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WORKING PAPER

E-BUSINESS AND PRO-PRODUCER RURAL ENTERPRISES:  
VALUE CHAIN BASED ASSESSMENT

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# **E-BUSINESS AND PRO-PRODUCER RURAL ENTERPRISES: VALUE CHAIN BASED ASSESSMENT<sup>1</sup>**

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## **—Abstract —**

Development of value chains is viewed as an effective instrument to provide decent work opportunities and protect the interest of producers in rural areas. Rural enterprises have the potential to adopt e-business strategies to meet the standards required for local, regional, or global markets. E-business practices aim to mitigate risks often stemming from power imbalances including information asymmetry across the value chain entities that can influence terms of exchange.

This paper focuses on “weavers” and “Bidi workers” in Mahabubnagar district in the state of Andhra Pradesh, India. The study highlights the scope for the rural enterprises to adopt e-Business strategies and exploring opportunities for convergence for pro-producer sustainable value chains. It uses value chain development for decent work framework for the study.

**Key Words:** *Rural Enterprises, Value Chain Development for Decent Work, E-Business for Pro-Producer*

**JEL Classification:** J54, J81

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# E-BUSINESS AND PRO-PRODUCER RURAL ENTERPRISES: VALUE CHAIN BASED ASSESSMENT

## 1. Introduction

Mahabubnagar District is located in the central part of peninsular India and northern part of southern Deccan region. Mahabubnagar is spread over an area of 18,400 sq.km and is the second largest district in the state and largest in Telangana. Mahabubnagar (traditional name: Palamur) is the most backward and least developed district in Andhra Pradesh, despite its proximity to Hyderabad, the state capital and one of the ten most backward districts in India.



The southern part of the district is relatively plain and has irrigation facilities from the projects on Tungabhadra and Krishna Rivers. The Eastern part receives relatively more rainfall and is greener with intense agricultural activity. The western part is backward with rainfed agriculture.

- Bidi rolling is concentrated around Amarachinta – Chintakunta and
- Weaving is concentrated around Gadwal-Rajouli.

The district forms part of Telangana region of Andhra Pradesh, which is a land-locked area with semi-arid climatic conditions having hot summers, warm winters and sporadic rainfall. The temperature variation is between 43° C and 28° C and the average annual rainfall is 65.5 cms. Most of the district is drought prone and gets substantially low rainfall. Seasonal migration for alternative livelihood opportunities has become a tradition for most of the people.

According to the 2011 census Mahabubnagar district has population of 4,042,191, and ranked as 55th most populous district out of 640 in India. The district has a population density of 219 inhabitants per square kilometer with population growth rate of 15.03% over the decade 2001–2011. Mahabubnagar has a sex ratio of 975 females for every 1000 males and a literacy rate of 56.06%.

(Source: [www.mahabubnagar.nic.in/Resources/DistStat.doc](http://www.mahabubnagar.nic.in/Resources/DistStat.doc))

The Andhra Pradesh state's first Human Development Report of 2007 reiterates that the Mahabubnagar district is lagging behind in all aspects, as measured by the Human Poverty Index, Human Development Index, Gender Development and Empowerment Measure Index, and Economic Growth parameters. Among the 23 districts in the state, it ranks 21st in Income, 22nd in Health and 23rd in Education in the state. Bidi rolling is clustered in and around Amarachinta village with six Bidi companies operating from nearby Chintakunta village. Gadwal Saree weaving is concentrated in and around Rajouli village with several master weavers and a well established weavers' cooperative functioning since inception in 1951.

## **2. Focus of Paper**

Electronic business, or e-business, may be defined as the application of information and communication technologies (ICT) in support of all the activities of business. Commerce constitutes the exchange of products and services between businesses, groups and individuals and can be seen as one of the essential activities of any business. Electronic commerce focuses on the use of ICT to enable the external activities and relationships of the business with individuals, groups and other businesses. This study is undertaken to assess how e-business and e-commerce practices can contribute to improve the livelihoods of weavers and Bidi workers in Mahabubnagar district.

## **3. Overview of Bidi Rolling and Saree Weaving**

Both of these industries are categorized as cottage industries – where workers work in their homes under constrained space, inadequate lighting and improper ventilation often on piece rate basis - and are considered as self-employed and do not enjoy benefits or protection of being employed. This virtually negates legal and contractual obligations of employers to engage on minimum wages, responsibility for providing amenities and decent work conditions and aids evasion of taxes. These arrangements leave workers at the mercy of agents and contractors without any recourse to rights. Adam Smith first introduced the concept of 'processes' in the *Wealth of Nations* [Smith 1776]. Bidi rolling and weaving still seems to follow this model based on division of labour, largely within family members, contributing to enhance workman dexterity leading to increased productivity by a factor.

### **3.1 Bidi Industry**

Bidi rolling is an agro-forestry based industry in India and provides home based occupation to millions of women and children who are mostly from the poor socio-economic status in contexts where better work opportunities are non-existent. Bidi is made from two main raw materials - tendu leaves collected from forest are used for wrapping over Bidi tobacco flakes procured from cultivators. Most of the Bidi making is carried out by the contractual, home-based, piece rate work commissioned by about 300 manufacturers of Bidi brands through thousands of small scale contractors in India. Raw materials are transported to poverty stricken and low wage rate prevailing regions where poor are induced into this hazardous Bidi rolling activity by work contracts through agents. There are approximately 4.4 million poor people engaged as full time Bidi workers in India (VHAI, 2009). Bidi is usually and relatively low priced in comparison to cigarettes and considered as poor man's cigarette. Bidis outsell cigarettes by a ratio of eight to one (8:1) in India. Bidis are usually smoked by men, but produced mainly by women, men and children who prefer to work from home and who cannot do strenuous work (Srivastava, 2000).

About 40 Bidi manufacturers are present in Andhra Pradesh with an annual industry turnover of about Rs1,500 crore engage over 10 lakh Bidi workers, mostly women, particularly in the Telangana region. Srinivasulu (1997) reported that 90% of Bidi workers are women and other older people who are often helped by even children. Depending on the demand, contractors may engage workers on all days with no breaks or holidays (Kaur and Ratna, 1999).

Bidi rolling causes serious occupational hazards to the workers and their families due to constant exposure to tobacco dust and hazardous chemicals and they experience exacerbation of tuberculosis, asthma, anemia, giddiness, postural and eye problems (Kumar, 2003). When Bidis are stored in the house, food spoils quicker and family members experience nausea and headaches (Panchamukhi *et al.*, 2000). Most Bidi workers were living in poor environmental and housing conditions. Almost 90% of the workers complain of pain in various body parts most frequent being shoulder pain in both the males and females, followed by back pain and neck pain. Apart from the musculo-skeletal problems, there are also cough (27%), breathlessness, acidity, generalized weakness and skin diseases (dermatitis) and tuberculosis. Prevalence of these problems is so wide spread making Governments oblige with provisioning of free or subsidized medicare in Bidi rolling zones.

### **3.2 Weaving Gadwal Silk Sarees**

According to anecdotal history, weaver community is present in Rajouli for about 250 years and has grown in numbers to reach about 320 households today. They started weaving the famous Gadwal Silk sarees from 1858 AD. Many had excelled in their weaving skills, creative designs and motifs. They established a weavers' cooperative society in 1949 and registered in 1951.

Founders introduced regular member savings as an integral part and this savings serves core working capital requirements of the cooperative. Members receive work order from the cooperative along with supplies of raw materials, specifications of the product and terms of conditions including wages to be paid, delivery period and permissible wastage of materials. Cooperative found it lucrative to directly reach customers in five towns in the district through its own retail outlets. It also markets through other reputed retailers in distant markets. Cooperative was able to pay 20% more as wages to its members in comparison to what other players like Master Weavers are paying due to direct marketing, collective purchase of raw materials. It is run by an elected board with the help of Secretary and 15 other staff members.

Weavers traditionally operated the looms from their own houses. Severe flood in October 2009 destroyed their houses and damaged looms beyond redemption. Rajouli village, famous for Gadwal sarees, was one among the worst flood affected village. The floods shattered the lives of the weavers who lost their looms as well as their houses. Weavers were just hoping for some assistance to help them in keeping their tradition of weaving alive. Gati Limited, India's leader and pioneer in Express Distribution and Supply Chain Solutions transport and Logistics Company stepped in to help as a part of Corporate Social Responsibility activity. While the Government provided rehabilitation assistance to build houses in the outskirts of the village, Gati acquired land just opposite and built two prefabricated work sheds for the weavers. Eenadu publications group provided 80 improvised looms that were installed 40 each in the two work sheds. Even now in 2013, we find that many of the new houses are yet to be completed and work sheds planned for installing looms was not complete even in a single newly constructed house. Quite a few of the weaving families are still living in tin sheds without any amenities.

### **3.3 Comparative Overview**

Bidi workers are paid on the basis of – numbers of Bidis they roll from the measured raw materials supplied to them and are penalized for deviations from the expected standards - both in terms of less than expected number as well as right size and finish. Weavers likewise are paid on the basis of – meters of cloth woven – at differing rates based on intricacies of design and expected time to complete. Both Bidi workers and weavers they also suffer deductions for rejections and delays and deviations from expected standards.

In both cases, workers are provided with raw materials, which need to be prepared before actual use in the production process involving simple tools and machinery at their own homes. Business processes involve layers of supervision and management to coordinate outputs of divided tasks and the hierarchy was established as the standard model of the business organization. As can be observed from examining factor, demand, industry and institutional conditions referred in the following Table: 1, and discussions so far, further declining and

demise of Bidi rolling industry is desired due to hazardous and chronic disease conditions induced by exposure to tobacco.

**Table: 1. Comparative Overview**

<b>Aspects of Business</b>	<b>Amarachinta Bidi Cluster</b>	<b>Rajouli Weaving Cluster</b>
<b>A Factor Conditions</b>		
1. Availability of Raw Materials	Harnesses & supplied by companies to home based workers	Harnesses & supplied to home based workers
2. Availability of Skilled Human Resources	Present in large number	Present in large number
3. Agro-climatic Suitability	Limited or no options to work from home	Limited options to work from home
4. Access to Capital	Very little	Limited / moderate
5. Availability of Infrastructure (power, water, roads, storage etc)	Constraining	Power & water supply constraints
<b>B Demand Conditions</b>		
6. Size of Domestic / Export / Local Demand	Shrinking in all segments	Shrinking low end; increasing in others
7. Number of Buyers	Reducing	New entrants
8. Transparent Quality/ Quantity Measurement in transactions	Opaque and skewed terms against workers	Opaque, skewed against weavers

<b>Aspects of Business</b>	<b>Amarachinta Bidi Cluster</b>	<b>Rajouli Weaving Cluster</b>
9. Growth of Domestic / Export Demand	Declining in both segments	Increasing in both segments
10. External Buyers	Non-existing	Limited presence
<b>C Industry Conditions</b>		
11. Number of firms	Limited	Many competing;
12. Existence of Competition among Firms	Limited; Cartels in operation	Unfair practices, few dominant firms
13. Possibilities of Setting up New Firm	Not easy, Difficult	Entry easy in trade; not in production
14. Marketing Agencies	Not present	Wholesale and retail chains gain
15. Reliable suppliers– input/component/machines	Low	Exist but not good
<b>D Institutional Conditions</b>		
16. Presence of efficient Promotional Agencies	Anti tobacco	No end - end focus
17. Functioning Producer Organizations	Very few existing	Large number exist but few effective
18. Quality Institutions for imparting skills	Not existing	through apprentice
19. Access to all necessary physical/ legal resources	Legal restrictions exist at each stage	Restrictions on use of chemical dyes
20. Supporting / Favourable Policies	Not existing	Not existing



Women, children and old persons are engaged in Bidi rolling for low returns and high health risks. Very limited value addition taking place in the industry is leading to ever cost reduction compulsions and squeeze of margins at every stage making it a “Sunset” industry with declining benefits for everyone associated.

Relations and transactions among value chain members are increasingly marked by growing mis-trust. Over dependence of workers on Bidi rolling with subsistence piece rate wages and without feasible alternate options has created ample scope for exploitative practices other players in the value chain. During the transition, existing workers may be provided regular work; decent wages; access to medicare; and ensure worker benefits by enforcing legal compliance.

Whereas preserving and promoting Gadwal saree weaving is desirable but in a manner that assures reasonable returns and working conditions to weavers. Currently work orders are issued along with raw materials. Usually terms of engagement like piece rate wages to be paid, delivery schedule, design specifications and allowable wastages and penalties for deviations are made clear.

Even women, children and old persons in the family are engaged for low returns to their labour and suffer from chronic health problems due long hours of work in cramped conditions. Scope for improving returns to labour exists, especially if production shifts to cater demands from high quality-high value segments.

#### **4. Conclusions: E-business Possibilities**

Electronic business, or e-business, may be defined as the application of information and communication technologies (ICT) in support of all the activities of business. Commerce constitutes the exchange of products and services between businesses, groups and individuals and can be seen as one of the essential activities of any business. Electronic commerce focuses on the use of ICT to enable the external activities and relationships of the business with individuals, groups and other businesses. In practice, e-business is more than just e-commerce. While e-business refers to more strategic focus with an emphasis on the functions using electronic capabilities, e-commerce is a subset of an overall e-business strategy. E-commerce seeks to add revenue streams using the World Wide Web or the Internet to build and enhance relationships with clients and partners and to improve efficiency using the Empty Vessel strategy. Often, e-commerce involves the application of knowledge management systems.

#### **4.1 E-business Possibilities in Bidi Industry**

As indicated earlier, ICT applications can be used to enumerate persons involved in Bidi rolling. This is essential first step to assure that they claim and receive what they are entitled to from the companies they work for as well as benefits intended by the Government for their welfare. In addition, work allotment, measurement of work and payment systems can be improvised for ensuring transparency and fairness. Correct wage payments into bank accounts of respective workers and statutory contributions towards worker benefits can be streamlined to ensure fair transactions.

#### **4.2 E-business possibilities for Weavers**

We noted with delight, use computer aided design cards in weaving. This has considerably reduced time and drudgery involved in setting the looms for ready for start of weaving process. They are able to keep pace with fast shifting trends of market with the use of computer aided designing and manufacturing. This resulted in improving the efficiency, maximum utilization of resources and improvement in services for customers' satisfaction. Search for ways and means of achieving these elements leads towards development and use of new technologies. As the proverb says "Creativity is one percent inspiration and ninety-nine per cent perspiration." but computers have confirm it wrong. They have made textile designing simpler, faster, more precise and enjoyable. The designer can create his motifs with a mouse or pen. Once the design is created, further process of editing the design i.e. clipping of certain parts, adding new shapes, changing the shapes, distortion, resizing, color changing, color reduction, replicating and combining as per the need can be done at the minimum possible time. Also, one part of design can be altered without affecting the rest.

We recognize opportunities for E-business processes spanning the entire value chain: electronic purchasing and supply chain management, processing orders electronically, handling customer service, and cooperating with business partners in the weaving sector. E-business software solutions allow the integration of intra and inter firm business processes to work with synergy in responding to customer needs. Basically, electronic commerce (EC) is the process of buying, transferring, or exchanging products, services, and/or information via computer networks, including the internet. EC can also be beneficial from many perspectives including business process, service, learning, collaborative, community. Weaving sector offers immense scope for electronic commerce. Geographical Indication and traceability of products to artisans and possibilities for weaver to customer direct interaction can result in participative design and joint decisions related to choice of colours etc. Developing this interface will cut down on role of intermediation and improve returns to weavers as well as more value for customers.

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