the pre-testing phase, the questionnaire had queries on the entrepreneur's background (human capital), on their current business activity and on their networking activities (social capital). Once the questionnaire was finalized, it was administered in four clusters—Mangalagiri, Chirala, Gadwal and Pochampalli. Uppada was left out as there were too few master weavers. In total, quantitative data from 107 master weavers was collected.

Mangalagiri Cluster:

Mangalagiri is a cluster in Guntur district. Shyamasundari and Niranjana (2006) say that there were four cooperative societies in the past, but all of them are more or less defunct. The entire cluster produces for master weavers. They say that the popular product is a sari with a specific type of border and also say that the dress material has been popular for the last decade and half. While sari is a traditional product, dress material on the other hand is not. Of the four master weavers they have interviewed, three of them have shifted from producing saris to

producing dress material. This shift is indicative of ground realities. The person who brought about this change in this cluster is AKR and the change came about serendipitously.

AKR (Turnover Rs. 5,000,000; Clients 15, Partners 1); location: Mangalagiri

Although, the family belonged to the weaving community, AKR's father worked as a carpenter in Mangalagiri town. It was not until AKR married, that he entered into the handloom sector. His brother-in-law was working for a local master weaver. AKR got some dowry to start a small handloom unit with 5 weavers and his brother-in-law provided the expertise required to run the venture.

The initial produce consisted of coarse saris. He obtained a loan from one of his customers in order to increase his production. By 1990, the total number of looms had gone up to forty. Meanwhile, AKR had become an active member of one of the local political parties. It was due to this affiliation that he got his next breakthrough.

In 80s, Mangalagiri was one of the clusters that had showcased its products in the Festival of India. Archana Shah of Bandhej in Ahmedabad mentioned earlier, in addition to having a store also started a catalogue from which customers could order products. As she mentions in her interview *'The catalog did a lot for Mangalgiri because we used local names in the catalog. Those catalogues became very popular in urban centers. Weavers in Mangalagiri said, you know, people carry those catalogues come to meet us. So Mangalgiri came to life because of that I would say.'*

With Mangalagiri being popular in urban areas, one of the colleagues of AKR at the local party office was asked to produce some samples of a new type of product (unstitched material sets for salwar kurta also known as dress material) by a fellow party member from Hyderabad. This local colleague was not involved in weaving and instead he passed the order to AKR. Even for developing samples, the entire loom structure would have to be modified. The weaving is different and so the master weaver would have to identify a skillful weaver who could do this. Therefore, to produce the first dress material, it is quite a risky initiative. The sample sales were successful and the orders started to grow. The other master weavers in the town were not very enthusiastic to venture into the production of this new product, since they had some

bad experience with shirting material (bleeding Madras fabric) some years earlier. As a result, for about four years, only the initial set of producers and their family members of AKR were able to take advantage of the growing market of 'dress material'.

After a few years, wholesale merchants from Bombay approached AKR and asked him to start producing directly for them, instead of relying on a 'go-between' in Hyderabad. Since AKR's colleague at the party had passed away, he did not feel the same kind of obligation towards his sons and it was relatively easy for him to break the connection. Now AKR is active in politics and his son controls the productions. It was interesting to find that the brother-in-law who initiated AKR into weaving now works for AKR as a contract weaver and controls about seven looms.

Uppada Cluster

Uppada cluster consists of five villages and is close to the city of Kakinada in the north coastal part of the state. For many decades, this cluster was known for producing cheap cotton sari woven with extra weft designs. However, currently this cluster is one of the most popular in India and is producing saris that can cost up to Rs. 3-4 lakhs each. In addition, the number of master weavers has increased tremendously. The cluster contains a cooperative that has been one of the few that has always been profitable and has a number of assets as well. However, the number of weavers working for the cooperative have been decreasingly continuously due to the high wages being given by the master weavers. With the increase in the production, the cluster needed new weavers. Here young women from other castes such as fishermen, etc. have been trained to weave and also weave complex designs. About ten years ago, the cluster had a possibility of choosing either jamdani weaving (complex weaving using extra weft) or jacquard weaving. For a little while, both these weaving existed, but now the entire cluster produces only jamdani. The two masters discussed below were involved in each of these types of weaving respectively.

SAR (*Annual turnover: 10 – 15 lakhs, partners: 1, Clients: Local master weavers and local stores*).

SAR is a 46-year-old weaver who, along with his father worked for a master weaver in the village of Moolapeta. Due to financial difficulties, they migrated to Chirala, a larger weaving

cluster about 300 km away, to work under SAR's uncle, who is a master weaver there. The loom that is used in his hometown and the loom that is used in Chirala are different. The one in Chirala is a Jacquard and the one in Moolapeta is a Pit loom. In addition to using the Jacquard loom, he also learnt how to build and repair one.

When the financial situation of the family stabilized ten years later, they decided to move back to Moolapeta. They could easily find employment under a local master weaver and operated two looms for him for a few years. While doing so, SAR realized there was a difference in which the master weavers in Moolapeta and in Chirala operated. In Moolapeta, the master weaver supplied the yarn and expected the weavers to supply the finished product. Whereas in Chirala, the operation was a bit more specialized. There are few pre-loom activities that are performed by specialists hence the yarn that is supplied to a jacquard loom in Chirala has to undergo fewer pre-loom activities. Also, the earnings while working on a jacquard are more, since the product has higher solubility. This made moving to jacquard weaving attractive.

When SAR had saved/collected some money, he approached his cousin in Chirala to assist him in setting up a jacquard in his house. However, SAR did not remove the pit looms to supply to the local weavers, but did his brother work on it since he was not sure of the success of the Jacquard loom.

He made frequent trips to Chirala to procure the raw material as well as to supply the finished product. This went on for a few years until SAR was confident that he could completely shift to jacquard weaving. His son could not finish high school, but he was keen on weaving. With assistance from his village president, SAR's son applied for a self-employment loan under a special program and was successful in procuring the loan. SAR now added a new wing to his house and set up two new jacquard looms. Now, he had three looms. In addition, he also set one up in his friend's house. His trips to Chirala became more frequent since he procured larger sets of raw material and took back finished goods.

With this village now being exposed to jacquard weaving, gradually a few other master weavers adopted the technology. Instead of selling to the master weavers in Chirala, these master

weavers have set up jacquard on their own and have now developed a market of their own. Since SAR knew how to set up jacquard looms, he augmented his income for a few years by constructing about 40 looms in his village before carpenters from Chirala started to come to Moolapeta and build jacquard looms.

Having experienced the ease with which the market seems to absorb the jacquard products, the larger master weavers in the local areas started to purchase most of the production in Moolapeta. So with the assurance of markets, he stopped working for his cousin in Chirala and ventured into his own production with couple of weavers. In a short while, he was able to increase the number of weavers working for him to about 20 and just when the future seemed to be promising, a mishap involving his son significantly affected his business operation. His son was involved in a road accident and one of his legs required multiple surgeries and for over a year, he was confined to his bed. SAR drew significant amounts of money from his business to pay for the medical bills. It took about a year for SAR operations to become stable. With the markets showing no signs of fatigue of jacquard products, competition within the master weavers of the village increased tremendously. Master weavers are now wooing weavers with very lucrative offers. In the light of these developments, small master weavers like him were facing difficulties in productions with weavers are opting to work for whoever pays the most. He decided to decrease his production business and venture into setting up of a dyeing and warping unit. Even now the raw materials for jacquard production in Moolapeta comes from Chirala, sensing an opportunity that the time is right for setting up of a raw material processing unit within the village, he utilized the connections with Chirala and recently purchased a second hand warping unit. Until the time the dyeing raw material and equipment arrives, he is training few women in the processing of yarn. He intends to move his dyeing and yarn processing unit to a nearby plot of land that he has leased for this purpose.

***LVR** (Annual turnover: Between 75 Lakhs - 1 Crores, No. of partners: none, Clients: top retail outlets in cities across the country, also has a sales outlet in his house)*

LVR worked with a master weaver before joining a group of 18 master weavers to form a large firm that has exhibited in the World Industrial Fair in New Delhi in 1958. After the fair, all of them decided to open an office in Delhi as well as in Bombay. LVR initially set up the offices at

both the places. Since he was fluent in Hindi and could understand English, he was travelling to both the offices and to various other places in the country so much so that many customers felt that he was the owner of the firm. This large firm had to be disbanded in 1966 due to internal strife and financial mismanagement.

LVR along with a few of the master weavers from the earlier group started a new firm. The clients were more or less from the earlier set. He was involved in this multi-partnered firm until 1980. After which he started his own firm with the help from three of the four sons who discontinued their education to join the firm. Instead of seeking out new clients, he started utilizing the various exhibitions that the government was organizing across the country. While travelling around, LVR came across an innovation in central India and started to experiment in his cluster to improve upon it (using cotton warp and silk weft). After doing so, he used these exhibitions to meet clients. They wanted him to start supplying his products to them. He was extremely successful for over a decade due to this innovation.

Just as the time came up to change to another new innovation, the Weavers Service Centre in the state was training weavers to learn Jamdani (a new technique of inlaying silver thread into the weft to create embroidered patterns). LVR took up experimenting with this new technique as he felt it might have good markets.

In addition to the vast business linkages he developed over the years of travelling all over the country, LVR attributes his success to the quality products his firm produces. Also, while travelling around the country, he said, he always took some extra time to visit the various governmental training and service centers, to find out about new designs and new dyeing techniques. He could dye the yarn very well and understood the elements of design. It is on these two aspects that his firm has become known for. He now supplies to the largest and most reputed stores across the country. His products are suited for the niche society in the urban areas. As he wants to focus on low volume and high-priced sari, he chose to stop supplying to some of his smaller clients.

Although his sons have taken over, LVR keeps himself informed of every action in the firm. Two of his sons go out to meet clients, take orders and retrieve credit while the third takes care of the accounts and spends time in the outlet in the village. LVR spends his time designing new saris. His is the only firm in the cluster that has new designs coming out everyday. To date he has a collection of over 2000 designs that he has used for his saris. He supplies fabric to professional garment designer firms across the country.

Pochampally Cluster

Pochampally cluster is close to Hyderabad. This cluster had seen exponential growth in the 90s and the first half of 2000s. Much of the growth can be attributed to the ikat type of weaving that this cluster is famous for. The cluster has both silk and cotton weaving. For some time there were about 10000 families producing ikat products. KAR, was the weaver instrumental in developing ikat silk sari. He not only had to learn how to weave silk but also had to learn about dyeing before he was successful.

KAR (Turnover Rs. 7,500,000, clients 25 – top retail outlets across the country, partners 1)

When KAR grew up and learned the skills of weaving from his father, the handloom industry in Pochampalli was just starting to expand. The local weavers' cooperative was formed in 1956. It was because of this cooperative that the government funded experiments to make a sari with a 'Telia rumal' design. A Telia rumal is a large 'tie and dye' handkerchief that had been made in Chirala and exported to Arabia during the pre-Jacquard era. The local term 'tie and dye' actually refers to the more commonly known technique of 'resist dyeing' which involves selective tying and dying of the yarn prior to weaving. The design patterns on the fabric emerge during the weaving process due to the selectively dyed yarn. This process is also known as 'ikat'. If either the warp or the weft is dyed it is called "single ikat". If both warp and weft are dyed, it is known as "double ikat". Part of the difficulty is the translation of the pattern into a complex dyeing process. The challenge of making double ikat is greater than that of making single ikat. Double ikat is made only in a couple of places in the world: one in Patola, Gujarat, India and the other in Bali, Indonesia.

Due to the efforts of the cooperative, telia rumal design was successfully adapted for sari weaving. Both local merchants and merchants from Calcutta were interested in the product and soon there were about one thousand looms producing that sari, in and around that village. The production and sales were controlled by the local cooperative.

KAR was working for the cooperative as a 'designer'. Due to his ability to come up with good designs, he was involved in the project of adapting telia rumal designs for sari production. When the Chairman of the Handloom Development Corporation, Kamala Devi Chatopadhaya came to Pochampalli and wanted the cooperative to start experimenting with Silk, KAR was one of the two persons in Pochampalli, selected to be trained in Varanasi, a reputed silk weaving center in North India.

A master weaver who had heard of these experiments, wanted to invest some money in the project. He had a big order for silk shirts from America and wanted to experiment with multi colored silk materials. With the help of the Weaver Service Centre in Hyderabad, the so-called 'American Shirts' were developed. Because of the poor quality of dyeing, these shirts were also known as bleeding Madras shirts. In spite of the bleeding of the dye, this type of shirting continued to be popular for a few years.

After this experience, both the young weavers were offered jobs in Weavers Service Centers. KAR accepted the job, but very soon decided to start his own firm. He returned to his village, produced a few cotton saris and initiated the marketing by going to traders in the city of Hyderabad, about 60 Km from Pochampalli.

KAR's dream was to revive the 'silk sari' project. Considering his limited resources, he had to bring in a few other people into the project. He convinced one of the local raw material suppliers of the potential of his project. The supplier delivered silk yarn from Bangalore on credit. While he was working in Varanasi, KAR got in touch with some outlets in Western India, which regularly purchased expensive Varanasi silk saris. He sent his first batch of 32 saris to four outlets in Bombay and one in Hyderabad. He strategically wanted Western India as his first market since they were exposed to the extremely complicated "double ikat" Patola sari,

which only the rich can afford. The sari KAR produced was not as complicated as the Patola sari but it had a similar design and quality and was much cheaper.

The outlets in Bombay started placing more and more orders. KAR's next step was to start the production of this Patola-like sari. He went to Bombay, met the owners of the outlets and looked at the Patola sari carefully to comprehend its production. He then started experimenting and had design support from the wife of one of the owners of the outlets. In addition to showing him her sari collection, she also gathered many designs from her friends and sent them to him.

KAR worked with low quality silk until he was sure of the nuances of production. Once he was sure how the sari was to be produced, he was able to get orders from Bombay merchants. Instead of producing it in Pochampalli, KAR then went to a village where most of his relatives lived. He started producing this Patola kind of sari there. In a year or so, he extended his production to another village. Both these villages were producing about 2000 saris per year. Since the demand was quite high, he could now seek advances from the outlets in Bombay and long term credit from merchants supplying raw material.

In this cluster, for hundreds of years, cotton thread was used as the 'tying' medium. This was cumbersome and the cotton also absorbed the dye. The edges of the designs were therefore not smooth. To overcome this problem, KAR started using pieces of rubber from used cycle tubes as the tying material. This not only eased the task of 'tying' but also helped in keeping the design edges smooth. Even today, using 'used cycle tubes' is still very popular in the cluster since the material is cheap, durable and readily available.

As the sari demand started spreading to other large cities in Western India, KAR started helping his family and friends to set up their own production units. He could not meet the demand all by himself. Instead of taking the saris produced in the new units to areas where KAR was selling, the products were marketed in other parts of India. KAR and his sons are still the largest producers of the 'Patola type' sari in Pochampalli.

Connecting the micro actions of the entrepreneurs to the growth of the clusters

When new innovations come into a cluster and when the market demand for these new products start to increase, then there is a positive influence on increase in the number of master weavers. To explain this further, the path to establishing a master weaver firm can be abstracted to two different routes. The first route is to ‘inherit’ part of the family firm. Handloom is primarily a family or kin-oriented business involving either siblings or cousins. Siblings and cousins usually play managerial roles to begin with. When the firms become large, every stakeholder gets his share of the business in the form of capital, employees and clients. The original firm is then splintered into many firms. The second route is that taken by weavers who, after working for an intermediary – cooperative, NGO or a master weaver – for a while set up their own firms with financial support from family or elsewhere. Unlike splinter groups, the weavers who establish fresh start-ups are unlikely to have any business experience and learn the elements of managing a business by observing others and learning from their own mistakes. Other than those who are part of the weaving community, it is not easy for persons from any other caste to set up master weaver firms.

As one master weaver commented *“In the last 12 years in Pochampally, there were only two instances where someone from another caste set up a firm. Both these firms became bankrupt in less than a year.”* Managing a master weaver firm may require a lot of tacit knowledge that accrues through a mix of experience moderated by a sense of belonging to the same community. It may be due to this sense of belonging that it is possible for any weaver (and not members of other castes) to start his own firm, unless he is indebted to a master weaver. The most challenging part of starting one’s own firm is to raise the required capital and to recruit weavers as most of them would be under the aegis of another master weaver. An important factor in creating an enabling environment for new start-ups is the macro environment surrounding the village or cluster. During boom times, there are a number of opportunities for weavers to break their bonds with master weavers to establish their own firms because many individuals (especially raw material suppliers) would be willing to lend money, but in normal times when there is lesser optimism of the industry, it may be more difficult. The basic demographics of the master weavers in the study area are given in Table I.

Table 1: Master Weaver demographics

	Respondents		Entrepreneur Age			Firm Age		
	Number	Percentage	Minimum	Maximum	Average	Minimum	Maximum	Average
Pochampalli cluster	37	34.6	35	57	46.2	7	31	18.8
Gadwal cluster	15	14.0	27	52	41.0	5	24	14.9
Mangalagiri cluster	22	22.6	38	65	46.7	9	32	19.0
Chirala cluster	33	30.8	38	55	47.7	9	34	18.9
<i>All clusters</i>	<i>107</i>	<i>100</i>	<i>27</i>	<i>65</i>	<i>46.1</i>	<i>5</i>	<i>34</i>	<i>18.3</i>

This table shows that the average age of the master weavers in the sample is about 46 years. The average age of their firms is 18 years. The most recent firm has been in business for 5 years and the youngest entrepreneur is 27 years old. The oldest firm started 34 years ago and the oldest entrepreneur is 65 years old. The fact that no new firms have been established in any of the four clusters indicates that perhaps the industry has reached its saturation levels and offers few opportunities for fresh entrants. It was found that Gadwal's average firm and master weaver, age are lower than those of the other clusters. Of those that have started young, it was found that they do not come from master weaver families, but have started out on their own after working with another master weaver for a short while.

Table 2: Start up process in the handloom industry.

	Respondents	Splinter firms		Fresh start-ups	
		Number	Percentage	Number	Percentage
Pochampalli Cluster	37	20	54.1	17	45.9
Gadwal Cluster	15	6	40.0	9	60.0
Mangalagiri cluster	22	5	22.7	17	77.3
Chirala cluster	33	8	24.2	25	75.8
<i>All clusters</i>	<i>107</i>	<i>39</i>	<i>36.4</i>	<i>68</i>	<i>63.6</i>

The above table shows that among those surveyed, there are more fresh start-ups (64%) than splinter firms, with the exception of Pochampalli. This implies that given certain conditions, independent weavers do have possibilities of coming out of the 'clutches' of master weavers to establish their own ventures. It is the demand of a particular product that creates an enabling environment for weavers along with the characteristics of their social networks that seem to

influence who is able to set up their own ventures. It is mostly through referrals (an important function of the social network) that weavers wanting to set up their own ventures reach.

Social networks as a knowledge resource

In a low technology industry such as handlooms, the hand-operated looms and the skilled weavers who create the textiles are the key resource base. The looms that produce fabric for the master weaver are no different from those of his competitors. When it comes to the labour, some master weavers may have more skilled weavers than the others. Notwithstanding the weavers' skills, the most significant factor in a success story is often the social and business network of the entrepreneur—the connections to retail store owners who pass crucial market information; suppliers who can provide sufficient credit and quality raw material; weavers who are able to quickly understand the market information and produce marketable products etc. Master weavers use their social networks extensively because the growth of their venture is heavily dependent on the inputs obtained through these networks.

In entrepreneurship literature, the network perspective recognizes that entrepreneurs are not atomised decision makers functioning as mutually independent beings in the way that the economic perspective assumes them to be. Nor are individuals completely conditioned by their environment as posited by the social and cultural perspective. This network concept, which has been a key area of entrepreneurship research in the recent past has sought to explain the differences in the performance of entrepreneurial firms by analysing the structure and relationships of the social networks of the entrepreneurs.

In a previous paper (Bhagavatula et al. 2010) we have shown that social networks often explain the differences in the capabilities of master weavers in identifying opportunities and mobilizing resources. In this section we provide some descriptive statistics on the social networks of the master weavers that provide an understanding of the basic functions of the networks. Intuitively, one can argue that it is through these networks that master weavers are able to identify talent, markets and resources that help them develop products that have high marketability.

Table 3 Network size of master weavers (in per cent)

Net Size	Pochampalli	Gadwal	Mangalagiri	Chirala	Total
1-4	2.8	6.7	9.1	0	3.77
5-8	11.1	26.7	63.6	15.2	25.47
9-12	25	40	18.2	42.4	31.13
13-16	38.9	20	9.1	42.4	31.13
17-20	22.2	6.7	0	0	8.49

The average number of contacts each master weaver has is taken as the network size and is given in Table 3. It has been categorized into five levels with an increment of four contacts in each category. Across the clusters, master weavers in Mangalagiri have smaller networks and those in Pochampalli have the largest networks. The reason for this could be that Mangalagiri dress material has large sales to a few buyers, while Pochampalli, which mainly produces higher priced saris, sell in fewer numbers. On the other hand, the smaller network sizes of Mangalagiri master weavers may be linked to their staying in lodges rather than dorms when they travel, thereby reducing their chances of meeting people from the industry. Overall, less than 4 per cent of all master weavers had a network size of four or less and less than 9 per cent have networks larger than sixteen, while close to 90 per cent have a network size between 5 and 16.

Table 4: The composition of the master weavers' networks (in per cent)

Net Size	Ties Strength		Same	Caste Different	Do not know
	Weak	Strong			
1-4	18	82	75	25	0
5-8	38	62	60	26	14
9-12	39	61	62	19	19
13-16	38	62	62	22	16
17-20	45	55	61	21	18

One of the most important resources for an entrepreneur is information. Scholars like Kirzner (1997) believe that entrepreneurship happens because information is unevenly distributed in society. The patterns of social relationships abstracted into strong and weak ties have been shown to be important for identifying different types of information. Weak ties are argued to

be sources of novel information (Granovetter, 1973) and bridging (Burt, 1992) to contacts in distant parts of the social strata. It is by virtue of this access to new information, that it is assumed that entrepreneurs identify new opportunities². In this study, a linear combination of duration of the relationship, frequency of contact and caste was used to identify whether or not a tie was weak or strong.

Table 4 shows that smaller networks are likely to be comprised of strong ties, whereas, as the network size grows, the numbers of weak ties are likely to increase correspondingly. The strength of a tie is calculated by a linear combination of duration, frequency and caste of the contact. Likewise, smaller networks have contacts from similar caste backgrounds. However, it is interesting to note that caste composition does not significantly vary as the network size builds up. Within the caste composition, there are a significant number of alters whose caste affiliations are not known to the master weavers. It is likely that these people are from other parts of the country where the caste system functions differently³. It is also possible that these people are store owners or raw material suppliers, rather than weavers who are in distant towns and cities and not around the villages where handloom production takes place.

Table 5: Details of master weavers' relationships (in per cent)

Network Size	Duration of contact			Frequency of contact			
	More than 10 years	Between 10 to 5 years	Less than 5 years	Daily	Weekly	Fortnightly	Monthly
1-4	100	0	0	58	25	17	0
5-8	66	23	11	32	31	21	16
9-12	64	25	11	30	31	18	21
13-16	64	32	5	29	31	22	18
17-20	40	39	21	23	34	24	19

According to Table 5, master weavers seem to have a significant number of relationships spanning more than 10 years, irrespective of the network size. In addition, an entrepreneur

² See Adler and Kwon, 2002 for a detailed review on the social capital and Hoang and Atoncic, 2003 and Jack, 2010 for a review on networks research in entrepreneurship

³ 'The People of India' (Anthropological Survey of India, 1985) lists about 2000 castes and 200,000 sub-castes across the country.

meets about a quarter of his alters on a daily basis and almost half of his alters on a weekly basis. This level of face-to-face interaction may be required considering the labour intensive activities of the industry – production does not happen unless there is frequent contact with the weavers and clients do not return the credit unless they are prompted regularly. It is likely that most of those whom the master weaver meets on a fortnightly or monthly basis are his clients and those he meets more frequently are his weavers and suppliers.

Every master weaver's network is different from that of his competitors. This is because they each have their own background and social status and the people they come across will be different. In addition, if a master weaver speaks many languages, it helps him reach out to a larger group and diverse social circles. The range in the network composition ensures that there is variety in the feedback too. Hence, it is important to understand what kind of information master weavers draw from their network. In order to ensure a certain consistency, a qualitative study was used to identify topics. The topics include marketing, finance, product design and production.

Table 6 shows the distribution of alters with whom master weavers discuss each of the above issues. The table shows that when the network size is small, master weavers discuss almost all issues with everyone in their network. When the network size is less than 5, master weavers discuss marketing related issues with 83 per cent of the alters (the contacts), finance with 75 per cent, design related issues with 67 per cent and production with 83 per cent. The numbers do not add up to 100 as master weavers discuss multiple issues with the same alter. Hence it can be said that greater levels of *multiplexity* – discussing multiple issues with the same contact – exist in smaller networks. As the network grows, the master weavers have an option of talking to specific individuals on specific topics which may decrease the multiplexity.

Table 6: Variations in the network content (in per cent)

Network Size	Marketing	Finance	Design	Production
1-4	83	75	67	83
5-8	86	23	54	42
9-12	79	20	59	34
13-16	72	23	57	37
17-20	77	29	49	41

The greatest drop in content as the network size grows seems to be in issues related to finance. This could be because the entrepreneur may choose to talk about finances only with a core group, usually family or close friends. On the other hand, marketing seems to be the most common network content as several master weavers bring it up with a significant number of alters. Perhaps it is exactly such persistent efforts at keeping their ear to the ground that makes them more successful as an entity than weavers' cooperatives.

Summing up

The Master weaver firms as a production and marketing channel have in many ways held the handloom industry over the last 40 years. Although they have been exploitative in the past, the market demand along with the requirements of finances, are all forcing master weavers to start exploring alternative paths to govern production such as developing contract weavers or mini master weavers.

If one were to view the handloom industry from a master weaver's perspective, establishing a venture in handloom industry is fraught with risk. Firstly, master weavers need to raise capital and more often than not, they have to rely on informal financial systems that charge interest rates higher than 36%. Secondly, they need to coordinate their production, which spreads across various locations, to ensure that the products are marketable. Third, they need to market their products to retail stores, which are again spread across various locations. Cash transactions are rare in handloom marketing. Store owners need to be provided with credit periods of 30 to 90 days depending on the season. An immediate difficulty with sales on credit is the recovery of it.

Master weavers find it difficult to recover money from the textile stores. They have to make multiple trips to the stores and place innumerable phone calls to recover their money. Also, they need to tread a careful path in this recovery process because the store owner may turn around and refuse to purchase further stock if a master weaver is too forceful. Every master weaver has a story to tell about how thousands of Rupees in capital are locked up in the form of bad debt because the store owners defer payment for long periods stating bad business cycles. In some extreme cases, the store owners may even file an insolvency petition in which case the master weaver loses most of his capital. Fourth, many weavers require their master weavers to upgrade to more expensive looms which means that capital, which cannot be used in the production cycle, has to be infused initially and the profits are likely to come only later.

Finally, raw material needs to be purchased mostly on credit for about a period of a week to a fortnight which is much shorter than the sales cycles. Therefore, master weavers producing expensive fabric need to invest heavily in raw material upfront on the premise that the product will eventually be saleable and generate profits months later. It is not that the weavers do not know the difficulties in managing one's own business. They watch the operations of master weavers from close quarters and are aware of the undercurrents that the master weavers experience, especially the financial jugglery required, to operate a handloom venture. When given a choice many weavers are likely to remain under a master weaver even at low wages than set up their own ventures. Informal conversations with weavers reveals their choice of work – they prefer to work under a master weaver because he is much more likely to provide work all around the year which is more important than higher wages that cooperatives occasionally provide.

In the weaver's cooperatives, the members do know how to be entrepreneurial, but the bureaucracy and the strict rules restrict pursuing opportunities that are ephemeral although extremely profitable. If the cooperatives have to be entrepreneurial and be egalitarian at the same time, they will have to take some risk and encourage enterprising individuals who can straddle both profit making and profit sharing. Within cooperative societies, there are often individuals who are by nature eager to embrace greater common good. It is these weavers who

require some training in being more entrepreneurial. It is likely that such individuals can usher in a new cooperative movement, which in the light of the current trends can be termed Cooperatives 2.0.

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Appendix

Main Players in the handloom industry

There are two sets of players in the handloom industry. The producers and the market intermediaries.

Market intermediaries

Master weavers: Master weavers are entrepreneurs who organise the production and marketing of weavers' output. The term master weaver is a generic term and does not indicate any form of mastery much unlike master craftsmen of the erstwhile artisan guilds. Every master weaver has a group of weavers who work under him and regular set of customers, who are retail outlet owners in urban areas. He provides the raw material to the weavers and markets the finished product.

Mini Master weavers: Master weavers with less than 10 weavers, who are sub-contractors for larger master weavers.

Cooperatives: Cooperatives have been formed so that weavers get regular wages. According to Cable et al. (1986), the structure of cooperatives has not changed for decades. At the village level there are primary producer cooperatives. The function of these units is to group the weavers and offer them raw materials and assistance in marketing. These cooperatives form an apex cooperative society at the regional or state level. The apex bodies are responsible for yarn procurement (usually from cooperative spinning mills) and market the goods in areas outside the coverage of the primary cooperatives. They are part of the All India Fabric Marketing Cooperative Society Limited which runs eight stores across the country selling products from various states.

NGO/Fair trade organizations: Various kinds of NGOs are involved in the handloom industry but the core objective of each varies. Some of them are focused on increasing the political awareness of the weavers in order to lobby for government support; some others are training weavers to improve their production skills, and some other are helping them market their

goods. Dastkar Andhra is one of the most prominent NGO in Andhra which is involved in both production and marketing of the handloom product.

Designer stores: One of the earliest and the largest is FabIndia. They currently operate in six countries and have about 170 stores and have been in existence for over 50 years. Stores like Bandhej, Anokhi, etc. also have multiple stores across the country but are much smaller than FabIndia. In addition, there are multiple boutique single stores owned by designers such as Creative Bee in Hyderabad, Nature Alley in Bangalore, Shilpi in Chennai, etc.

Producers

Independent weavers: These are weavers who purchase yarn from the open market, weave the fabric and then sell the product in the market. Over the last 40 years weavers in this segment are reducing drastically.

Weavers: (work for master weavers): These are weavers who receive loans from a master weaver and are required to produce for that master weaver alone. They get the raw material from the master weaver and are paid on the complexity of the weaving. He can work for another master weaver, if the new master weaver pays the entire loan amount to the previous master weaver and provides a new loan. This happens when the product (sari or dress material) is extremely popular or if the weaver is very skilled.

Contract weavers: (Work for master weavers): These are weavers who do not have any loans from master weavers and are free to weave for anyone. They usually have a better bargaining power vis-à-vis normal weavers and also get paid more. This segment is increasing for two reasons, i. master weavers are no longer willing to block a significant portion of their working capital in form of loans, that too when the credit periods for marketing are increasing. ii) because of the advantage they have to work directly with retail stores or with master weavers from other parts of the country.

Figure: The handloom supply chain in India

