

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

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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 of Rajouli village famous for Gadwal sarees originated 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 pro-producer sustainable value chain development for decent work.

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

JEL Classification: J54, J81

1. INTRODUCTION

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

Figure 1: Mahabubnagar District Map



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 rain fed agriculture. Cottage industries, like Bidi rolling - concentrated around Amarachinta village in Atmakur Mandal and Handloom weaving is concentrated around Rajouli village in Gadwal Mandal.

According to the 2011 census Mahbubnagar 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. Mahbubnagar 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 accessed 12.04.2013)

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, Mahabubnagar ranks 21st in Income, 22nd in Health and 23rd in Education in the state.

2. RESEARCH AGENDA

This research study is taken up with two major objectives to:

- understand the current situation of weavers in Rajouli cluster and identify the deficits in decent work conditions in the value chain and
- assess how e-business practices can contribute to improve the livelihoods of weavers in this cluster.

Filed visits to the cluster were undertaken to understand work conditions under which the weavers are functioning and assess possibilities for application of information and communication technologies (ICT) in support of business activities in the value chain. Intense interactions with significant stakeholders were held to capture their views about the current business situation and possible use of e-business strategies for improvements.

3. WEAVING SECTOR – AN OVERVIEW

Handloom weaving is categorized as cottage industry – where weaver households work in their homes under constrained space, inadequate lighting and improper ventilation often on piece rate wages basis - and are considered as self-employed and do not enjoy benefits or protection of being employed formally. 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]. Saree 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. Gadwal Saree weaving is largely concentrated in and around Rajouli village and occurs in four different modes – about 50 % of weavers are commissioned by master weavers; about 30% are commissioned by weavers’ cooperative functioning since 1951; about 10% are undertaken by weaver households by themselves; and about 10 % are working from the two work sheds constructed after floods destroyed their homes in 2009. Commissioned weaving generally operates a described below:

- Weavers are issued work orders and are supplied with raw materials along with raw materials – either by master weavers or their cooperative - which need to be prepared before actual use in the production process involving simple tools and machinery at their own homes.
- Usually terms of engagement like piece rate wages to be paid, delivery schedule, design specifications and allowable wastages and penalties for deviations from expected standards are made clear.
- Weavers are paid on the basis of – meters of cloth woven – at differing rates based on intricacies of design and expected time to complete. Weavers also suffer deductions for rejections and delays and deviations from expected standards.
- Business processes involve several tasks requiring supervision and management to coordinate outputs of divided tasks and the hierarchy was established as the standard model of the business organization.
- 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.

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 from this cluster had excelled in their weaving skills, creative designs and motifs.

3.1 Overview of Handloom Weaving

Factor, demand, industry and institutional conditions related to handloom weaving are summarized in following Table: 1 to present an overview.

Table 1: Overview of Conditions

Aspects of Business	Rajouli Weaving Cluster
A Factor Conditions	
1. Availability of Raw Materials	Harnessed & supplied to home based workers
2. Availability of Skilled Human Resources	Large number made it production centre
3. Alternate Employment Opportunities	Vulnerability to Exploitative Terms Engagement
4. Access to Capital – credit, subsidies	Limited and available on usurious interest rates
5. Availability of Infrastructure (power, water, roads, storage etc)	Power & water supply constraints
B Demand Conditions	
6. Size of Local Market	Shrinking
7. Number of Buyers	Consolidation in some and new entrants in some
8. Transparent Quality/ Quantity Measurement	Opaque transactions, skewed against weavers
9. Growth of Domestic / Export Demand	Increasing in both segments
10. External Buyers	Limited presence
C Industry Conditions	
11. Number of firms	Many competing in many segments
12. Existence of Competition among Firms	Unfair practices, few dominant firms
13. Possibilities of Setting up New Firm	Entry easy in trade; not in production
14. Marketing Agencies	Wholesale and retail chains are growing
15. Reliable input/component/machine supply	Exist but not very reliable
D Institutional Conditions	
16. Presence of efficient Promotional Agencies	No end – to – end focus by agencies
17. Functioning Producer Organizations	Large number exist but few effective
18. Quality Institutions to impart skills	Largely through apprentice only
19. Access to necessary physical/legal resources	Restrictions on use of chemical dyes
20. Supporting / Favourable Policies	Not existing

Weavers are highly marginalized and their gains are limited due to piece rate wage system pegged close to near subsistence levels. Best of the times give them more work throughout the year and worst of times leave them dependent for survival. Low level of earnings locks them in poor working and living conditions.

Weavers of Rajouli established a cooperative society in 1949 and registered in 1951. Key features of the cooperative are as follows:

- Since beginning, cooperative introduced regular member savings to meet investment and core working capital requirements.
- 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 waste of materials.
- Cooperative found it lucrative to directly reach customers in five owns 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 staff members.

3.2 Challenges in Weaving Business Continuity

Weavers traditionally operated the looms from their own houses. Severe flood in October 2009 destroyed their houses and damaged looms beyond redemption. Rajouli village 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 out skirts 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 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. Preserving and promoting Gadwal saree weaving is considered desirable but in a manner that assures reasonable returns to weavers and under decent working conditions.

4. RESEARCH FRAMEWORK

Weavers in Mahabubnagar are challenged by poor working and living conditions due to non-remunerative returns to labour. Such conditions have been recognized in several countries and ILO is advocating a Decent Work Agenda promoting employment, social protection and fundamental principles and rights at work. Value Chain Development for Decent Work (Mathias and Tapera 2009) outlines this approach which is adapted for explaining the situation in this case. Such inhibiting conditions are often addressed through technology mediation. Especially e-business models for rural enterprises have evolved to support the value chains and unlock opportunities improve working and living conditions.

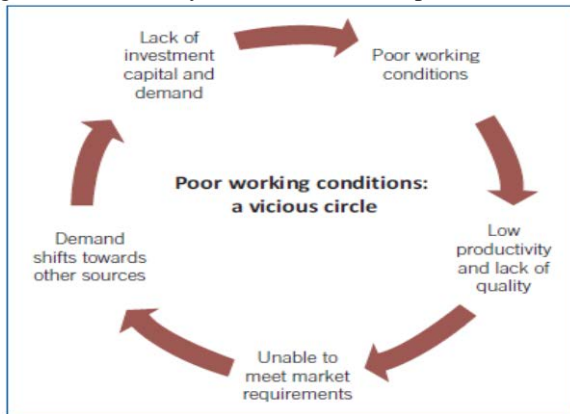
4.1 Deficits in Value Chain

Based on the understanding from the above, we can summarise the deficits in the value chain using the Value Chain Development for Decent Work Framework:

Social Dialogue: Factor conditions reveal dependence of weavers for raw materials as well as capital on Master weavers which creates scope for exploitative relations. Master weavers provide critical credit support for not only productive but also social and health expenditures apart from providing backward and forward market linkages. This excessive dependence made weavers accept – work orders close to often below subsistence wage rates.

Working Conditions: Poor working and living conditions in which weavers are living is a symptom of poverty affecting not only health but also their social esteem and economic status and recognition, and most importantly their commitment to work and loyalty to their buyers and customers. Decent work deficits lead to system inefficiency and lack of quality in products lowering ability to compete in markets.

Figure 2: Vicious Cycle (Mathias and Tapera 2009)



Poor working and living conditions reflect not only social but also become an economic factor affecting income and employment opportunities. Poor working conditions including inadequate lighting and unhealthy work environment affect productivity and quality. With low productivity and quality, they are unable to serve high value markets. Unmet demands, leaves customers to shift. This results in loss of income opportunities, insufficient investment in technology and better working conditions.

Value sharing: Weavers are hardly gaining from the value addition. Weavers share in the value remains close to and often less than subsistence wages through the mechanism of piece work wage rates and not equitable.

Gender equity: Women and children contribute with very little or no returns to their labour.

Costs distribution: Increasing material costs and dependence for capital squeeze the returns to labour of the weavers make them bear costs disproportionately and limit their gains due to very little bargaining power.

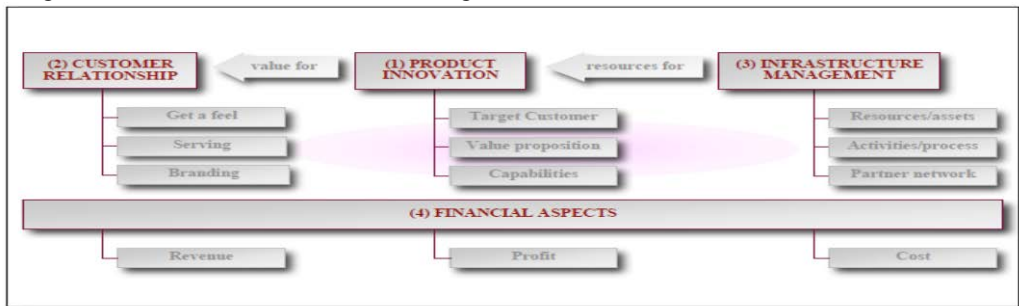
Lead firms: Firms providing market linkages are leading the value chain and these firms extend embedded business services in the backward and forward links.

4.2 E-business Framework

E-business model (Magali et al. 2002) is found to be more appropriate and useful in conceptualizing the weavers' business. Weavers, being usually, far removed from the relationship with customers are not able to 'get a feel of' their expectations to 'serve' demand with an appropriate 'product'. Due to this gap in

understanding about the target customer, weavers are not able to dovetail ‘capabilities’ to come up with a right kind of ‘value proposition’ affecting capability for product innovation. This in turn is adversely affecting their costs, revenue and profitability leading to impairment to invest in and manage infrastructure namely, resources/assets; activities/processes and partner networks.

Figure 3: E-business Framework (Magali et al. 2002)



We noted with delight, use of computer aided design cards in weaving. Weavers obtain designs and suitable cards punched which helps them set the looms for weaving in a quick manner.

Table 2: Promise of E-business solutions

Elements of Business Model	Critical Aspects	Present Situation	Promise of E-business Solutions
Customer Relationship	Get a Feel	Weaver often has no direct interface	Direct interface using ICT is possible
	Serve Expectations	No direct articulation of expectations	Customer can take part in design
	Establish Identity	No established brand or geographical indication	Product Traceability & GI possible
Product Innovation	Target Customer	Often unknown to weavers	Interaction possible
	Value Offer	Weaver has vague idea of what customer pays	Customer orientation improves
	Develop Capabilities	Innovation capabilities underdeveloped	Opportunities for Innovation increases
Infrastructure Management	Resources/Assets	Under investment	Improved margins help access to capital, market, technology
	Activities/Processes	Lack of improvement	
	Partner Networks	Under developed	
Financial Aspects	Revenue	Lost opportunities for revenue employment	Opportunities expand
	Costs	Economies of scale, scope and integration	Costs, Risks Reduce
	Profits	Insufficient improvement in working and living conditions	Better Working and Living Conditions

Weavers are able to keep pace with fast shifting trends of market with computer aided designs. This resulted in improving the efficiency, optimum utilization of resources and improved services for customers' satisfaction. Geographical Indication and traceability of products to artisans with specific skills 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 intermediaries and improve returns to weavers as well as more value for customers.

6. CONCLUSION

E-business facilitates engagements of customers in product innovation and builds relationships of trust. This leads to lean resource management and productive environment. Weaver cluster becomes prosperous and generates avenues for decent employment opportunities, improved working and living conditions. Analysing the situation of the case of weavers' cluster through these discussed frameworks indicate deficits in the value chain leading to erosion of sustainable livelihoods of weavers. Contemporary e-business oriented interventions have scope to reduce agency overheads, establish information symmetry, and improve customer orientation and productivity. Such interventions hold promise for more decent employment opportunities and continuous stream of benefits.

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