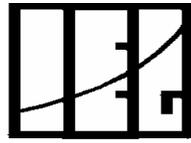


**Economic Empowerment of Farm Women through
Viable Entrepreneurial Trades**
(Edited version)

Nilabja Ghosh



सत्यमेव परमो धर्म

**Institute of Economic Growth
Delhi University North campus
Delhi – 110 007**

17 May 2010

Preface

This project not only addresses the contemporary and relevant issue of women's empowerment but far transcends it. Successful entrepreneurship of farmwomen can pave the way to increased income and employment in agricultural households and integrate large sections of Indian population, so long excluded, into the growth process. Given their poor status in economic life, promotion of entrepreneurship among of farmwomen is an important endeavor towards human development and human justice. Besides women's economic contribution to their households and their leadership in the emerging business scene will constitute a significant step towards a society characterized by gender equity.

The Agro-economic Centres and Units participating in this project have been the 'eyes and the ears' for this study, reporting a rich fund of information on the status, performance, constraints, potentials and above all the reality of entrepreneurship among women in agriculture. Each individual report is highly illuminative in its own right for presenting a vivid regional picture. I have tried to provide a common though not uniform framework for the procedure and in this report summarized the findings with a macro-view. Needless to say, the contribution of the participating members is central to this project.

Directors, Professors Kanchan Chopra and Bina Agarwal have been immensely supportive and encouraging to my maiden attempt in handling this coordinated project. The Ministry of Agriculture also helped me in the coordination at all stages and I thank Dr. R.C. Ray and Mr P.C. Bodh of the DES for their advice and experts Mrs. Tej Verma of ICAR, Ms Lakshmanan and Ms Saraswati of the NGRCA and Dr. Tripathi the Director, Extension Management in the Extension Management Unit in the Directorate of Extension for insightful discussions.

Among my colleagues in IEG I am indebted to Mrs. Shashi Kad for helpfully typing the entire manuscript and Mr. Sreedharan for happily supporting in the computer related work at all stages. Young Mr. Shailesh Kumar helped in detecting errors as far as possible and while finalizing the report assistance from Mr Gaurav Gupta and Mr Rajeshwor was crucial. Even outside the academic ambit my friends deserve acknowledgement. Mr. Sushil and my family enthusiastically helped me with the piles of manuscripts, reports and books and tolerated my lack of interest in most other things in life.

Nilabja Ghosh
Institute of Economic Growth
Delhi-110007
17 May 2010

Contents

Summary	i	Chapter 5. The Primary Survey: Coverage, Method and Profile	80
Details of Primary survey	iv		
Main finding and Policy Suggestions	vi	Chapter 6. Women as Entrepreneurs: Commercial Success	99
Programmes and Organizations	viii	Chapter 7. Factors of Success: Organization, Market intermediation and Training	113
Chapter 1. Introduction	1		
Chapter 2. Women as Human Resources in India.	18	Chapter 8. The entrepreneurs as Women: Beyond the economics	130
Chapter 3. India's Farm Women as entrepreneurs: A Secondary data based review.	43	Chapter 9. Concluding remarks	142
Chapter 4. Distress, Development and Intervention: Secondary data Based exploration of Women entrepreneurship.	57	Reference	a
		Participation	g
		Action Taken Report	h.

Economic Empowerment of Farm Women through Viable Entrepreneurial Trades

(Summary)

Transformation of the lives of the women who live and work in agriculture still remains an unfinished task in Indian agricultural development. Disempowerment of the women in farm households is an issue that spans inextricably across the household, the community and most importantly, the market. Much of the disadvantages that women suffer are linked with the lack of economic opportunities and choices. A number of different factors are responsible for the state of affair, such as the under-development of rural areas, social norms, lack of effective institutions, the characteristic features of agriculture as an occupation, and most notably, the failure of the public extension agencies in agriculture to treat women at par with men in agriculture.

The very recognition of the capability to contribute economically can potentially improve the women's status at home, leading to better self-confidence and a more meaningful partnership between the sexes. Economic power of women can also go a long way in eliminating unjust societal practices. In addition, economic opportunities for women can be a way to improve farm incomes. It is a most welcome step that the Government of India has, in the last one and a half decades or so, been intervening through a series of projects to transform the lives of farm women and promotion of entrepreneurship in local resource intensive agro-based activities is one promising and integral method. This study enquired about the status and features of enterprises among the farm women and examined the viability of select enterprises that are commonly promoted by public programmes. The study also asked if entrepreneurship could empower

women in a fuller sense. Both secondary and primary data was used for addressing the issues.

The data on farm households extracted from NSSO's 55th Round survey was analysed to study the status of women's entrepreneurship. The women in these households are found to be more participative in economic activities even compared to the average rural woman but they mostly work as family help with no visible income or as casual labourers who are known to face a harsh and discriminating market. They mostly engage with crop cultivation. Only less than 10% of the women are self employed in own enterprises (entrepreneurs) dealing in primary activities, processing food, craft work and bidi making. The enterprises are organised in an outdated manner. Spatially, the tendency for entrepreneurship among workers especially in primary activities is strong in the northern states but processing activities are more popular in the eastern states. The tendency for entrepreneurship is found to be positively correlated with several development indicators but the linkages are weak for processing suggestive of the role of distress in this case. However, analysis also suggested that entrepreneurship as an intervention can improve wages in the labour market by providing an alternative livelihood.

The nine primary surveys conducted for this study provide a broad vista of entrepreneurship as was promoted in recent times. The entrepreneurs came from different classes of households and possessed varying levels of education and there was a great deal of divergence in the profiles among the different regions. The women from the eastern states came from poorer households but they tended to have higher education than in the north. The analysis of the women's profiles suggests that targeting is inadequate and much remains to be done for drawing the poorer and marginalised women to the programme.

The enterprises in the samples are all found to be financially viable generating moderate amounts of profit even when the raw materials provided freely by the promoter is included in the cost. The annual income exceeds a threshold level of Rs 10,000 in all cases except the new and ecological group for which market valuation of the product may be gross underestimates. Clearly, the enterprises enjoyed significant cost advantages and all the enterprises are profitable.

In many cases the women were successfully organized in Groups working from common workplaces with common equipment. Family was the main source of labour though hiring was made when necessary and similarly, finance came mostly from family sources though borrowings from institutional and non-institutional sources supplemented the funds. Marketing was a major constraint, conducted mostly through middlemen and informal tie-ups. Formal contracts are also reported in a few cases. Direct selling was very popular and sometimes the women travelled to exhibitions at distant places. Training was given by ICAR and other sources but they were not popular in all cases. A regression analysis showed training to be a significant input to enterprise in all cases but food processing, finance to be a significant input with limited returns and time as an important input in food processing and primary activity. The women could contribute substantially to the household income through the enterprises and the men were reported to be encouraging and collaborative. There was a distinct and familiar pattern in the male contribution since their cooperation is sought in outdoor and skill intensive work but many of the women felt that entrepreneurship has helped to improve their status at home in community. A weak link with the marketing activities that usually entails negotiations and social interactions, however limited the gains in empowerment.

Details on Primary Survey

Agencies

The Agro-economic research (AER) Centres that undertook sample surveys in their assigned areas were as follows.

1. Agro Economic Research Centre of Punjab Agricultural Economics, Ludhiana-Punjab;
2. Agro-economic Research Centre for North-East India in Jorhat- Assam;
3. The Agro-Economic Research Centre of Sardar Patel University Gujarat- Rajasthan;
4. The Agro-economic Research Center of Himachal Pradesh University, Shimla;
5. The Agro-economic Research Center of Delhi- Haryana
6. The Agro-economic Research Center of Delhi- Uttarakhand
7. The Agro-economic Research Center of Bhagalpur-Bihar
8. The Agro-economic Research Center of Allahabad- Uttar Pradesh
9. The Agro-economic Research Center of Waltair- Andhra Pradesh

Regions

Thus the states covered selected (mostly two in number) districts in Punjab, Rajasthan, Uttarakhand, Himachal, Haryana, Uttar Pradesh, Bihar, Assam and Andhra Pradesh. Clearly the coverage includes a variety of geographical, social and economic features. Fertile, arid, hilly and sub-montaine, coastal, erosion prone, advanced and backward regions are all included in the coordinated surveys.

Survey method

The regional KVKs and the State Agricultural Universities helped in identifying the activities of women entrepreneurship common in the area along with the specific regions that appeared to be intense in such activities. Three to seven agro-based activities of common enterprise are selected for study in each region. Lists of trained and of non-trained entrepreneurs were drawn out with the advice of the KVKs and the participating NGOs to make up the frame. The women belonged to typical farm households though

land ownership was not treated as a binding condition. Random sampling methods were used for selecting the sample for each enterprise activity with total sample size preferably not of a size less than 100.

Activities of Enterprise

As far as possible the products under study would be based on raw materials that could be sourced from the surrounding nature and agriculture. While analyzing the results for the present purpose, in view of the large variety of activities covered, the enterprises were classified in four broad groups, namely Primary production (PP), Food processing (FP), New and eco-friendly products (NEC) and Crafts (CRF). The total sample size added up to 1186 covering a number of activities falling into one or the other of the above four enterprise groups.

MAIN FINDINGS AND POLICY SUGGESTIONS

Main findings

1. By and large, entrepreneurship among women has helped in generating income and gender empowerment. Potential of the initiative cannot be doubted.
2. Entrepreneurship among women is seen to be culturally accepted across households and regions without having to be distress induced.
3. There are regional differences in performance and in northern states Punjab, Haryana and Uttarakhand enterprises are relatively much more profitable. Nevertheless, the enterprises have contributed to household incomes even in the other regions.
4. The entrepreneurs do not belong generally to the poorest and most marginalized households. This is a sign of poor targeting for income generation but not necessarily for women empowerment.
5. Agriculture/primary enterprises and food processing enterprises appear more profitable but call for strengthening of marketing and finance. New /Eco-friendly enterprises suffer lack of demand and there may be justification for initial support and subsidy.
6. Substantial raw material and environmental advantages are noted for these agro-based enterprises.
7. Family members and men are reported to be cooperative towards the income earning activities.
8. Enterprises helped women's empowerment but made relatively poor contribution towards (1) women's leadership and community status and participation, (2) decision making power in family.
9. Marketing deserves promotion and since traders are important, there is a need to improve competition via improved transport, information flow and motivation.
10. Except in New/Eco-friendly activities, in which subsidies and grants are necessary, marketing support and promotion can be more valuable. Training is useful for enterprises, barring possibly food processing. Group based organization for entrepreneurship is found useful.

Policy suggestions

- In view of the positive economic and non-economic benefits indicated in the studies intervention through promotion of entrepreneurship should be continued with emphasis.

- Targeting efficiency needs to be improved so that larger sections of the poor and the marginalized are drawn into the beneficiary pool. As it happens, targeting and inequity appears to be a weakness of the route.
- Greater attention is deserved by the Eastern states
- Training needs to be more participative so that women with inherent or traditionally acquired skill can share their knowledge. Training from external sources is not always desired. For new enterprises training is very important.
- Effort may be made to involve women more in marketing and outdoor activities.
- Group production offers a promising way to overcome the weaknesses faced by individual women.
- Banks and private sector may be encouraged to complement the initiative which has considerable commercial potential.

Programmes and Organisations

SEWA: A trade union registered in 1972 which is meant to organize poor self-employed women workers so that women obtain work security, income security, food security and social security (health care, child care and shelter). It is a conference of three movements: labour movement, cooperative movement and women's movement.

ATMA: Agricultural Technology Management Agency is a society of key stake holders involved in agricultural activities for sustainable agricultural development. It is a focal point for integrating Research and Extension activities and decentralizing day to day management of public agricultural technology system.

KVK: Krishi Vigyan Kendra was established by a sanction of the Indian Council of Agricultural Research in 1992 for implementation of programmes following a Benchmark survey to understand existing practices of farmers and make socio-economic appraisals. It undertakes off-campus trainings and also on-campus trainings as well as demonstration of environment friendly packages, organizes short term and long term vocational training courses in agriculture and allied enterprises to farmers, women, rural youth with an emphasis on 'learning by doing'.

AICRP: All India Coordinated Research project in agriculture is a research programme in mission mode to achieve success in crops in the way the agrarian programme in India had demonstrated in wheat.

Women in Agriculture: Under this umbrella project were initiated on nearly all aspects of the role of women in agriculture. Research efforts are made to relieve farm women of the drudgery by providing time and labour saving tools. Vocational trainings are also conducted to impart skill to undertake different avocations.

SHG: Self help group is group of about 15 people hailing from homogeneous social or economic class united for addressing common problems. The members meet regularly, pool small sums of money from their savings, lend within the group, keep records and approach banks for higher loans. About 80% of SHGs have only women members.

NATP: National Agricultural Technology Project was a World Bank funded project for bringing innovation in extension given to Indian agriculture

1. Introduction

The failure of the much hallowed green revolution of India in touching the lives of the women in the participating households has been rather underemphasized in the literature. Over seventy percent of India's population lives in rural areas and farmwomen constitute more than forty percent of India's women population. While, thanks to the growing scholarship on the issues of gender, problems that women at large face in society are understood and addressed much better now than a few decades earlier, objective evaluations made by agricultural economists and sociologists today increasingly suggest that the issues and concerns related to the farm women may be substantially more complex. The distinctiveness arises from a number of different factors, such as the under-development of rural areas, lack of effective institutions, the characteristic features of agriculture as an occupation, data protocols of statistical agencies, apathy of public extension agencies and the socio-cultural history of individual communities. That the transformation of the lives of the women who live and work in agriculture still remains an unfinished task leaves no room for debate.

The concept of empowerment has found a place in the approach papers of most development agencies at the national and international levels. Education, health and access to income and resources are identified as possible routes to women's empowerment. Viable avenues of earning direct incomes through useful work in keeping with the market demands could be a way to change the biased power equations in the rural society towards the female members hailing from farm households, to greater equity and to human capital formation. Developing suitable livelihood opportunities for the rural women based on their existent strengths thus deserves attention. This study focuses on entrepreneurship as a means of earning income. It aims to study the status of entrepreneurship among women in agricultural households in India, to assess the viability of the enterprises that are generally promoted by the agricultural extension system in present times, and to explore the possible implications for women's empowerment. Surveys conducted in nine states Punjab, Haryana, Rajasthan, Uttarakhand, Himachal Pradesh, Uttar Pradesh, Bihar, Andhra Pradesh and Assam have yielded primary data on the subject.

1.2. Organization of Study

This report deals with the subject of gender empowerment of a particular section of people with its own special characters and focuses on a particular route. The merit of this route i.e, entrepreneurship is assessed through the empirical lens. Thus the subject is broad as well as narrow, broad because overall empowerment of women is the key issue in the discourse but the concern in this work centres on a specific target group and on a specific option without any attempt at comparison.

The study is organized in the following way. In Chapter 1 a theoretical background to the subject is provided touching on the conceptualisation of empowerment and gender, the context of participation and empowerment in market, development of the subject of gender in literature and the significance of entrepreneurship as an employment route. The objective is to set up the framework and the motivation for the present study. Chapter 2 presents the case of gender issues in India with a particular reference to farm women who are the subject of the study and the policy background. In chapter 3 we analyse secondary data drawn from NSSO 55th round survey to examine the livelihoods and enterprises of farmwomen taking a view of their individual status and vocational advantages. We specify both cultivator and agricultural labour as farm households and define farmwomen as the women belonging to such households. In Chapter 4 we continue the analysis initiated in the preceding one to test certain perceptions about women's entrepreneurship and government interventions in relation to distress and development. The next three chapters work with the primary data. Chapter 5 initiates the empirical study by presenting the objectives, coverage and methods used as also providing a glimpse of the profile of the sampled units. In Chapters 6 and 7 we compile the results of the primary surveys and make comparative statements of the profitability of enterprise, considering various measures. The cost advantages emanating from the rural ambience and the natural environment are emphasized. The discussions deal with the organizational and institutional issues involved as well as training for skill development to determine their relative roles through analytical and quantitative evaluation of the results. In Chapter 8 we go to the broader issue of empowerment

stepping beyond immediate economic effects and in Chapter 9 we end with a few concluding remarks.

1.3. The concept of Empowerment

The term empowerment used in the title of the study has become a 'buzz word' today but literature has not really provided a clear definition of the word. Indeed, empowerment is a construct in diverse disciplines and to assert a single definition would be formulaic and contradictory to the purpose (Zimmerman, 1984). Nevertheless, a broad understanding of the concept is desirable for evaluation of programmes. That empowerment is a multi-dimensional process that helps people gain control over their own-lives is largely accepted.

Though empowerment is related to power which is often understood as the ability to make other do what one likes regardless of their own wishes (Weber, 1946), contemporary perspectives hold that power can be shared and can also expand. Thus, empowerment challenges the basic assumption about power, leading to an integrative concept of power such that gaining power would not diminish the powers of others. It is not a one time change but a journey in which individuals become partners in solving complex problems. Power itself is a relational concept. Empowerment is also viewed as a social process in which both individual changes and the interconnectedness among individuals are crucial links (Wilson, 1996).

Empowerment is generally associated with the term marginalization. Marginalized refers to covert or overt trends in society in which those perceived to be lacking in desirable traits or deviating from group norms are excluded by wider society. Lacking self sufficiency, they tend to become dependent and often call for welfare actions and lose the pride of accomplishments that those who have the opportunities develop. Empowerment thus also means creation of skill and capability among the marginalized so as to eliminate the forced dependency relation, minimize any future need for support, expand choices and create a sense of achievement and competence among the agents. In the longer run it means mainstreaming of the excluded groups or inclusiveness. Sociologically, empowerment corrects the discrimination against certain groups based on caste, class, occupation and gender and their exclusion from

decision making processes. The issue of exclusion and hence also empowerment arise in a number of spheres, within the household, in politics and community, in workplace and with other market players and even at the individual level (internalized).

Empowerment is less easily operationalized than it is used as an objective. Indeed empowerment has been treated either subjectively or certain quantitative and qualitative indicators intuitively linked to the concept are employed to assess empowerment success but the task is still far from simple since hardly any accepted and objective method has been constructed towards measurement of empowerment. Economic empowerment is only a possible route to overall empowerment. Income is a possible way to gain recognition and self-satisfaction but it may not be an assurance for empowerment in a fuller sense. To what extent the earning of income translates itself to aspects such as greater freedom in household, more say in community affairs, improved team work and leadership and challenge to unjustified gender orders and stereo-typing would depend on the nature of the economic activity done and the acceptability and environmental support for such work. While in principle income earning opportunities created as intervention would confer a bargaining power in traditional markets, much would depend on the informational empowerment of the agents and the negotiating and collective power acquired in the process by agents to demand their dues. In fact, an economic empowerment programme can have powerful extra-economic empowerment impacts that can emerge regardless of and parallel to the incomes generated so long as the promotional programme can be suitably designed.

1.4. Participation and empowerment of the women in agriculture

Despite the deficiencies of the statistical systems in the country in capturing its full extent, it is widely acknowledged that economic participation of the women in farm households in particular and the rural economy in general is considerable. Nevertheless, the empowerment of rural women remains to be a daunting challenge for policy makers in India. Left to itself the rural labour market does little to translate

this economic participation into a position of strength. Women's empowerment¹ as conceived in various discourses is about changing the equations of power, both social and economic. Thus for the farm women, the power can easily be envisioned to move from a historically male-focused structure towards a more gender balanced one, and economically from the more landed and affluent to the poorer and vulnerable.

A typical picture of disempowerment at the household level of women in traditional societies shows them to be partially or wholly divorced from an economic life, having little or no access to money and no power to spend on items of their choice, not to participate in decisions in households for want of competency and having no voice against injustice. All this in turn leads to other social practices and ills that go against the female gender. Much of these disadvantages are linked with the lack of economic opportunities and choices and economic empowerment to integrate them with income earning processes appears to be an answer. The very recognition of the capability to contribute economically can potentially improve the women's status at home, leading to better self-confidence and a more meaningful partnership between the sexes. Economic power of women can also go a long way in eliminating unjust societal practices. Moreover, women's economic empowerment is found to hold significant welfare potentials for children in terms of nutrition, education and health care. The same for women belonging to poor households helps them improve household incomes and contribute significantly to the household empowerment.

The use of the term 'inclusive' growth is now a qualifying description of the development objectives of a country. The economics at the household and individual level make up the economics at the macro level. Meaningful participation of under-

¹Empowerment is now commonly incorporated in most policy documents including the UNDP's millennium development goals. An apposite description given runs as follows: 'it attempts to reverse a whole range of attitudes in society to enhance the ability of the disadvantaged or powerless to challenge and change in their favour existing power relationships that place them in subordinate position in economy, society and politics' (Agarwal, 1994). This involves acquisition of capability basically acting in three levels namely, individual, collective and agency to question and disturb existing unfair power distribution and the ability to negotiate communicate and gather support. Empowerment has been viewed as gender balanced process of 'undoing internalized opposition' that also 'empower men as well in material and psychological terms as equal partners' (Raju, 2005) .

privileged women in the market can ultimately draw them into being active contributors to the national economy. It is likely that by this process the women will gain greater confidence and participate in decision making at the community level and this dividend in terms of human agency will pave the way to an asset distribution and a political system that is more balanced than ever witnessed before.

Predominantly the women in India's agriculture work as unpaid family-farm help or as casual wage labour. As family help, their contribution is never evaluated in the market nor does the society or the women themselves make a sharp distinction between economic and household work. To what extent the lack of visible earning and the indeterminacy of their economic contribution impinge on the women's position is not clear, but a correspondence between society imposed economic dependence and the poor status and even injustice meted out to women has been strongly supported by empirical evidence as well as rational arguments. As casual labourers in others' farms the women do receive compensations though often in kind, but the bargaining strength of the women in terms of security of tenure, working condition and wage rates is severely undermined by a range of factor which include technological and economic changes, rigidities of societal perceptions, lack of alternative opportunities and the society imposed educational shortfalls. The appallingly gender insensitive and unregulated character of the rural labour market is a major determinant of the gender order in market. There is however little choice facing the women as participants. Thus economic empowerment can be meaningful for both the categories of farm workers despite the subtle distinction from the typical case.

Part of the reason why the women in farm households remain unappreciated despite their role is perceptible, arising from the lack of visible monetary or cash compensations in many cases. Their own misplaced and acquired notion of their contribution further prevents them from seeking their dues. The other part of the problem lies in the nature of the market reflecting on the type of work they dominantly do and their poor bargaining power in the market due to many socio-economic forces.

Women's participation in the economy has been largely confined in nature. Agriculture in the form of conventional crop cultivation has an overwhelming place in their occupation. Evidence has shown that the farm jobs that are commonly assigned to women in agriculture are typically exhausting and tedious in nature. They have been relatively untouched by modern technology. Formal education and skill are of limited use for such jobs which might also explain the lack of motivation of schooling the girl children. In sum, the jobs done by the women offer little opportunity of development and career aspiration and have more to do with the urgency of subsistence needs. Lack of viable choices are a major source of disempowerment for the labouring women as well as for the women working as family help.

At the household level, the issue of women's empowerment is more complicated than poverty alleviation because of a neutral or even perverse relation observed in its association with affluence. Evidences have shown that Indian women in affluent houses or progressive areas may not be suffering any less subjugation than those in poorer households in which both men and women earn incomes. Yet, women's predicament in market and in the household domain is not necessarily independent because rural women's powerlessness arising both at home and in the market can reinforce one another. Lack of opportunity, distressful work profiles and poor bargaining power in market pushes women to a home bound and dependent and even vulnerable life (where marriage becomes the main and only support-base) creating an aversion for wage labour among the women and the society while it is mostly economic distress at the household level that pushes them into the market for manual jobs. Gender induced immobility as compared to men further undermine their positions in the local market and reduces their choices. Thus, for the women in agriculture, empowerment is an issue that has both intra-household and intra-market dimensions which have their feed back effects. Empowerment is an objective that can hardly be left at the mercy of economic growth. Rather, policy attention and the task of monitoring of the status only become more important in the presence of growth.

It also follows that only active interventions can reverse the predicaments of the women in households dependent on agriculture. Economic programmes for the creation of capability and viable opportunities rather than passive reception of welfare doles can help the rural women to emerge as more aware, participative, vocal and

aspiring individuals with dignity and as agents of positive social and economic change. However, whether the implementation of economic development programmes automatically improves the level of empowerment of women in all its manifestations and how effective are the programmes implemented by the government as compared to other organizations have been questioned (Basu and Basu, 2007).

1.5. Gender in Literature

Gender is intimately linked to the division of labour in household that leaves its imprint in the market. For this reason the question of gender arises more intensely at the intra-household level though the extra-household ramifications call for attention as well. Since the present study obviously has its focus on women in particular, a brief review of the important branch of literature that has served to propel this thrust is warranted. The perpetuation of gender discrimination in society through centuries, to which the women themselves have contributed as an endogenous process, can be linked to the deep relation between tradition and gender. In the last many decades however, theorization, technological development, ideology, activism and international dialogues interacted with one another to gradually transform gender regimes in various cultures.

The history of mankind with a gender perspective is a relatively new subject. Standard history books throw little light if any on the place of women in the different societies. Early religious practices involving the worship of female goddess in many parts of the World dating 1550-2000 BC provide a gender perspective of what might have existed in ancient world (Robert, 1995). It is believed that it was women who starting from being food gatherers were the likely initiators of domestication of animals and crops and of cultivation that led to a settled life 12500 years ago. Archaeological evidences however are too scarce to corroborate this hypothesis.

A feministic review exposes a typically 'andro-centric' approach in the literature available on social change, which is not surprising because of the domineering presence, even in western societies, of male historians, anthropologists, philosophers and sociologists (Billson and Fluehr-lobban, 2005) obviously because females were

implicitly considered incapable of higher learning ². A singular exception was Engels(1884) who argued in his influential work *The Origin of the Family, private property and the State* that in propertied classes women depended on men but gender relation was egalitarian among the proletariats where they joined the labour force. While his argument proved to be an immense inspiration towards women's employment it did not escape critics' censures, one notable argument being that it bypasses the possible impact of conferring property rights to women themselves (Agarwal, 1994).

The feminist³ movement in the 19th and 20th centuries played a significant role in facilitating women's participation in economic life. Some recent theses have even argued that the gendered identity is more a social construct⁴ than a biological constraint. Gender roles in any society are thought to be much more culture specific than universal⁵, where the traditions characterizing any culture need not even have a rational origin and may in fact also change with time⁶. Members of any given community are found to think that their particular division of labour between sexes is the 'natural' one because it has undergone little or no change for generations even though other communities may have completely different ways. In fact in African agriculture and in many tribal systems, the task of food production is left to women. Thus, Boserup (1970) attributes to the emergence of the 'plough culture' the 'veil' of female members who became exempted from farm work or became confined to select activities while men and hired labour continued with farm work. Boserup also marks the linkages of social oppressions such as the dowry with changing division of labour. In any case, at any point of time this cultural relativism makes any value

² Male bias is detected over the entire coverage of western thinkers Plato, Locke, Rousseau, Hume, Hegel and Nietzsche. Freud had explicit theories on women but even his views have been criticized by feminists as discouraging. Marxist analyses also do not escape the same bias or possibly they subsume gender within class (Guettel, 1974).

³ Feminism, a word coined in 19th century, denotes a diverse collection of social theories, political movements and moral philosophies concerning women and gender equality.

⁴ Women's natural ability to give birth to offspring is what sets her apart from man and this does not necessitate a life long differentiation. Attribution of 'affection and care' exclusively to women, the 'private-public' demarcation of gender were being considered as 'cultural conditioning' in this important emerging school of thought (Verma 1995, Firestone, 1970, Nussbaum, 1995).

⁵ Culture is defined (Murdoch, 1961) as a system of collective habits that are learned collectively and either shared throughout society or limited to certain classes or groups within society.

⁶ Such changes may be triggered in the face of crises like wars and famines that generate contingencies, innovations that selectively eliminate old habits for more rewarding ones and by cross-cultural influences such as by conquest or as by globalization in the recent history.

judgment on women's concerns and any general framework difficult, appearing as an uninvited imposition of one's culture on another.

Economic theory too missed the gender issue. The household always had a central place within the utilitarian framework of micro-economic analysis in consumer choice and welfare economics. The treatment of household as a unit or a near black box prevented the overt appearance of gender as an issue which essentially arises within the household level. The method unwarrantedly assumes either the congruence of interests among members or an optimal intra-family distribution through the presence of an altruistic head (Samuelson (1956), Becker (1981)). Recognition that these were strong assumptions, paved the way to the bargaining models of 1980s (Manser and Brown, (1980), McElroy and Horney (1981)). The latter were based on the game theoretic approach pioneered by Nash (Nash, 1950)) and fall into the 'cooperative conflicts' class of models that can apply to marriage and intra-house hold resource allocation⁷. Since due to the accepted division of roles in household and dominance of male authority, women's presence in the market was thin very little attention was paid towards the gender contentions that may arise subtly in market.

The need to go beyond economic dimensions has been appreciated by welfare economists for some time. Sen (2006) after an exhaustive and incisive review of the application of various approaches to gender in economics roots his theorization on Aristotle's 'functions of man' doctrine⁸. He distinguishes between functioning and capabilities but did not specify a list of capabilities. The need for a list was widely appreciated and Martha Nussbaum (1995) later suggested a list of central functional capabilities based on an essentialist approach. Other important contributions towards defining a life worth for human dignity, that transcended income or material dimension, include Dasgupta (2001) and Alkire and Black (1997). The UNDP's current practice of reporting a single and simple index known as the human development index or the HDI, which goes beyond the economic performance of a nation and in effect shifts the emphasis from the economy to the person was inspired

⁷ For more information see Sen's lucid essay *Gender and Cooperative Conflicts* (Sen, 2006)

⁸ Sen's review spans over a broad vista of thoughts and philosophies covering utilitarianism of Bentham-Mill class, the Rawlsian (Rawls (1971)) ideas of 'Justice as Fairness' (Pindyck and Rubinfeld, 2001) and the philosophies of Smith and Kant.

by these developments. Since the subject of gender empowerment can be placed in context of all round human welfare, any attempt at assessment cannot remain confined by economic measures. A parallel index known as the gender gap index quantifies the gap measuring the extent to which women have achieved equality with men in critical areas namely economic participation, economic opportunity, political empowerment, educational attainment and health and well being.

1.6. Entrepreneurship and human resource development

The economic and social empowerment of women in farm families is a subject that was embedded in the task of transforming a traditional agriculture that was inspired in the 1960s by the works of Schultz (1964). In the 1970s Myrdal (1976) wrote on investment in human resources as a factor for growth and in the 1980s Dandekar (1982), in a seminal contribution to literature, reflected on the possibility of integrating women in economic development and the importance of men's cooperation to make this happen. Sen's (2006, 2003) thoughts on capability and gender provide a solid underpinning for most works on women's place as human resources.

The subject of women's employment in agriculture is a relatively well-researched area in India. The work profile of the female farm workers and their place in the market as suggested in the various studies provide enough rationale to look deeply into the prospects of developing alternative but related sources of income as well as creating other market relevant skills among them. Entrepreneurship, in this milieu, is a possible route to creating human capital as well as delivering human empowerment. While directly, this self-employment route is a way of earning income through industry and enterprise, indirectly too there could be important economic benefits for women in the rural economy. The possibility of earning through enterprise appears as an alternative livelihood opportunity for the women and is likely to help improve their bargaining power in the labour market. In addition, entrepreneurship also has several nice properties such as the independence of the self-employed actors to design their

own work schedule in tune with the gender commitments⁹, the possible cooperation between the sexes leading to closer partnership and the chances of facing market challenges through negotiation and adaptations leading to awareness and increased readiness to take up community leadership roles. Entrepreneurship in the form of value addition services in agriculture could be answer to the rural employment problem at a time when farming as an occupation is facing a growing disenchantment.

However, it is important not to confuse enterprise¹⁰ as a substitute to regular or casual employment, nor to underestimate the challenges of entrepreneurship such as risk, uncertainty and competition. While relieving the entrepreneur from the strictures and controls of the employer, an enterprise can impose other demands. Above all, piercing competition can come from the organized sector. While natural and environmental advantages are generally the asset of rural enterprises along with indigenous skills and flexible norms, the disadvantages are manifold. A few of them can be enumerated as follows.

- (1) Absence of adequate institutional capital and investments on fixed capital flowing into the rural sector. Working capital have to be met largely through family resources or informal borrowing.
- (2) The returns being uncertain (probabilistic), financial risk is considerable. There are very few affordable insurance products available and often the risk taking ability of the operators who are typically poor, is meagre.
- (3) Developing product in keeping with market demand, standardization of quality and use of the most appropriate technology may not be easy in the unorganized ambience under consideration.
- (4) Efficient product marketing is crucial for success. Bigger entities often have specialized wings or even seek specialized services of other firms to

⁹ Implementing and enforcing labour laws as in the organized sector could be a Herculean task for any government in a large country.

¹⁰ An entrepreneur is a 'person who organizes and operates a business or businesses, taking on greater than normal financial risks in order to do so' is the definition given in Oxford dictionary. Further, Oxford American dictionary describes enterprise as an undertaking that is 'difficult' and also defines an entrepreneur as a person who undertakes a 'commercial risk for profit'.

reach the customers and create necessary linkages and even create the market for new products.

Farmwomen may not be expected to possess all this expertise beyond a point and this is an area in which training, information and public support may be crucial inputs.

Literature addressing the issue of women's enterprises is sparse barring specific sections devoted to the women's component in the works on development or labour market often in a historical context. Interludes of success¹¹ in craftsmanship in an otherwise unremarkable history of rural entrepreneurship in India have been documented (Myrdal, 1976). The decline of rural artisans that went with the growing duality between rural and urban sectors in independent India despite government efforts to promote small and tiny industries, the integrations of rural entrepreneurship with poverty alleviation programmes at a micro level and the insipid performance of the flagship programme Integrated Rural Development Programme (IRDP) are the records of achievement in post-independent India on this front. A recent book specifically on the subject of women's enterprise by Rathakrishna (*) and the in-house research papers occasionally brought out by NABARD bring out a larger picture of emerging India. NABARD is a pioneer in conceptualising and implementing the self-help group bank linkage programme (SBLP) and micro-finance for economic empowerment of women (Badatya, Wadavi and Ananthi 2006).

1.7. Key issues and findings

Economic empowerment of women in agriculture is a broad area that touches on both realms of women's existence i.e., in the market and in the household where the farm too forms an extension of the household. India has been traditionally and historically an agricultural country in which the population that is employed in farming and their livelihood concerns engaged the attentions of the policy maker. Although a special

¹¹ Training of apprentices was traditionally organized in guilds or similar bodies that were usually specific social groups. The success however fluctuated with time and patronage the products received and general prosperity of the nation.

focus on the women among the workers in agriculture, and especially those workers whose contribution was subtle and unrecognized was lacking in the plans, the severity of the conditions faced by these people was central in most discourses in development studies. Thus problems like underemployment, poverty and the adverse terms of trade had found their place in text books, research papers and policy documents. With the increasing recognition of the special significance of the gender issue, and the consequent improvement of data coverage different dimensions of work participation observed among the women workers gradually drew attention. Though studies based on primary data especially those contributing to a Government of India sponsored project named 'Women in agriculture' yielded a rich picture in this respect, an integrated view of the country as a whole amenable to regional comparison was on the whole missing.

Secondary data on the rural sector however is collected in a scientifically rigorous manner by an official source but studies based on this data concentrated on the rural sector that subsumed and often concealed the finer aspects of the people from agricultural households in particular. Also, though the subject of rural labour has by far been a most intensely investigated area and the non-farm employment of rural people also received its share of attention in recent times, a specific consideration of entrepreneurship of rural women has largely eluded attention. This study attempts to fill up this gap by considering the farm households's socio-economic attributes in a relative perspective vis a vis the other rural households and by specifically identifying the women of the farm households and the entrepreneurs among them to study the various aspects of interest. In fact the study observes the lag of these households that draw sustenance from land even over others in the same milieu, a greater engagement of farm women in economic life and in agriculture as casual labour and the backwardness of their enterprises wherever entrepreneurship is undertaken especially those that involve processing or manufacturing rather than cultivation.

The poor bargaining power of the women in the labour market has been attributed sometimes to discrimination in an unequal society. The gender disparity in wages is found to be marked in the country and in all the states but this study also proposes that such disparity could be an outcome of demand and supply factors that could be corrected by conscious intervention. Both the administered wage in public works and

the incidence of entrepreneurship are seen to have positive effects on women's wage earnings. Another positive feature of entrepreneurship is that it does not appear to fall prey to the aversion for participation shown by women in affluent households and regions. A third feature on entrepreneurship observed from analyzing the secondary data is a spatial dimension to the process and the correlation of its incidence with various development indicators and the apparent association of the processing enterprises with distress.

The secondary data however is too aggregative to bring out the finer elements necessary for understanding the issue and for policy explorations. The coding of the industries given in the data only helps to identify the groups rather than the individual characters of the activities and their products. It throws little light if any on the practical aspects of entrepreneurship like marketing and organization and says nearly nothing on the empowerment implications. Worse, even the economic result cannot be read from this data. The monthly per capita expenditure of the household reported in lieu of income gives no idea of the returns earned specifically by the women from the enterprises.

The survey results presented in this work seeks to fill up the information gap with regard to the issues of the women's enterprises and show the areas of strength and factors of potential. However, the results admittedly suffer from the usual bias afflicting relatively small samples although the individual reports that come as inputs to this work are micro-studies providing rich information by their own virtues. Further, the sample surveys in various regions in India are undertaken by different independent agencies with their respective judgments and in obviously dissimilar conditions and despite a common coordination and the best attempt towards uniformity the cross-region comparisons can still be taken as indicative at best. The enterprises studied are new and mostly initiated by NATP and are generally based on inputs sourced from local environment or markets. An assessment of the profiles of the entrepreneurs reveals mostly a middle level to reasonably privileged milieu. Exploration of the economic aspects suggest that the enterprises have powerful natural advantages, are moderately viable at the current initial stage and constrained by varying factor such as finance, time and demand. Training as provided by the agencies is useful though not necessarily essential for profitability, operation in

Groups is a promising organization and marketing is an area of weakness. Beyond the economic aspects, entrepreneurship is subjected to a broader view over its empowerment effects. While earning of visible income can conceivably generate recognition in family and society as capable members as also lead to a self-esteem in being able to contribute patently to family welfare, the interactions in society and exposure to market negotiation are likely to deliver returns in terms of confidence, awareness and leadership skills that possibly mean much more than higher economic returns. The investigations reveal important gains in terms of economic contribution leading to empowerment in family and society though no radical break has occurred in respect of gender roles.

2. Women as Human Resources in India

This Chapter is aimed at providing a comprehensive background to the issue of rural women's employment in India. A historical sketch, an account of the current concerns and perspectives on the place of women as human resources of the country are followed by a glimpse of the transitions in data protocol and the public policy that accompanied the recognition of the importance of the subject.

2.2. A socio-cultural background

Indian history does not really yield a consistent picture of gender relations that existed in the culture. While the earliest culture in India, the Indus Valley civilization leaves no strong indication of gender disparity and the evidences from early Vedic age certainly suggest the existence of some degree of balance as also attainments in female scholarship, the literature of the subsequent periods including the epics clearly glorified women's self-negation and unquestioning surrender to men (Verma, 1995) in all spheres of life. The economic domain was not excluded. The appearance of the law codes *Smritis* and *Samhitas* and the emergence of the caste system saw a sustained era of social deterioration and also the economic and social subjugation of women. Early marriage, segregation, denial of education, burning of women (sati) and the rigors of widowhood were some of the afflictions the Indian women suffered through centuries. The society gave no legal protection to their rights and entitlements, apparently glorified their self negation and despised any show of independence. While all this relates to the Hindu community, those belonging to the other dominant religion Islam also did no better. The plight was alleviated to an extent by the painstaking efforts of reformers and the laws that were enacted by the pre and post independence governments.

The lack of horizontal uniformity in the treatment received by women is another feature of the country's gender order. Cross-sectional disparities between northern and southern

regions of India and across household of varying economic and social classes are noteworthy. History, economics and family lineages constituted conventions that tended to keep women tied to home and denied of choices in the name of honour in northern society regardless of the relative affluences. Despite the changes taking place, modern society is yet to shake off those rigidities completely. Restrictions on women are found to be rigid among higher caste and higher class households and considerable prestige is associated with the practice of keeping women out of economic life. Economic dependence is instrumental in depriving women to make their own decisions in life. Although greater gender equity is observed in poorer and lower caste families in which both men and women participate for living, the desire to emulate the higher classes when household conditions improve is a sign that even these people are vulnerable. Unfortunately also, norms are not easily reversed even when the family falls into bad times and the women's participation in the workforce is discouraged even if their children starve (Chen, 1995).

All this gives rise to an apprehension that economic growth is no solution and in fact can further push woman to her traditional place in home. However, there is no strong reason to believe that the roles are not irreversible with the onslaught of economic and social stimuli. Globalization, economic opportunity, education, technology and legal changes are some of the measures that can profoundly influence the gender order.

2.3. Gender disparity in present day India

Duality and contrasts have been and continue to be a part of the Indian milieu even today. Several concerns bear testimony to this persisting inequality. The sex ratio of the population is probably the most glaring instance. India is one of the few countries that are marked by a 'missing' women' syndrome¹. Table 2.1 traces a declining trend of the sex ratio in the under-six years age group. The bias possibly reflects the unequal distribution of health care and nutrition among men and women, high female infant

¹ Amartya Sen (2003) considered sub-Saharan Africa's sex ratio as a yard-stick to estimate an absence of 45 million women who should have been there. See also Klasen and Wink, 2006.

mortality and worse, the popularity of the practice of female foeticide in many pockets. The tendency to discriminate against the female sex, evident in affluent areas particularly in the northern India, may have much to do with the deep underlying problems of women's existence and their economic disadvantages. The evolution of many social ills like dowry can be directly associated with the transformation of economic roles of women (Boserup, 1970).

Table 2.1: Sex ratio from Census data					
Year	1961	1971	1981	1991	2001
All ages	941	930	934	927	933
0-6 Years	976	964	962	945	927
Note: Sex ratio is number of females per 1000 males. Source: Census based data taken from Bose, 1996 (India's Basic Demographic Statistics, IBR Publishing Co.					

Another societal disparity, characterizing both the rich and the poor alike relates to property rights, in which the customs ordain that properties especially land, the main source of sustenance and security in rural India, pass down to male heirs as a regular course. This system makes females dependent on spouses or other male relatives. In case of death of spouse or desertion the women are often deprived of any means of sustenance. Distribution of land titles in favour of women has been proposed as part of women's empowerment (Agarwal, 1994, Government of India 1982). While there are apprehensions that re-orientation of land rights may encourage men to withdraw from their traditional role of the 'food provider' and add burden on women's household responsibility (Rao, 2005), agriculture is itself now giving its way to many other emerging opportunities. Land may not remain to be the chief source of economic power but access to education, skill and productive capital can prove to be a more viable measure for improving the position of women.

Gender disparity is also most manifest in education. Historically, while both girls and boys in ancient India were said to be entitled to fourteen years of education, this privilege was withdrawn in respect of girls in the later Vedic age (Mathur, 1973) and since then centuries had passed during which time the society felt no need to educate its

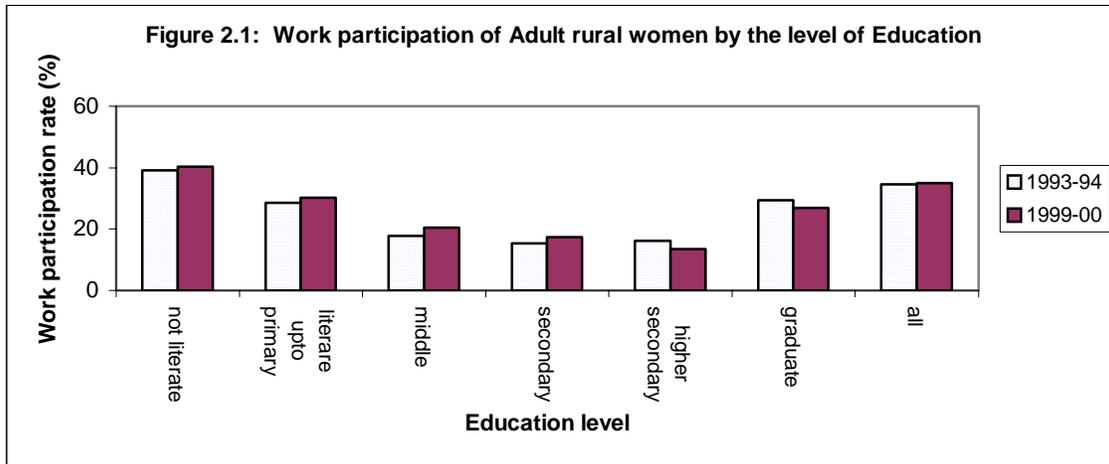
women. Despite the British government’s feeble efforts (dispatch 1854) and the Indian reformers’ bold attempts, independent India saw women’s literacy rate at a paltry level of 9% in 1947. While the government emphasized women’s education from the beginning the progress was very tardy. It was the National Education Policy of 1986 that provided landmark initiatives and projected a growth path for girls’ school education in the 1990s². Female education provided it is ably designed to include both awareness and useful skills in the curricula, in turn could be a stepping stone to women’s participation, acquisition of bargaining power and growth in economic life.

Table 2.2: Distribution of female (principal status) workers by education level		
	Female	Person
Not literate	75.3	40.0
Literate up to Primary	15.1	27.4
Middle	5.7	16.1
Secondary	2.4	9.2
Higher Secondary	0.7	4.1
Graduate and above	0.7	3.2
Source: NSSO, 2001 (Employment and Unemployment Situation in India 1999-2000)		

Table 2.2 based on NSSO data collected in 1999-00 shows that more than 75% of the principal status female workers in rural India are not literate and less than 1% are graduates. Interestingly, the relation between rural women’s education and employment is not unidirectional as seen in Figure 2.1. Work participation rate (WPR) is high at 40% for women who are not literate but it comes down with increasing education at school level as women avoid the status that marks the typical rural female workers. WPR again reaches a high of 27% with higher education. School level education does not offer any opportunity and graduation is found to be a threshold for better opportunities. Surprisingly, between 1993-94 and 1999-00 WPR has increased for women with lower

² The effort was part of a global endeavour symbolized by the Jomtien Conference. The Right to Education is another landmark approach still pursued. In 1993 the Supreme Court ruled in the case of Unnikrishna J.P versus State of Andhra Pradesh that the right to education is implicit in and flows from right to life guaranteed under Article 21. The initiative taken by the court was enormously significant, since the goal of universal education which is stipulated by Article 45 of Directive Principles of State Policy, and which was supposed to be achieved by 1960, has yet to be realized three decades onwards. .

levels of school education but has decreased at higher levels. Lack of opportunities for educated women in rural areas could be a major reason for the outcome.



Based on Source: NSSO 2001 (Employment and Unemployment Situation in India 1999-2000).

Finally, feminization in agriculture has been a feature associated with globalization in many developing countries. Increasing opportunities draw men out of rural employment leaving women with responsibilities of farming, household and child care. Ironically, rural women have shown greater rigidity against diversification from agriculture despite the worsening of their bargaining power on account of this inelasticity. Table 2.3 shows that from 1987-88 onwards, the share of male principal status workers in agriculture has come down from 74% to 71% in 1999-00 whereas that in female workers stagnated around 84%. In 2004-05 the proportions engaged in agriculture came down. The fall was significant (from 71% to 66%) for males but more moderate in the case of females.

Year	Men	Women
1987-88	73.9	82.5
1993-94	73.7	84.7
1999-00	71.2	84.1
2004-05	66.2	81.4

Source :NSSO 2001 (Employment and Unemployment Situation in India 1999-2000)

2.4. Employment of rural women: Measurement and trends

Although employment data is collected with gender categorization by both the national agencies i.e., the Census and National Sample Survey (NSS), the conventional practice of omitting intra-household dimensions prevented it from proving adequate since most rural women work informally and within the household premises. A correct picture of the extent and nature of the women's economic participation remained elusive for years. Women are known from common experience to devote hours of work for the wellbeing of the household, a contribution that unfortunately is not recognized by most accountancy systems. Besides, women in agriculture also participate substantially in farm work in conjunction with their household chores. Yet women rarely tended to report themselves to the surveyors as farmers.

Year	Census (Total)		Census(Main)		Year	NSSO(PS+SS)		NSSO(PS)	
	Male	Female	Male	Female		Male	Female	Male	Female
1981	53.8	23.2	52.6	16.0	1987-88	53.9	32.3	51.7	24.5
1991	52.5	26.7	51.8	18.6	1993-94	55.3	32.8	53.8	23.4
2001	52.1	30.8	44.3	16.6	1999-00	53.1	29.9	52.2	23.1

Source computed from Census 1981, 1991, 2001 Primary Census Abstract and reported from NSSO 2001 (Employment and Unemployment Situation in India 1999-2000) NSSO 2001

Data on women's work participation in both official data sources have been supposed to be underestimation but Census reporting is more under the scanner. Comparing (rural) estimates based on Census and NSSO data (Table 2.4), though male work participation rate obtained from the two sources are similar, for women the rates are considerably less in Census than in NSS data. For example, in 1981 total male participation was reported as

53.8% and 53.9% by the Census and the NSSO respectively while the same for female is reported as 32.3% by NSSO as against only 23.2% by Census. The NSSO's reporting of women's work participation is however considered superior to Census due to its well designed questionnaires, better trained personnel and smaller sample (Hirway and Roy, 1999). As both agencies have been fine-tuning their approaches to capture women's participation the data tend to converge over time. The basic concepts behind the data used as specified by Census and NSSO have some fine differences that might not be enough to explain the discrepancies. Women's own perception regarding their contribution and a failure of the designs to capture the whole range female activity that encompasses both household and economic domains often without a sharp boundary (Krishnaraj, 2005) are mostly responsible for the underestimation with respect to women.

Workers	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
Time	1987-88		1993-94		1999-00		2004-05	
% Workers (PS+SS)	32.3	15.2	32.8	15.5	29.9	13.9	32.7	16.6
% Workers (PS)	24.5	11.8	23.4	12.1	23.1	11.7	24.2	13.5
% Unemployed (PS-adj)	2.4	6.2	0.9	6.1	1.0	5.7	1.8	6.9
% Underemployed (PS+SS)	36.2	28.4	33.7	23.4	32.4	20.9	34.3	20.2
% in Agriculture	82.5	21.8	84.7	19.3	84.1	14.6	81.4	14.7

Source: NSSO 2001 (*Employment and Unemployment Situation in India 1999-200, 2004-05*) Sarvekshana 2001

Despite the underestimation, the differences between the rural and the urban sectors in India shown in Table 2.5 suggest that rural women are far more participative in economic life than urban women. In 1999-00 female work participation rate was nearly 30% in rural India compared to 14% in urban areas. A perceptibly declining tendency was being noted in the participation rates but a reversal is marked in the latest quinquennial round 2004-05 in both sectors. A large part of the participation is in the subsidiary status so that in the Principal status (PS) it is less at 23% in rural areas, which is still more than the 12% recorded in urban areas. A very large part of about 84% of the women workers are occupied in agriculture. The work participation rate, it is observed, has declined from

32.8% in 1993-94 to 29.9% in 1999-00. The PS participation rate has been nearly static between 1993-94 and 1999-00 so that subsidiary participation had a greater role in the change. Unemployment is reported to be lower in rural areas but even this measure may be subject to reporting and designing insufficiencies. Rural women are known to withdraw from not only the workforce but even from the labour force when seasonal scarcity of work sets. Because of this it is difficult to measure the extent of underemployment as they show a tendency to report themselves as housewives rather than unemployed (NSSO) during this period. As a more concrete measure, the NSSO compares their actual reporting in the Usual status with that in the weekly and Daily status. The women who are reported as employed in the Usual status but as either unemployed or not in the labour force in the Current daily status are deemed as underemployed. More than 30% of rural employed women are actually under-employed by this measure though this share has come down over time. Between 1999-00 and 2004-05 surveys, the incidences of employment, unemployment and underemployment have all registered increases in the rural sector but the proportion in agriculture has come down from 84% to 81%.

2.5. Quality of Employment

Not only is the rural woman's work profile highly confined to farming, even for women working within agriculture, it is severely limited to certain specific operations only. The lack of diversity of women's occupation is compounded by the fact that such operations are found to be difficult, monotonous, and repetitive and is described as drudgery. The All India Coordinated Research Project (AICRP) 1999 of the Ministry of Agriculture identified transplanting, weeding, cutting and uprooting, sowing and storage as common female activities of farm job. While rating the operations by their 'difficulty scores', these operations were assigned relatively high values. The activities are generally manual and many of them require awkward postures that produce body pains and injuries and that sometimes are known to cause reproductive problems. They are also not conducive to human resource development since not only scientific skills but decision-making too

has a small role in such jobs and women are have little association with negotiation and communication in public life. Since there is little scope of utilizing education in this occupation, work participation of women was found to decline with education up to a point as observed in Figure 2.1. Women most commonly work as unpaid labour on family farms or hire themselves out as casual labour in neighbouring farms.

The quality of employment is also indicated by the degree of casualization of labour. Table 2.6 shows how the structure of employment for both men and women has moved from a self-employment base towards casualisation between 1993-94 and 1999-00 where self-employment includes a large section of family helpers among the workers. In the 2004-05 report this tendency is found to have halted and employment has moved towards self employment again. The various programmes promoted through the self-help-group movement could deserve some credit for this reversal. The categories reported in table 2.6 cover both agricultural and non-farm work. Casual labour is essentially wage labour signifying well-directed and measurable income earning³ but in agriculture it usually comes with insecurity and poor bargaining power. Regular employment has fluctuated but shows no perceptible sign of improvement until the last round.

With this shift towards wage employment, wages earned by workers become a crucial determinant of their economic well-being. Some evidence of a slow improvement of real wage rates (Hirway and Roy, 1999) has been noted in both agricultural and in non-agricultural employment. There is a close connection between the two markets as non-farm rural wage labour offers an alternative to farm labour implying a competitive relation and in fact any other alternative avenues including public works and entrepreneurship could have a positive influence on farm wages. A more decomposed data however reveals possible stagnation of real wages between 1970s and the early 1990s (Parthasarathy, 1996). In any case, it comes out uniformly that men's earnings have been consistently above those of women's in agriculture and more so in non-agriculture. In agriculture, women earn about 50% or at the most 80% of men's wage

³ The Millennium Development Goals include an improvement of the share of women engaged in wage employment though explicitly in non-agricultural jobs.

depending on the work and region and there is no particular tendency for the difference to

Year	Self employed		Regular employed		Casual employed	
	Male	Female	Male	Female	Male	Female
1987-88	57.5	54.9	10.4	4.9	32.1	40.2
1993-94	56.7	51.3	8.7	3.4	34.6	45.3
1999-00	54.4	50.0	9.0	3.9	36.6	46.1
2004-05	57.6	56.4	9.1	4.8	33.3	38.9

Note: Figures are percentage share of employment. Self employment includes helping in family enterprise.
Source: Source: NSSO 2001 (*Employment and Unemployment Situation in India 1999-2000, 2004-05*)

narrow down over time. Micro studies also bring out only similar disparity in wage rate (Kaur and Goyal, 1996, Sudha Rani et al, 1990).

Operation	Male	Female	Ratio (F/M) %
Sowing	66	46	69.7
Weeding	58	48	82.7
Transplanting	62	52	83.9
Harvesting	65	54	83.1
Winnowing	61	47	77.0
Threshing	64	50	78.0
Picking	62	45	72.6
Casual labour*	45	29	64.7
Public works*	48	38	79.1

Source: *1998 figures from NSSO 2001 (*Employment and Unemployment Situation in India 1999-2000,*) others from *Indian Labour Journal Vol 46 No11 2005*

The gender disparity observed in farm wages is often attributed to the fact that men and women perform different kinds of operations. While it is true that jobs done solely by men such as ploughing, irrigation, levelling and transporting invariably command higher wages, it has been pointed out that even in those jobs that are done by both men and women or perhaps better done by women such as picking and transplanting, the wage rates given for women are less than men. Table 2.7 shows how wage disparity is evident in recent data for similar operations done by women and men. Disparity is also evident at

the state level as seen in Table 2.8. A second argument emphasizes that women's work is less productive and women bear certain 'gender characteristics' (Standing, 1985). In a third argument, women's lower wage earning is described to be a sign of discrimination inherent in society and not for the productivity per se. Possibly the supply factor in the rural labour market even when viewed as moderately competitive, could also be playing a significant part in creating the gulf. While men migrate to cities for work, lack of housing and employment opportunities coupled with household responsibilities makes it difficult for women to accompany them and they stay back in the rural labour market creating abundance. The concern for immediate household sustenance sometimes makes their participation appear as distress labour. We will find in Chapter 3 that supply factors are significant as determinants of female wage rates. Women's bargaining strength is further undermined by their deprivation of education, skills and technological incompatibility with the required operations that only the failure of the social and the extension system could be accountable for creating.

State	Public works		Casual		Ratio (male/female)	
	Male	Female	Male	Female	Public works	Casual
Andhra	45.47	34.26	40.67	26.48	1.33	1.54
Arunachal	79.23	121.43	67.09	42.73	0.65	1.57
Assam	67.97	27.14	48.82	35.55	2.50	1.37
Bihar	40.25	36.5	36.53	31.57	1.10	1.16
Gujarat	40.24	39.77	43.91	34.43	1.01	1.27
Haryana	43.3	28.57	62.25	51.01	1.52	1.22
Himachal	75.7	51	67.06	50.36	1.48	1.33
J.Kashmir	83.79	23.75	77.04	66.07	3.53	1.17
Karnataka	45.29	46.62	42.51	27.14	0.97	1.57
Kerala	100	61	100.78	56.65	1.64	1.78
M.Pradesh	41.67	35.16	30.15	24.91	1.18	1.21
MMN	77.75	78.05	75.69	51.99	0.99	1.46
Maharashtra	49.38	26.85	41.32	25.28	1.84	1.63
Manipur	60.15	24.74	59.46	47.4	2.43	1.25
Orissa	33.87	28.76	31.14	23.34	1.18	1.33
Punjab	57.14	18.71	65.86	49.48	3.05	1.33
Rajasthan	36.22	50.78	55.19	37.02	0.71	1.49
Sikkim	83.29	0	50.71	40.6		1.25
Tamil Nadu	77.62	45.05	60.2	30.78	1.72	1.96
U.Pradesh	86.85	25.88	43.5	30.08	3.36	1.45
W.Bengal	37.34	34.12	44.6	35.59	1.09	1.25
India	48.14	38.06	44.84	29.01	1.26	1.55

Source: Indian Labour Journal Vol 46 No11 2005

It is argued that while mechanization with took place during the period of the green revolution, has made farm jobs easier, the favourably affected jobs were mostly in the male domains. The government's extension mechanism was largely answerable for this failure and in response to such criticisms, the National Agricultural Technology Programme (NATP) and the Central sector scheme Women in Agriculture discussed in foregoing sections were designed to address this anomaly. However analyses also show that mechanization created additional demand for labour through increased intensity of cultivation (Agarwal, 1984, Subrahmanyam, 1999) and the process itself may have been gender neutral. A biased societal reaction and a misplaced belief that women could not

handle machines⁴ could have been responsible for even jobs customarily done by women to pass into male domain in case machines entered the scene.

2.6. Constraints due to under-development

Women in the Indian society are said to prefer home-based activities on grounds of their household role (Tenhunen 2006). It is possible that women, perhaps out of choice, spend considerable time on children than is spent by men. This cannot fully account for the inordinately strong physical tie that women in rural India have with the homes, a tie that is made more rigid by the fact that these areas fall behind in a whole range of gender sensitive development indicators. They have little access to domestic facilities such as the affordable cooking gas and piped water let alone many other gadgets that make life easier. Poor supply of electric power is generally an accepted restraint that differentiates them from their urban counterparts. Child care facilities (creches) are even less accessible. Added to this is the poor state of infrastructure and communication facilities as also unreliable law and order that make out-door work and mobility difficult and unsafe. Poor health facilities compound women's responsibilities of attending to incidences of illness in family. Sharp contrasts between the rural and urban sectors in regard to household amenities are exposed by Census data (Table 2.9). Perhaps these shortcomings in rural areas are significantly responsible for strengthening the existing gender order.

2.7. Social benefits of Women oriented economic programme

Empirical evidences in India and other developing countries have shown that countries could gain rich social benefits by implementing women oriented developmental programmes effectively⁵. More over, their access to income not only enhances household

⁴ This notion was shown to be untrue in other societies where women do operate and maintain machines (Wasnik, 2006) .

⁵ Women's education and their access to reproductive health care that also reduces infant mortality could be more useful as instruments for population planning than questionable direct and coercive means. Added to

income and improves the standard of living but it could reduce intra household inequality with respect to health care, food, morbidity and mortality (Hariss 1990, Kumar 1978). Men have been found to spend more on personal needs like tobacco and women on family's consumption (Gulati 1978, Mencher and Saradmoni 1982) and there are evidences that mother's income specially benefits nutrition and health status of children (Guha Khasnobis and Hazarika, 2006), although viewed against the possibility that mother's wage earnings also reduce time for child care. The post reform period since 1990s found that Indians could excel in enterprise and business at the national and international levels. Clear evidence has started emerging that women have now joined the race in seeking higher education, participating in economic life, performing in sports, science and arts and are fast rejecting the traditional social dictums on their movements and codes. Not of any less significance is the fact that Indian women are rising to heights in business, Indra Nui global CEO of Pepsi, Naina Lal Kidwai, Country Head of HSBC, Sikha Sharma MD of ICICI Prudential and Vinita Bali, MD of Britannia Industries are among a few examples who have even broken the 'glass ceiling'.

	%Permanent House	%Electricity Connection	%Water from tap	%LPG Fuel
Rural	41	43.5	24.3	5.6
Urban	79	87.5	68.7	47.8

Source: Census 2001 (*Tables on Houses, Household amenities and Assets*).

2.8. Women in India's development Policy and Plans

The Indian Constitution cannot be faulted for not taking cognizance of the gender disparities in development and for not providing the right road map for gender justice in Indian policy. Articles 14, 16 and 39 make provision for gender equality in all spheres of life and Article 15 even empowers the State to make official discrimination in favour of women. India's Five Year plans also did have a place for the special needs of women but the inadequacy of the initial approach cannot be missed. The First Five year Plan (1951-56) incorporated nearly no notion of development in the case of women. The only

this, since child bearing and rearing consume significant part of female time, a woman with an employment will possibly have the incentive to limit her family size and confer quality life to the existing composition.

innovative contribution in the Plan worth mentioning was the formation of the Central Social Welfare Board (CSWB) in 1953 and the intended *Mahila Mandals* as part of the Community development approach⁶. Clearly, there was no vision of women forming an enlightened workforce of the future. The Second Plan (1956-61) coincided with serious reforms in agriculture and the approach to rural development was integrated with Intensive Area Development Programme (IADP). The Green Revolution patently suffered from a male bias. This Plan can only be credited for recognizing the needs of the existent women workers such as maternal benefits, crèche, equal pay and training. The Third Plan (1961-66) further brought in dimensions like education, maternal and child health along with family planning.

The Fourth Plan (1969-74) was still directed to women's welfare within the family, which was treated as the base of operation. Family planning to reduce birth rate was an integral element affecting women. The Fifth Plan (1974-79) also brought no change in the direction of approach. Thus, no landmark step was envisaged during the entire period to turn the gender order in the economy. Admittedly, the component measures of a welfare approach incorporating education, health and child care as laid down in the successive five Plans toward the women had a degree of positive although indirect implication for the development of women. Several years hence, the Mid-term Review of the Tenth Five year Plan in its critique of the declining sex ratio in evidence observed about the inherent assumption of the Plans that 'all failures in development can be mono-causally linked to population explosion'. Thus despite the spill-over benefits of this 'policy obsession with population control', no explicit attention was awarded to the potentials of women as human resources of the country.

The Fifth Plan period was important for two reasons. The submission of the Report of the Committee on the status of women in India (CSWI) led to debates and the much needed consciousness of women as inputs for national development rather than as mere targets of welfare. It was realized that the Constitutional guarantees of equality would be

⁶ Today the precise role of the CSWB is under evaluation and there are proposal of restructuring the Board according to current requirements and to merge it with other schemes in the Ministry.

meaningless unless women's rights for economic independence was acknowledged and their training in skills as contributors to the family and national economy improved. The new understanding was of momentous importance. The Fifth Plan also coincided with the International Women's Decade organized under the UN's behest⁷. In 1976 a National Plan of Action was prepared providing guidelines based on UN's World Plan. A Working Group on Employment of Women was set up as an exercise of the Sixth Plan.

Influenced by CSWI Report and two other Reports on Women in Agriculture and Rural development, the Sixth Plan (1980-85), devoting a whole chapter on women and development, for the first time shifted the approach towards women from welfare to development and women's 'opportunities for independent employment and income' found a place. Although family was still the unit of development, the Plan initiated the path breaking transition that future Plans were to carry forward. It directed attention to education, health and also employment of women, recognized women's lack of resources as the impeding factor for their development. The Seventh Plan (1985-90) made qualitative emphasis on inculcating confidence among women and generating awareness of their rights and privileges and deliberated on training them for economic activity. In keeping with the spirit of the Decade and operationalizing the concerns, the Plan emphasized opening new avenues of work for women. Other gender sensitive issues such as women's land and property rights (joint *pattas*), credit, marketing and technology were taken into consideration. Women's role in home and child care and in collecting fuel, fodder and water was recognized. The Plan also identified beneficiary oriented programmes IRDP, TRYSEM, DWCRA and continued the externally funded programme for women in agriculture initiated during the previous Plan. Domestic violence received attention.

⁷The twentieth century has been witnessing landmark actions at the international level, gradually and steadily changing the gender order in society bringing women towards the mainstream society and economy. Beginning with the UN's first World Conference on Women in Mexico in 1975 there were subsequent conferences in Copenhagen, Nairobi and Beijing and the UN decade for women (1976-85) began the self-exploration among the nations on their internal policies. In 1990 the millennium development goals (MDG) further reinforced the resolve of including components relating to women's welfare and development.

In 1985 Government of India constituted a separate Department in the Ministry of Human Resource Development to monitor and execute programs for women in other Ministries and Departments. The National Education Policy gave a specific direction for the education of the girl child. A perspective Plan for Women (1988-00) was made to provide a long term overall policy for Indian women. The Eighth Plan (1992-97) was the first plan in post-reform era. Marking a departure from the past, this plan was indicative only and the role of the Planning Commission was redefined. The Eighth Plan focused on human resources, viewed women as equal partners in development and demonstrated gender sensitivity so that development programmes did not bypass women. The National Commission on Women (NCW) was set up as a watchdog to protect women's rights. The Plan envisioned an employment strategy based on opportunities of self-employment and sought to improve the bargaining power of producer groups in unorganized sectors. The importance of vocational training for self-employment was recognized and training of women in soil conservation, dairy, social forestry, sericulture, horticulture and poultry became popular. The formation of the Self-help Groups and training them for employment were milestone of the period. The modification of agricultural extension to cover women beneficiaries was also a landmark initiative of the era.

The Ninth Plan (1997-2002) placed women's empowerment among the primary objectives of national development. For delineating target groups, women were categorized by age based on economic criteria (15-59) besides the usual reproductive criteria. A National Policy for Empowerment of Women was adopted in 2001 which viewed women as agents of socio-economic change⁸. The strategy towards women's empowerment is further reinforced by National Health Policy, National Education Policy, National Nutrition Policy, National Population Policy, numerous rural development programmes and social welfare schemes like Indira Awas Yojana and National Old Age

⁸ The NPE W seeks to create an enabling environment for women to exercise their rights both within and outside their homes, reserve one third of seats in Lok Sabha and State Legislative Assemblies, ensure that at least 30% of funds and benefits flow to women in all development sectors by the Women Component Plan (WCP), to organize women into self-help groups and increase credit flow to women.

Pension, all of which have special focus on women. While the transition is yet in process, as men and women move towards equity, one looks forward to a time when the special emphasis on women in particular may not be required⁹. The Tenth Plan also emphasized women' empowerment and employment generation and 30% allocation for women in beneficiary oriented projects ensued.

2.8.2. The Eleventh Plan

Economic empowerment of women treated as agents of development is a subject of considerable importance in the on going Eleventh Plan in which Gender budgeting and Gender outcomes assessment are given high priority. Education, Training and credit for women and 'leadership development for life, livelihood and civic empowerment of minority women' received increased emphasis. A special focus on 'inclusion' makes SC, ST and Muslim women the target beneficiaries. The NCW will be given greater powers.

2.8.3. Education and Training for Women Entrepreneurs

As seen in Table 2.6 self employment is a dominant form of economic occupation of the rural women apart from wage labour. However much of this self employment signifies engagement of women in family owned farms and poor utilization of human resources. Entrepreneurship has been recognized as a promising form of employment in India's development policy. In order to transform human resources into successful entrepreneurs not only general education but also skill specific training is considered important input.

Among the public programmes for self-employment, the Integrated Rural Development Programme (IRDP), was possibly the largest and the most outstanding employment programme for rural people. This Centrally sponsored Scheme operating since 1980 was aimed mostly at poverty alleviation by providing self-employment to the rural poor

⁹ The Tenth Plan has also emphasized women' empowerment alongside its focus on employment generation but unfortunately combines women with disadvantaged groups like children and disabled devoting a chapter on 'Women and Children' although it is important to realize that women's disadvantages are more man made than natural or biological and their constraints, concerns and opportunities of the two groups are vastly different.

through acquisition of productive assets or appropriate skills to generate additional income on a sustained basis to enable them to cross the poverty line. Assistance is provided as a mix of subsidy and credit to families below the poverty line. The target group consists largely of small and marginal farmers, agricultural labourers and rural artisans. Associated with the IRDP were programmes like the Training of Rural Youth for Self-employment (TRYSEM) for creating entrepreneurial competence and technical skills among the youth. Development of Women and Children in Rural Areas (DWCRA) and Supply of Improved Tool Kits to Rural Artisans (SITRA) are two other sub-programmes associated with the IRDP. The achievements of all these programmes were less than satisfactory. The benefit failed to reach the poorest in the society, with investment remaining at sub-critical levels viability eluded the enterprises and above all, given the poor honorariums paid and the lack of incentive to generate competitive business capability, the mobilization of the best services of trainers proved to be challenging. Since the IRDP involved provision of subsidized credit, the lack of viability of the IRDP enterprises also tended to impact on the banking incentive in the country. The IRDP however exists even today though in its new avatar known as the *Swarnjayanti gram swarozgar yojana* (SGSY). Another parallel programme the Khadi and Village Industries Commission, associated with India's freedom movement was created as a statutory body in 1957 to provide support and organization to village artisans. The KVIC has greater commercial orientation 'producing saleable articles' finds a place among the objectives along with employment generation, building up of self-reliance and community spirit. There are more than 100 categories of village industries, which include mineral based, forest based agro based and food industries. The KVIC offers a chain of sales outlets through which the products are marketed and 41% of the beneficiaries are women. The KVIC network organizes Exhibitions, Fairs, Seminars and Public Education Programmes to promote the scheme.

Another programme known as the Support for Training and Employment programme (STEP) was launched in 1987 when the National Commission for Self Employed Women and Women in the Informal Sector made a situational review. The STEP programme aims to increase the self reliance and autonomy of women by enhancing their

productivity and enabling groups of women to take up income generation activities. It provides a package of upgradation of skills through training, extension and other inputs and the targets include poor, marginalised and assetless women. The Scheme covers 8 traditional sectors of employment, viz., Agriculture, Small Animal Husbandry, Dairying, Fisheries, Handlooms, Handicrafts, Khadi and Village Industries and Sericulture. Two more sectors, namely, Social Forestry and Waste Land Development have been added later.

Activities under IRDP and KVIC	
• IRDP	Bullock (Kangayam) Dairy, Milk Cow , Milk Buffalo, Goat for rearing, Sheep for rearing, Poultry (Broiler), Cart-Cart Man Type, Tyre Cart with Bullock, Mushroom, Bee Keeping, Kattumaram and Fish Net
• KVIC- Products	Khadi textiles, Honey, Fibre products, Processed fruit vegetable products, handmade paper, leather products

2.8.4. Women in India's Agriculture

'Gender and Agriculture' is an issue especially addressed by the Eleventh Five Year Plan in context of its aim of reversing the deceleration of agricultural growth and the reinforced emphasis on food security and vulnerability of rural women and children. The Plan presents three new road maps as follows. Gender 'mainstreaming' has become an important concept and instrument. Incorporated in the National Agricultural Policy of 2000, it means that women have to be part of all the schemes and can participate and benefit at par with male farmers by setting their own agenda. Keeping in perspective the pivotal role played by women in agriculture as farmers, co-farmers, family labour and managers and of women's extensive involvement in agricultural production and processing and in allied sectors, the Plan identifies the place of women in thrust areas for promoting agricultural development. These areas include the increase in crop

productivity, incorporation of a regional dimension, livestock, coastal and inland fishery, horticulture, plantation and nursery, sustainability concerns, water use and management and storage.

Further the Plan recognizes that the ability of women to function effectively as farmers is constrained by their disadvantage due to the lack of property rights¹⁰. Studies have shown that gender equality in property rights can reduce risk and increase livelihood prospects as well as improve survival and education prospects of children. Since 78% of rural households own some land, access to even small plots of land can help women improve their bargaining power and use the same asset for productive purposes.

Finally, the Plan also recommends training programmes based on needs identified by women and organized at the door step. Training programmes organised by Universities should provide admission regardless of sex, age and educational qualifications. Strengthening of backward and forward linkages of the agricultural sector with the non-agricultural sectors would provide gainful employment to women workforce. Training in nursery raising, horticulture, techniques in cereals productions, storage technique, seed support, biodiversity preservation, organic farming and manure preparation are mentioned. The designing of the course would also be sensitive to women's own interests.

2.8.5. Women and Agricultural Extension

With the decline of the erstwhile Training and Visit or T&V system of extension of technology to agriculture, consensus moved towards a more holistic form of extension which drew farmers as groups of participants rather than individual recipients of instructions, viewed agriculture in a form far broader than the earlier crop based approach and unlike in the T&V, gender became an essential and integral component. The

¹⁰ The Hindu Succession Act (HAS) 1956 and the Muslim Personal Application Act 1937 denied both Hindu and Muslim women the right to inherit property and although a number of legislative measures flowing from the Constitutional provisions conferred equal land rights to women, in practice there was a wide gap between the provisions and the reality. In 2005 an amendment to the Hindu Succession Act of 1956 effected further correction to the biased and unjust land rights.

Directorate of extension of the Department of Agriculture and Cooperation (DAC), Ministry of agriculture, in operation since 1958, is the nodal agency for effecting agricultural extension which includes dissemination of technology and training as key methods, with a focus on skill transfer.

The National Gender Resources Centre in agriculture (NGRCA) located in the Pusa campus in Delhi under the same Directorate is responsible for adding a gender dimension to agricultural policies and programmes and rendering advisory services for gender mainstreaming in agriculture. In fact the Centre acts a focal point for convergence of all gender related activities and issues in agricultural allied sectors within the DAC. Today, the gender concern is addressed by mandating that 30% of the resources on developmental programmes and activities for women farmers and women extension functionaries in major states. The Centre also disseminates information on gender friendly tools/technologies in crop production, processing, post harvest management and other allied sector activities. Gender budgeting of the DAC is done at the NGRCA and a gender dimension is added to performance budget. In fact a separate chapter on gender perspectives in agriculture is inserted in the performance budget of the DAC. Even when there is no specific beneficiary oriented programme or any significant allocation earmarked for women farmers, attempt is made in each scheme implemented by the department to identify and promote the involvement of women in areas having better potential and scope. For example, although the schemes Technology Mission on Cotton and on Farm Water Management for increasing Crop production in Eastern India are neither gender specific nor have any specific allocation for women, the states and the implementing agencies are encouraged to give preference to women farmers in the distribution of inputs, training and demonstrations.

2.8.6. Projects for women in Agriculture

There have been few programmes explicitly addressing the women belonging to farm family. A majority of these were financed by external agencies including foreign countries. The first of all these was the DANIDA which was a Danish supported farm

women programme that began with the signing of Women Youth Training and Extension Project (WYTAP) in 1982 between the Government of India, the Government of Karnataka and the Royal Danish Government. It worked in different phases up to the year 2005. The longest duration project in it was in Karnataka in which all districts except one were covered gradually. The Tamil Nadu Women in Agriculture (TANWA) concluded in 2003, the Training and Extension for women in Agriculture (TEWA) in Orissa concluded in 2003 and the Madhya Pradesh Women in Agriculture (MAPWA) concluded in 2005 were other parts of this holistic programme that aimed at empowering women with better access to knowledge. Village based training conferences, link workers training, inter-block and inter-district study tours for exposure, formation of 'Mahila Goshthi' groups and creation of drudgery saving technology were activities in the project

The Dutch supported projects included training of Women in Agriculture Andhra Pradesh (ANTWA) between 1993 to 2007 and the training of Women in Agriculture Gujarat between 1997 and 2003. Signed between the government of India and Government of Netherlands, the projects promoted holistic development of small and marginal farmers and agricultural labourers by exposing them to relevant technologies and entrepreneurial opportunities.

The Government of India and UNDP signed an agreement in 1998 for an umbrella Food Security Programme with six sub-programmes. Under this, three women specific sub-programmes were implemented with a focus on drought prone and desertified agriculture in a holistic and sustainable way. There was additional support for Cyclone affected districts and sustainable dryland agriculture by mahila Sanghams in Andhra Pradesh. Providing women's groups with access to crop land, encouraging tree-development in fallow land, storage and distribution of locally grown subsistence crops, processing of food for easy cooking and marketing are built into these sub programmes. Technology dissemination and exposure of women to best practices were also parts of the aim. State Departments of Agriculture, State Agricultural Universities, State Department of Women and Child Development and NGOs as well as numerous Self help groups were involved.

A central scheme of Women in Agriculture financed by the Government of India was launched on a pilot basis during the 8th plan in one district each of seven selected states Punjab, Haryana, Uttar Pradesh, Himachal Pradesh, Maharashtra Kerala and Rajasthan. It was extended to Ninth Plan and tenth plans and the North East hill states were later included. The scheme aimed at motivating, mobilizing and organizing women farmers to form groups so that agricultural support services such as inputs, extension and credit could be canalized through the networks. A composite package of recurrent skill based training was provided to enable them to adopt new technology. The women farmers also got training in managerial, entrepreneurial and decision making skills

All these programmes are reported to be highly successful. Income levels are found to have markedly increased, dependence on village money lenders reduced and general empowerment effects significantly attained. Exposures intra-state and interstate and experiences in setting up stalls to sell vermin, compost and food products were confidence inducing. The enterprises covered related directly to agriculture such as storage by operating 'Grain Bin', producing solar food processing, beekeeping diary, poultry. The main limitation was the inadequacy of implementation.

2.8.7. National Agricultural technology Project

The National Agricultural Technology Project (NATP), a World Bank-aided umbrella project was being implemented by two departments of the Ministry of Agriculture namely the ICAR under the Department of Agricultural Research and Education (DARE) the Department of Agriculture and Co-operation (DAC) between November 1998 and 2005. The project had a component of research and another of extension. The extension component, also called Innovations in Technology dissemination (ITD) was path-breaking as it aimed to pilot test new institutional arrangements for technology dissemination at the level of the district and below. The institutional mechanism was the creation of an autonomous body known as Agricultural Technology Management Agency or more popularly the ATMA at that level. The ATMA represented the partnership of the

stakeholders of the technology transfer which included research institutions under the ICAR or Universities, farmers' organizations, NGOs and corporate sector units and working transparently with a governing body and a management committee. The NATP introduced a group approach and a decentralized form of extension to identify and address critical gaps at the micro level. Training was an important instrument to fill the gaps and training address both farmers and extension functionaries. The NATP was an initiative in public extension in agriculture in general. Gender was not a separate component in it but it was integrated in the programme with a 30% desired allocation. Major thrust has been on technological empowerment of rural women for skill development and income generation. Trainings were conducted with about 3,800 participants in 155 training programmes. The maximum number of trainings planned were on post-harvest, and value-addition for mainly of fruits and vegetables and to some extent on other agricultural products. Animal husbandry and fishery have received due attention. Gender friendly tools were distributed. The NATP was pilot and a time bound scheme but with the success of the ATMAs a new central sector scheme known as the Support to State Extension Programmes for Extension Reforms with state participation was launched.

3. India's Farm Women as entrepreneurs:

A Secondary data based review

Empirical analysis is made of secondary data on farm women, their livelihoods and their enterprises based on the information provided by the National Sample Survey Organization (NSSO) in its all India level survey conducted in the year 1999-00. The information specifically on the farm households is extracted from the unit-record data of the 55th Round survey. A background of the subject is provided in the next section to set up the context.

The study is organized in the following way. First, the significance of the farm households as distinct from non-farm rural households is illustrated by their lags in critical development indicators. The study then focuses on the working aged women in these farm households and describes them by their profiles and the nature and sectors of their employment. In the third stage the common enterprises pursued by the farm women are identified and a brief assessment of the organizational character of such enterprises is made with the information as possible. A spatial perspective is provided on women's entrepreneurship by comparing and ranking the states.

3.2. Employment issues

Rural people still account for 72% of India's population. About 65% of the rural households (Table 3.1) draw their livelihood mainly from agriculture either as wage labour or as cultivator. Agriculture has traditionally been the major employment base in India but in the recent decades a number of new tendencies are emerging that challenge the structure of the rural economy. First and foremost is the rapidly falling share of agriculture in India's GDP. Second is a shift in people's diet away from food grains, by far the main products of agriculture. Third, with the return from farm technology dwindling, the pressure on the fixed land resources is mounting rapidly. Fourth, with the opening up of the market and the advancements in communication technology, new life-style demands, though known to be more conspicuous among the urban people, are also emerging among rural people in tune with a convergence in

tastes. All this generates socio-economic complexities reflected sometimes in extreme distress when incomes do not keep up with the demands. Not surprisingly, conventional agriculture seems to be losing its appeal.

Women are found to be highly concentrated in farm work that too mostly in the cultivation of conventional food and cash crops, while men look for alternative jobs. Fortunately, new opportunities are emerging in producing less common agro-products and for processing existing products even at the farm level to satisfy the changing dietary tastes of urban middle classes even as new institutions are developing for bridging the producer and the consumer. All this suggests that a redirection of employment strategy especially for the rural women towards more skilled, market sensitive and lucrative work in processing and value addition activities related to agro-products could be a promising path towards employment generation.

Household type	%Agricultural Labour	%Self-Employed in Agriculture**	%Agricultural total	%All others Households	%Rural population*	%Women in Agriculture
1993-94	30.3	37.8	68.1	31.9	74	84.7
1999-00	32.2	32.7	64.9	35.1	72	84.1

Source: NSSO 2001 (Employment and Unemployment Situation in India 1999-2000); * Census.
 **This share is shown to have improved on 2004-05 NSSO survey to 35.9%.

The existence of industries in the rural sector has not been strong in India. Rural non-farm employment over time has failed to show a strong positive movement (Sen and Jha, 2005). Activities that involve processing of agricultural products and production of non-conventional and allied agro-products are known to generate value addition to agriculture, strengthen the linkages with the other sectors and meet the changing tastes of people in the country. Yet, this sector itself has a relatively small role in the economy despite the intuitive understanding that members in farm households could have obvious strengths in such activities and the close vertical links with their main activity could be an advantage. The Economic Census in 1998 (Table 3.2) found that even among the rural enterprises those that are related to agriculture (such agricultural enterprises exclude crop growing activities by definition) have a meager share of only 15% of the total employment generated. Moreover, over 81% of this employment is generated in 'own account' enterprises that run on family labour only. Thus the

performance of employment generation of agro-based enterprises in rural areas is poor.

Table 3.2: Employment generation in Rural Enterprises				
Sector	OAE	ESTB	Total	%OAE
Agricultural	49.8	11.5	61.3	81.2
Non-agricultural	158.1	179.6	337.7	46.8
Total	207.9	191.2	399.0	52.1
%Agricultural	23.95	6.0	15.36	

Note: Employment in lakh Numbers, OAE (own account enterprises)= owned and operated with the help of household labour only. ESTB (Establishment)= engaged in economic activities with the assistance of at least one hired worker on a daily regular basis (including directory and non directory), Agricultural = enterprise involving livestock, agricultural services, trapping, forestry, logging and fishing.

Source: Economic Census 1998 reported in Manpower Profile 2004

3.3. Economic profile of the farm household: a relative view

A farm household may be defined as one that draws the major part of its income from agriculture. Both households that are self-employed in agriculture and the agricultural labour households (table 3.1) are treated as agricultural or farm households in this analysis. The statistics that are published by NSSO on rural households are a summary view over farm and non-farm households and like all averages they hide a part of the truth. In this section we show that the households to which the women who are the subject of this study belong fall back behind other households in the same rural area in several respects. What sets farm households apart from other rural households is the essential dependence of these households on land as the principal source of income.

Conventionally the economic well-being of a household is measured by its income or the monthly per capita expenditure (MPCE) that NSSO reports and the asset holding, specifically land possessed by the household. In addition some social indicators are also important. The most important one is education which is also an input to economic power. Specifically illiteracy is a barrier to higher earning opportunities and to awareness. India's society is historically segmented and certain social groups suffer a disadvantage due to their lineage though they also enjoy protection under

Indian Constitution. Gender is also a source of disadvantage in society. Table 3.3 brings out some sharp distinctions among the rural households.

As would be normal to expect, the non-farm household is more land-poor, with 96% of households having either no land or less than 2 hectares of land compared to 85% for farm households. However this advantage is not reflected in the income comparison. Based on our specification of the poor, which is MPCE less than Rs.300, equivalent approximately to lowest two all India rural deciles, 25% of farm households can be called poor but 16% of non-farm households fall in the poor category. A half of the farm households are also labour households. Farm households have a higher share of the two most backward castes but less of minority religious people. The difference in literacy levels is glaring. NSSO provides the valuable information whether all or some members of the household are illiterate. Illiteracy is much more intense in farm households when all household members are considered but the gap is wider when only adult female members are considered in the household. More than 65% of the farm households do not have a single literate adult female. Since both household types belonging to rural areas face similar cultural influences and developmental constraints, perhaps the conventional form of farming provides inadequate incentive and power to the farm household to acquire literacy. The household services that young girls provide to their families further discourage schooling. On the whole the traditional male dominated social structure is more pronounced in the farm-household in which the land customarily has been held under male titles, perhaps accounting for the predominance of male headed households compared to non farm rural households. Demographically, the household size is a little larger for agricultural households with more number of children.

Literacy is much less among both men and women of the farm households (table 3.4) and 87% of these women from farm households are not educated beyond primary level while this rate is 75.5% for others (table 3.4). Literacy through organized non-formal schooling or other non-formal sources has benefited a small share of women and is marginally more among the non-farm households. Both categories perform poorly in higher educational attainments.

Characters	Non-farm households	Farm households	All-Rural households
Poorer household(%)	16.4	25.0	22.0
Land poor household (%)	95.9	85.3	89.0
Labour households(%)	22.8	49.6	40.2
SC and ST households(%)	28.0	36.0	33.1
Minority religion households (%)	19.1	13.1	15.2
All members illiterate household (%)	15.6	22.3	20.0
All female adult illiterate households(%)	52.6	65.4	60.9
Female headed households(%)	14.0	8.6	10.5
Household size (Mean)	4.7	5.2	5.0
No. of Children (Mean)	1.9	2.1	2.0
Definitions: (1)Poorer household= households with monthly per capita consumption expenditure less than Rs 300, (2) Land poor households = landless, marginal and small holding households (less than 2hecatres), (3) Minority religions = religions other than Hindu, (4)SC and ST = scheduled caste and schedule tribe, (5)Indebted = households with loan exceeding Rs 800. Means are unweighted.			
Source: Computed from NSSO 1999-00 data			

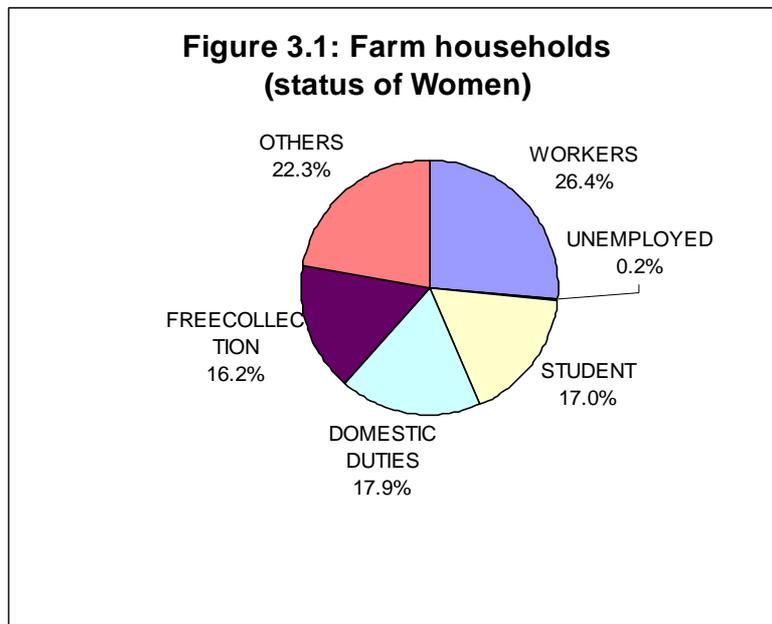
Characters	Farm households		Non-farm households		Rural households	
	Male	Female	Male	Female	Male	Female
Not literate	42.7	71.2	26.9	55.2	37.6	65.9
Literate-Non-formal education	0.6	0.3	0.4	0.5	0.6	0.4
Literate-others non-school	0.8	0.6	1.0	0.8	0.9	0.6
Literate Below Primary	25.6	15.5	25.9	20.4	25.7	17.1
Total Not beyond primary	68.3	86.8	52.7	75.5	63.4	82.9
Middle	16.0	7.6	18.9	11.9	16.9	9.0
Secondary/Higher secondary	13.4	5.0	22.2	10.6	16.2	6.9
Higher education	2.2	0.4	6.1	1.9	3.5	0.9
Source:Computed.						

3.4. Livelihoods of the farm women

Farm women constitute about 47.9% of Indian women and 48.9% of farm population¹. More than 26% of the women in farm households are workers in

¹ This is an approximate figure only. A population of 230 million (1999-00) is worked out based on NSSO data. There is usually a discrepancy between NSSO projected and Census population figures so

principal status (figure 3.1) and another 16% although involved in domestic duties also contribute indirectly by ‘free’ services for home consumption².



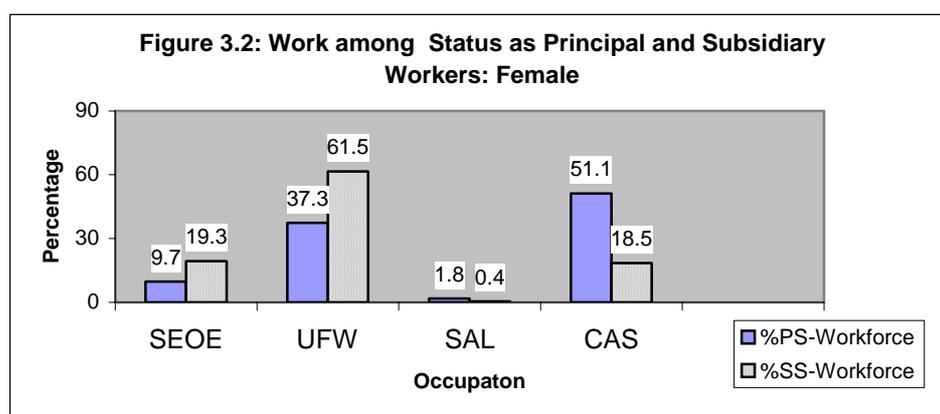
We consider in the rest of the chapter only women above the age of 15 years reported as ‘adults’ by NSSO rather than include children who in principle should not be in workforce. Of these working age women more than 71% are not literate and 87% are not educated beyond primary level. More than half are actually in workforce though 12% are in subsidiary status. Thus work participation is considerably more than for women from other rural households. Examining the employment status we find that less than 2% hold salaried jobs and a large 95.5% employed in agriculture and forestry in various capacities. Even among non-workers 41% perform jobs that could be potentially priced but 15.6% of the usual status workers are underemployed (see Chapter 2 for definition). Unpaid family workers constitute a large 37% of workers and a larger share 51% of the workers are employed as casual labour. The self employed in own enterprises (SEOE) group constitute a considerable section of the subsidiary status worker but less than 10% of those in the principal status.

that scholars usually project Census data to the survey period and make adjustment. This is not attempted here.

² This is specified as Free collection of goods (vegetables, roots, fire wood, cattle feed etc.) sewing, tailoring, weaving etc. for household use.

Table 3.5:- Economic profile of (Adult) Farm women in India	
Participation in Work	
Gender Share in Principal status workforce (%)	31.4
Principal status Workforce (%Population)	40.3
Usual (including Subsidiary) status workforce (%Population)	52.5
Principal Status Domestic and 'Free collection' (%Non-worker)	41.0
Occupation of Worker	
Salaried (%Principal status Workforce)	1.8
Employed in Agriculture and Forestry (%Principal status Workforce)	95.5
Unpaid family worker (%Principal status Workforce)	37.3
Underemployed (%Usual status Workforce)	15.6
Casual labour and Public works (%Principal status Workforce)	51.1
SEOE-Own account, employer (%Principal status Workforce)	9.7
Subsidiary status SEOE (%Subsidiary Status Workforce)	19.3
Education	
Not Literate (%Population)	71.2
Not beyond Primary (%Population)	86.8
Note: SEOE= Self employed in own enterprises. Underemployed are employed by Usual status but unemployed by Weekly status.	
Source: Computed	

The composition of occupation in the two categories Principal status and Subsidiary status also differs as seen in figure 3.2. Entrepreneurs (SEOE) and Unpaid family worker (UFW) making up the composite self-employment group have much higher shares in Subsidiary status (SS) employment than in the Principal status (PS) while Casual labour has a relatively low share in Subsidiary status employment³.



³ Subsidiary status employment is more common among women. In fact women make up over 90% of the workforce in this category, much more than their 31% share in the Principal status workforce.

The broad industries (2-digit) which the women workers engage in are represented by National Industrial Classification (NIC) codes. A more detailed enquiry shows that the group titled unpaid family help constitutes 38.6% of the employment in the most important occupation agriculture and casual labourers constitute the largest block at 52%. SEOE follows with only 8.5% of the agriculture employed workers. Salaried jobs are substantial only in the service sector followed by manufacturing. SEOE is important in all the sectors except agriculture the most dominant sector. In agriculture women's own enterprise is least important, perhaps also partly resulting from lack of land ownership.

Table 3.6: Occupation of Farm Women Workers in different Sectors of Industry (Principal Status)					
Industry of Activity	SEOE	Unpaid family Help	Salaried Job	Casual	Sum
	% in Sector				
Agriculture	8.5	38.6	0.8	52.1	100
Manufacturing	50.0	12.5	14.8	22.7	100
Services	20.6	6.3	45.5	27.6	100
Trade	68.4	21.0	3.5	7.1	100
Total Work force	9.7	37.3	1.8	51.2	100
Note: Casual job excludes Public works. Agriculture includes all agricultural activities and industry definitions are as per NIC 1998.					
Source: Computed from NSSO 1999-00 data using NIC 1998.					

3.5. Industries of Enterprise

The cultivation of major crops consisting of both food crops and cash crops like cereals, pulses, oilseeds, cotton, tobacco, sugarcane, rubber and similar other cash crops is the dominant occupation of rural people. In fact these activities account for respectively 88% of total workforce and 63 % of SEOE among the farmwomen. Table 3.7 gives a more detailed break-up of the women's activities as workers and entrepreneurs.

As workers the concentration of women in cultivation of major crops is marginally more pronounced than men but the share in SEOE is only 63.5% compared to 89% for male. In fact the women in the SEOE group representing entrepreneurs tend to be more diversified away from crop cultivation than men. The sectors in which they

operate are diversified agriculture, tobacco, agro-processing and retail trade and services. In tobacco no significant male presence is found.

	% SEOE	% Workforce	% SEOE	% Workforce
Activities	Male		Female	
Food crops	86.7	84.1	62.5	85.6
Cash crops	2.3	2.4	1.0	2.2
Major Crops (total)	89.0	86.5	63.5	87.8
Diversified and allied agriculture	6.0	6.0	19.7	7.8
Tobacco	0.0	0.0	6.1	0.9
Agro-processing	0.8	1.0	4.6	0.9
Retail trade and services	2.7	2.3	4.7	1.5

Note: Diversified and allied agriculture includes growing crops other than the major crops (food and cash), animal husbandry, fishery, agri-services and forestry. Agro-processing covers food processing, textiles and wood work. Services include Hotel, education, health and the group washing, cleaning, hair dressing etc.

The Box below gives a disaggregated picture of the diversified activities of enterprises in which the farm women's presence is observed⁴. The category 'processing'⁵ covers a large number of activities all of which convey value addition to agriculture. Tobacco enterprise covering two different activities constituting the

⁴ Tobacco, perfumery (including agarbatti) and craft are the activities that are found to have high share of women entrepreneurs (96%, 100% and 70% respectively).

⁵ The processing group includes food processing activities like Flour milling, Dal milling, Rice milling, Processing and grinding grains, vegetable milling, flour of meal of dried leguminous vegetables of roots and tubers of edible nuts, breakfast foods by swelling and roasting cereal grains, starch and sago products, glucose syrup, gluten, corn oil, animal feed, bakery products, sugar, gur, khandsari, cocoa, chocolate, confectionery, sweetmeats, macaroni, noodles, tea, coffee, edible nuts, malted and infant foods, spices, papads, vitaminised high protein flour, dried dal and cereals, Manufacture of Beverages (non-alcoholic); Textile based processing such as Spinning and weaving of cotton fibre, of silk fibre, wool, other animal hair, manmade fibres, Durries, druggets, rugs, carpets, coverings of jute, mesta, coir, other floor coverings of textiles, sunhemp, cordage, rope, tine, netting, thread, jute rope and cordage, coir rope and cordage, mesta, nets, Embroidery, laces, fringes, zari, ornamental trimmings, linolium, mantles, canvas goods, sanitary towels and tampons, metallised yarns, gimped yarn, rubber rubber, water proof textiles, knitted, crocheted fabrics of cotton, woolen and synthetic substances. Textile garments and accessories, raincoats, sheetings, hats, caps of waterproof textiles, leather apparels and Crafts like Basketry, grain bins, bamboo and reeds works, wooden containers, canes, rattan, bamboo willow, grass, leaves, wooden, industrial goods, cork products, bamboo and cane articles and fixtures thatching from reeds, grass, broom sticks, wooden agricultural implement, shopping bags and ornamental boxes, costume articles, trays, table-lamps, fancy baskets, table mats, vessel holders.

process of ‘bidi’ production, namely the making of the ‘bidi’ and collection of the raw material i.e., ‘tendu’ leaves from forests, is given as a separate category. In particular our interest lies in activities of enterprise that exclude tobacco although the size of this sector is equivalent to processing sector taken together. This is because the viability of this historic self-employment base of women in India is questionable in the current context⁶.

BOX

Enterprises with Women’s presence
Agricultural (Primary): Growing roots, tubers , cones, forage plants etc., fruits and vegetables; seeds, nursery products, spices, nuts, animals and fishery; agro-services, Forestry, forest services and collection. These exclude conventional crop based activities.
Share in workforce : 1.9%
Processing (PRC): Food processing; Textiles; Leather; Wood; Paper.
Share of workforce : 0.4%
Tobacco : Tobacco products (Bidi, cigar etc.) manufacture and collecting Tendu leaves.
Share of workforce: 0.5%
Trade : Retail Trade
Share of workforce : 0.2%
Services : Hotel; health; recreation; education; washing, hairdressing etc., finance and real Estate.
Share of workforce : 0.2%
All Enterprises (Entrep)
Share of workforce : 3.5
All enterprises (Entrep-adj) except Tobacco
Share of workforce: 3.0%

⁶ Bidi industry spanning most states in India may be as old as 119 years (since 1887) in India. A number of activities such as procuring Tendu leaves, cutting leaves to specific sizes, filling with tobacco, rolling and tying with yarns and curing in oven and selling make up the major functions in the industry. Factory production of bidi is known for its sub-human conditions but much of the processing has a home-based and unorganized character and is managed by contractors. The flexibility of a home-based avenue of earning possibly attracts women (and even children) constituting an estimated 68% of total workers encompassing the whole industry. The pitiable conditions of working in this industry, a subject of several studies (SEWA 1997, Sekhar S., 2004 Verma,2005) as also the decreasing production and consumption of beedi/tobacco, known to cause 3 million deaths per years in the world and facing curbs from government policies, raise the need for suitable alternative livelihoods for women.

3.6. Socio-economic profiles of entrepreneurs

In the comparison of the entrepreneur profiles across the industries of engagement in table 3.8, households in primary activities turn out to be socially and economically more privileged in terms of economic conditions but these women have less education. The MPCE capturing economic well-being of the households is highest among primary and low among tobacco and processing enterprises. Land possession is highest at 1.4 hectares. In contrast average holding of the processing women falls short of a hectare. Tobacco is worse. More than 41% of the processing entrepreneurs belong to backward castes while this share is 36% for trade and services and only

28% for primary activity based entrepreneurs. Women workers have a low level of education with 92.5% having up to primary level schooling. The entrepreneurs in particular have a better record than this but the processing entrepreneurs seem to be more educated than the others. The average age of the entrepreneur is greater than the average woman worker.

Table 3.8: Socio-economic attributes of women Workers and Entrepreneurs from Farm households						
Attributes	Worker	Entr ep-adj	Toba cco	Primary	Proce ssing	Trade& services
Household characteristics						
MPCE (Rs)	401.5	453	369	499	398.8	432.1
Land possessed (hectares)	1.16	1.08	0.40	1.40	0.82	0.89
SC/ST (%Households)	42.3	31	33.5	28	41.3	36.5
Labour Households (%)	55	48.9	72.6	36.1	55.8	61.0
Female headed (%)	3.5	15.4	9.8	20.5	9	10.7
All Adult female members illiterate (%)	65.6	52.4	45.6	55.6	52	60.8
Member characteristics						
Average age (Years)	35.9	38.2	29.3	41.1	36.5	41.6
Member not beyond primary education (%)	92.5	80.3	87.5	92.8	86.1	90.0
Note: Entrep-adj= entrepreneurs excluding those working in tobacco. Computed						

3.7. Structure of the enterprise

The processing organization is far from modern (table 3.10). Not even 7% of the enterprises have any system of written accounts. Accounting practices are followed to an extent by tobacco enterprises because they are usually tied up with more organized units. Most of the enterprises run only with family labour with no hired labour and nearly 70% operate from home with no separate office or work space. The picture is especially dark for manufacturing and in particular in food processing and textiles.

Modernisation indicators	Entrep-adj	Tobacco	Processing (total)	Food Processing	Textiles
Keep Accounts (%)	6.7	13.6	0.1	0	0.3
Employer (%)	0.7	0	0.8	0	0
Worker <6 persons	88.6	95.3	83.1	80	80.4
Keep accounts	6.7	13.6	0.1	0	0.3
Works from Home	68.6	88.9	73.4	61.7	71.9
No fixed place of work	1.2	0	0	0	0
Workplace fixed and not Home	0	0	0	13.2	0
Electricity use			2.5	9.7	0.8

Note: Electricity use is for manufacturing only

3.8. Spatial distribution of entrepreneurship

Tamil Nadu, Uttar Pradesh and Gujarat are the top three states for women's entrepreneurship as well as primary-activity based entrepreneurship but for processing the eastern states West Bengal, Orissa and Bihar are above the rest. Ranking of states by the incidences of entrepreneurship (Table 3.11), it is observed that the top twelve states account for 93% or more of the entrepreneurs in each case and 99% in case of Trade and services.

Since the state populations influence the entrepreneurs' shares in the total, the tendencies of taking up entrepreneurship by farmwomen are better captured by the shares in respective workforce. Some contrasts are noted in table 3.12 when we rank the states by these tendencies. The developed north Indian states Punjab and Haryana

that record the lowest work participation rate (WPR) of farmwomen rank high in their tendencies towards entrepreneurship, specifically in primary based enterprises. The eastern states West Bengal, Bihar, Orissa, Assam and Tripura are in higher positions when ranked by processing relative to primary based enterprises. In industrialized states like Maharashtra and Gujarat the tendency towards processing based entrepreneurship is absent.

State	Entrep	Entrep-adj	Agricultural	Processing	Trade	Services
Tamilnadu	17.60	17.20	17.80	9.90	20.70	5.90
Uttar Pradesh	11.40	12.70	15.20	7.20	9.30	10.80
Gujarat	11.20	13.40	19.30	0.90	8.30	0.00
Andhra Pradesh	9.30	11.10	6.90	8.30	18.30	40.00
West Bengal	9.00	5.60	2.60	16.20	8.10	3.60
Rajasthan	8.10	9.80	13.30	6.70	1.40	0.00
Karnataka	7.60	5.80	5.00	9.30	2.20	10.90
Bihar	5.70	4.40	2.00	11.80	8.40	1.90
Kerala	4.20	3.90	4.80	3.40	0.00	3.30
Maharashtra	4.00	4.40	4.50	3.10	4.10	9.00
Orissa	3.90	3.00	1.20	12.90	3.30	9.50
Madhya Pradesh	2.40	1.10	0.30	3.70	4.10	0.00
Megh-Miz-Nagaland	1.70	2.10	2.90	0.10	1.80	0.90
Punjab	1.20	1.50	1.90	0.00	2.00	1.50
Himachal	0.80	1.00	1.40	0.60	0.10	0.00
Assam	0.60	0.70	0.20	2.40	0.90	2.10
Haryana	0.50	0.60	0.50	0.00	3.90	0.00
Manipur	0.40	0.40	0.00	2.30	1.10	0.00
J&K	0.10	0.20	0.00	1.00	0.00	0.00
Tripura	0.10	0.10	0.00	0.10	0.00	0.50
Arunachal Pradesh	0.00	0.00	0.00	0.00	0.10	0.00
Sikkim	0.00	0.00	0.00	0.00	0.20	0.10
UTs	0.2	0.2	0.1	0	1.6	0

Table 3.12: Share of Workers in Population and Share of Entrepreneurs in Workforce for Women

State	Workforce (%Population)	Share of Entrepreneurs in Industries (% Workforce)					Services
		Entrep	Entre- Padj	Agri- cultural	Processing	Retail Trade	
Punjab	4.0	23.3	23.3	19.1	0.0	2.4	1.9
Manipur	22.9	11.4	11.4	0.0	9.2	2.2	0.0
Meg-Miz-Nag	66.6	11.2	11.2	10.0	0.1	0.8	0.4
Kerala	21.8	12.4	9.7	7.8	1.3	0.0	0.6
Haryana	5.5	8.2	8.2	4.4	0.0	3.8	0.0
Gujarat	50.1	6.4	6.4	6.0	0.1	0.3	0.0
Rajasthan	44.2	5.8	5.8	5.2	0.6	0.1	0.0
Tamilnadu	61.4	6.9	5.6	3.8	0.5	0.5	0.2
West Bengal	18.1	10.0	5.1	1.6	2.2	0.6	0.3
Himachal	42.1	4.2	4.2	3.8	0.4	0.0	0.0
Uttar Pradesh	22.1	4.2	3.9	3.0	0.3	0.2	0.3
Tripura	10.4	3.5	3.5	0.0	1.3	0.0	2.2
J&K	8.1	3.0	3.0	0.4	2.7	0.0	0.0
Orissa	32.1	3.6	2.9	0.6	1.5	0.2	0.6
Sikkim	43.9	2.7	2.7	1.2	0.0	1.1	0.4
Assam	14.5	2.6	2.6	0.5	1.3	0.2	0.6
Andhra	68.3	2.2	2.2	0.9	0.2	0.3	0.6
Karnataka	56.8	3.1	2.0	1.1	0.5	0.1	0.3
Bihar	25.3	3.0	1.9	0.6	0.8	0.3	0.1
Maharashtra	67.7	1.0	0.9	0.6	0.1	0.1	0.1
Madhya Pradesh	57.2	0.6	0.2	0.0	0.1	0.1	0.0
Arunachal	49.4	0.1	0.1	0.0	0.0	0.1	0.0
UTs	27.1	4.5	4.5	1.6	0	2.9	0
India	40.3	3.5	3.0	1.9	0.4	0.2	0.2

4. Distress, Development and Intervention: Secondary data based exploration of women entrepreneurship

The secondary data from NSS, studied in Chapter 3, is further used to infer certain crucial associations in the economy. Associations such as with income levels and distress have been noted in literature in the case of women's participation in economic life and have powerful implications for any policy aimed at gender empowerment and poverty alleviation. The expected query would be whether similar associations also apply to entrepreneurship as a particular form of participation. Empirical exercises are conducted to examine if women resort to entrepreneurship simply in response to distress or whether or not it can be a more general developmental option and if entrepreneurship can be used as a policy to improve women's bargaining power in the economy. Also, the key developmental constraints to entrepreneurship are categorized and the degree of association among the resultant indicators and entrepreneurship is worked out.

4.2. The likely identity of the entrepreneur

Logistic models, both binary and multinomial, are estimated on the NSSO data to know the correlates that can identify the entrepreneur as a woman, a human being and a householder. The correlates considered are typically socio-economic indicators such as the age and education level of the woman, the economic status of her household measured by the landholding class (small includes the landless), the household size indicating both the extent of responsibility in family welfare and the possible extent of support that can be possible, the status in the household as a head (who could be a widow with less family support in reality), a spouse of the head and other member and finally the regional location of her residence having a bearing on the social customs that guide her choice. The bi-variate logistic model considers the probability of being an entrepreneur as the outcome variable and the data base is that of the women workforce that includes

choice of any occupation other than entrepreneurship. While measuring the probability of joining the ranks of entrepreneurs we make a distinction between enterprises with or without tobacco related activities. In the multi-nomial case the sub-data base is that of entrepreneurs (excluding tobacco) only and the outcome variable to be explained is the likelihood of taking up one among the following activities for their enterprise, namely, primary, processing and others.

There are important differences in the results depending on whether we consider tobacco activity as an enterprise or not. Overall, the entrepreneur comes from a small holding class and has a rudimentary level education. On the contrary, an entrepreneur who is not engaged in the tobacco business on the average is likely to belong to a more privileged household in terms of landholding, is the head of a household, and has the privilege of higher level of education. Either way, they show higher probability to be located in the west-central region of the country, have a smaller family size and be above 35 years of age when the responsibility of child rearing is abating. The differences reflect the features of a likely entrepreneur in tobacco business as a member belonging to a typically small holding poor household with little alternative.

Within the group of entrepreneurs not engaged in tobacco business, we find that a typical entrepreneur in primary or processing activities are most likely to be in a younger (between 25 and 35 years) age group. The number of children has a positive correlation with the likelihood in both cases but while the primary entrepreneur is more likely to come from a medium holding household than other entrepreneurs, in processing the small holding profile is more plausible. An important difference is observed in the educational attainments. While the processing entrepreneur is likely to be educated despite the poor background, the primary entrepreneur is probably not literate. The processing entrepreneur is most likely to be located in eastern India and the primary entrepreneur in the west-central.

Table 4.1: Most likely profile of an entrepreneur identified by Regression				
Categories/ Variables	All enter- prises (1)	All enterprises Excl. tobacco (1)	Primary (2)	Processing (2)
Land class	Small	Large	Medium	Small
Age-group	>35years	>35years	25-35 Years	25-35 Years
Household Status	Others	Head	Head	Head
Education	Primary	Beyond Primary	Illiterate	Beyond Primary
Children No.	Less	Less	More	More
Region	West Central	West Central	West Central	East
Note: Specification are as follows: 1) Estimated by binary logistic model on workforce data. 2) Estimated by multinomial logistic model on Entrepreneur. (excl.tobacco) data. The estimated models are presented in Appendix table A4.1. Less: No. of children is a continuous variable and less denotes a negatives effect.				

4.3. Development with gender sensitivity

Entrepreneurship is an economic activity. The women's ability to indulge in entrepreneurship is likely to be linked with general economic development of the state through demand and supply linkages and with the infrastructural facilities of the state. In particular women, because of conventional household duties are more strongly dependent on certain aspects of infrastructure, household amenities, health and awareness. Due to biological reasons and social backwardness, women's integration in economic life could be additionally related to the fertility rate and public safety.

To examine the linkages among various developmental aspects of the states with women's tendency to participate we have computed correlation coefficients (Pearson's) and tabulated them in Table 3.13 (a) and (b). First, the states are assigned scores for certain composite indicators of development. These indicators are designed with particular attention towards the gender implications. The development indicators, whether economic, physical, social, administrative or legal are neither independent nor isolated factors in influencing women's economic participation. They act together in different combinations and are also mutually interdependent. The basic developmental variables are taken from various official sources such as the Central Statistical Organization (CSO), Census, National Family health Survey (NFHS-II) and National

Sample Survey Organization (NSSO) and the composite indicators are constructed using Principal components analysis as explained in the Annexe to this chapter. Constrained by data availability we considered only 21 states excluding Tripura. For states which have been bifurcated in recent times weighted averages are taken using the populations as weights. The period of covered is 1998-2001 and averages of the variables are considered. On the one side we have considered women's participation as workers and entrepreneurs as variables (Worker, Entrep, Entrep-adj, Entrep-primary, Entrep-processing and Entrep-Trade and Services). On the other side we considered six indicators related to different dimensions of development, namely, economic development, infrastructure, awareness, health, safety and household position of women. The scores that represent the composite indicators of development are provided in tables 4 and some of the basic variables in Appendix A4.2.

Table4: Scores and ranking of states by various indicators of development with attention to gender														
Indicator	Economic		Infrastructure		Safety		Awareness		Health facility and status		Position in Home Society		Household Amenities	
STATE	Rank	SCORE	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score
Andhra	8	2.22	9	1.41	5	0.72	13	1.31	13	1.51	15	2.36	8	2.07
Arunchal	17	0.88	11	0.97	20	2.99	16	1.14	19	2.76	10	1.37	12	1.38
Assam	19	0.36	20	0.05	15	2.04	14	1.3	10	1.45	12	1.55	18	0.36
Bihar	21	0	21	0	10	1.38	21	0	17	2.45	20	3.12	20	0.2
Gujarat	2	3.34	4	2.21	7	1.01	10	1.89	12	1.49	7	0.66	9	2.05
Haryana	5	2.51	5	2.1	17	2.07	11	1.67	8	1.14	9	1.37	3	2.77
Himachal	4	2.83	6	1.64	16	2.04	2	2.86	2	0.06	3	0.57	2	3.23
J&Kashmir	11	1.75	16	0.62	13	1.64	15	1.19	9	1.19	21	3.45	10	1.92
Karnataka	9	2.1	7	1.63	9	1.28	7	2.27	5	0.73	11	1.4	7	2.08
Kerala	6	2.49	8	1.46	19	2.94	1	4.28	1	0	1	0	6	2.14
Madhya Pradesh	15	1.02	13	0.9	21	4.15	17	0.93	20	3.21	17	2.42	15	0.84
Maharashtra	1	3.37	2	3.26	14	1.8	6	2.38	6	0.74	8	1.15	4	2.17
Manipur	16	0.98	19	0.23	1	0	3	2.84	14	1.58	13	1.71	13	1.2
M-M-N	14	1.26	15	0.74	4	0.64	8	2.2	21	3.69	5	0.58	19	0.31
Orissa	20	0.34	10	1.04	11	1.46	18	0.81	15	1.97	18	2.68	21	0
Punjab	7	2.49	1	3.67	8	1.06	4	2.57	3	0.38	4	0.57	1	3.51
Rajasthan	10	1.95	14	0.82	18	2.21	20	0.38	16	2.21	16	2.41	14	0.98
Sikkim	12	1.74	12	0.97	2	0.19	9	2.08	11	1.49	6	0.65	5	2.16
Tamil Nadu	3	2.84	3	2.58	12	1.54	5	2.41	4	0.72	2	0.39	11	1.74
Uttar Pradesh	18	0.62	18	0.41	6	0.88	19	0.57	18	2.64	19	2.94	16	0.75
W.Bengal	13	1.62	17	0.55	3	0.49	12	1.47	7	1	14	1.82	17	0.56

Notes: Scores obtained by using Principal components analysis of data on developmental variables. M-M-N is Meghalaya, Mizoram and Nagaland. See Notes for the elaboration on scores.

The ways in which the development indicators can influence women’s participation, are profound and often involve a two-way causality. For example, women’s superior position at home may encourage economic activity and enterprise among them but at the same time such economic independence or access to money income can also empower women to gain status at home. We have opted for a correlation analysis rather than regression because of following two reasons:

- 1) The variables are non-stochastic and any presupposition of causality can be ruled out.
- 2) The number of observations is small, limited by the number of states.

Despite the variety, the correlations computed across states seem to suggest that (1) most development indicators are positively associated with enterprise, (2) primary entrepreneurship is also associated with progressiveness of the states but the absence of a positive association in processing suggests that this form of enterprise could be an outcome of distress, (3) work participation of women as a whole is associated positively with some of the development indicators but the relations are not strong, only urbanisation of the state and its public safety being important correlates. The analysis also seems to suggest an advantage in primary based enterprise for women.

Table4.3(a): Correlation coefficients (Pearson’s) between Economic Participation and Macro variables						
Indicators	NSDP	URB	TFR	Literacy	Rape	IMR
Worker	0.340	0.448*	0.011	0.048	-0.431*	0.047
Entrep	0.516**	0.379*	-0.318	0.524**	-0.289	-0.481*
Entrep-adj	0.541**	0.357	-0.262	0.471*	-0.256	-0.417*
Primary	0.691**	0.457*	-0.233	0.454*	-0.209	-0.254
Processing	-0.336	-0.66	0.073	-0.001	-0.107	-0.255
Trade	0.268	-0.174	-0.254	0.321	-0.417*	-0.44*
Services	0.310	0.173	-0.391*	0.219	-0.184	0.085
Note for Tables 3.13(a) (b):One tailed tests conducted * Significant at 0.05 **Significant at 0.01. The variable specifications are explained in the Annexe.						

Indicators	Economic	Infra-structure	Aware-ness	Poor Health	Poor Safety	Amenities	Poor HH Position
Worker	0.335	0.284	0.020	0.123	-0.234	0.011	-0.227
Entrep	0.443*	0.585*	0.547**	-0.633**	-0.361	0.506**	-0.404**
Entrep-adj	0.457*	0.632**	0.521**	-0.589**	-0.311	0.573**	-0.393*
Primary	0.579* *	0.797**	0.408*	-0.577**	-0.152	0.620**	-0.441*
Processing	-0.263	-0.380*	0.183	0.064	-0.223	-0.202	0.192
Trade	0.260	0.271	0.428*	-0.446*	-0.327	0.509**	-0.348
Services	0.292	0.509**	0.246	-0.381*	-0.312	0.347	-0.218

Note: Same as in Table 4.3(a).

4.4. Distress and participation

Work participation among the farm women and likewise their entrepreneurship could be a response to distress in which case the solution might be to increase welfare measures. Table 4.1 identified certain features of the women's profiles that make them likely to participate in entrepreneurship and some of the features suggest that the participants especially in primary activities may be hailing from relative privileged households.

Different indicators of economic affluence by states are plotted against work participation and enterprise of women in Figures 4.1 depicting some crucial relations across states. Women's work participation appears to be more in states with higher share of total population employed as casual (hired) labour and in states with higher share of total population in landless households. This is an indication that work participation of rural women could be distress induced. The same relation however hardly follows in case of entrepreneurship in particular. The scatters in Figures 4.1.1 and 4.1.2 show a nearly perverse relation between affluence and work participation demonstrating the scanty participation of women in economic prosperity while in Figure 4.1.3 and 4.1.4 we find women are not averse to join the process as entrepreneurs whatever be their status. The plots for share of women as workers against share of women workers as entrepreneurs indicate an approximately downward sloping line. Thus enterprise is not distress driven across states although work participation appears to be so.

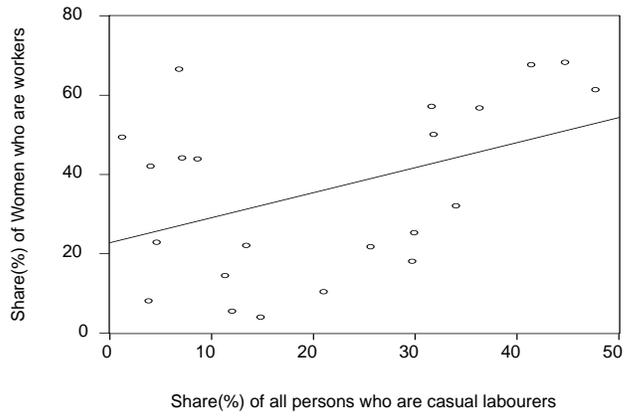


Figure 4.1.1

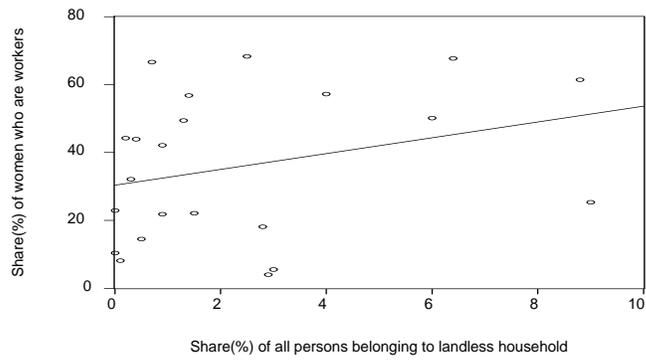


Figure 4.1.2

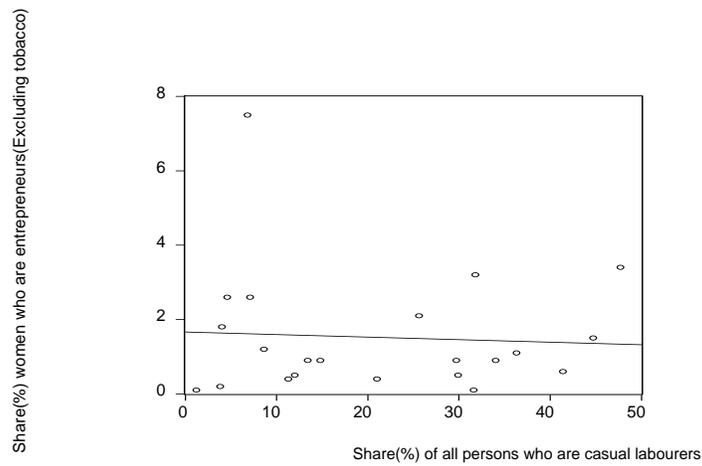


Figure 4.1.3

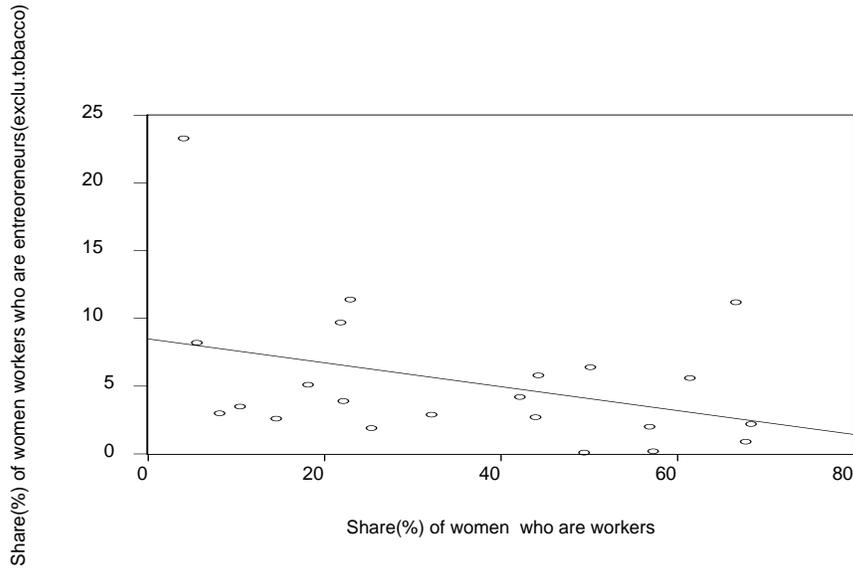


Figure 4.1.4

4.5. Entrepreneurship as a supply side intervention

The low wage rate of women workers in rural labour market mirrors the weaknesses of the market that works against the interests of the supplier of labour. Both demand and supply side forces determine wage rate, an indicator of the market condition and women's bargaining power. We have attempted to explain variation of females labour wage rates across states by demand and supply side major factor using regressions on the cross-section household level data and enquired if enterprise has a role as an exogenous intervention.

Agricultural growth can create demand for labour and help to raise farm wage rates so that states with higher NSDPA (net state domestic product in agriculture) register higher female wage rates. However considering NSDPA alone as a variable gives a poor equation for wage rate with an insignificant coefficient (Eqn.1 in Table 4.4). On the supply side if we consider women's work participation rate, presumably affected by the

social norms, the equation gains explanatory power (Eqn.2). In a simple model we postulate that demand for labour and supply of labour are functions of wage rate and demand and supply side variables represented by ZD_j and ZS_j with market clearing identity as follows:

$$D = f(W, ZD_j)$$

$$S = f(W, ZS_j)$$

$$D = S$$

Giving $W = f(ZD_j, ZS_j)$

The dependent variable W is Wage for female casual labour and the variables considered are

Demand side: NSDPA (of state), FSZ (farm size). NSDPA is expected to have a positive effect on labour demand and wage rate while a larger farm size can facilitate mechanisation bringing down wage rates. Supply side: WPRF (work participation rate of females) increases supply in labour market and can reduce wage rate. This is postulated to be decided by social norms of the time in the state. Landlessness (LANDLES) is a distress related factor that reduces the bargaining power of labour. Literacy rate (FLIT) is a factor that can restrict supply in local labour market however working in two possible ways, first depending on alternatives available for literate labour and the other on attitudes of educated manpower towards manual labour. Female literacy however has a significant positive correlation with NSDPA (Figure 4.2) and hence both variables are not used in conjunction. In equation 3 we find a significant effect of literacy on wage rate. Two intervention variables are also tried as supply side variable. ENTP is the proportion of entrepreneurs in workers presumably amenable to public promotional policies and expected to provide an alternative to wage labour. Similarly another alternative is provided by public works in which wage rate (WGPWF) is administered and is expected to set a floor for market wage.

Eqn.	Constant	NSDP A	PWFF	FSZ	FLIT	LNDLES	ENTP	WGP WF	RBA R-SQ
1	35.1 (4.1)	0.000 (0.48)							-0.04
2	49.3 (9.8)		-0.28 (-2.45)						0.21
3	31.4 (2.3)		-0.29 (-2.63)		0.33 (1.85)				0.28
4	36.1 (4.2)	0.001 (2.88)	-0.41 (-5.25)	-2.33 (-1.85)		-1.40 (-2.09)	2.61 (4.09)	0.17 (3.15)	0.53

Dependent is Wage (W). T-statistics are in the parentheses. Sample size is 21.

In equation 4 we find all the variables are significant and as expected. Both demand side and supply side variables appear as significant influences on wage rate. It is noted that women’s economic participation in general brings down casual labour wage-rate, as does the distress factor landlessness. On the other hand, government intervention to promote enterprise among women has a positive and statistically highly significant effect on wage rate. Remarkably, the wage rate in public works also has a successful role to help women workers.

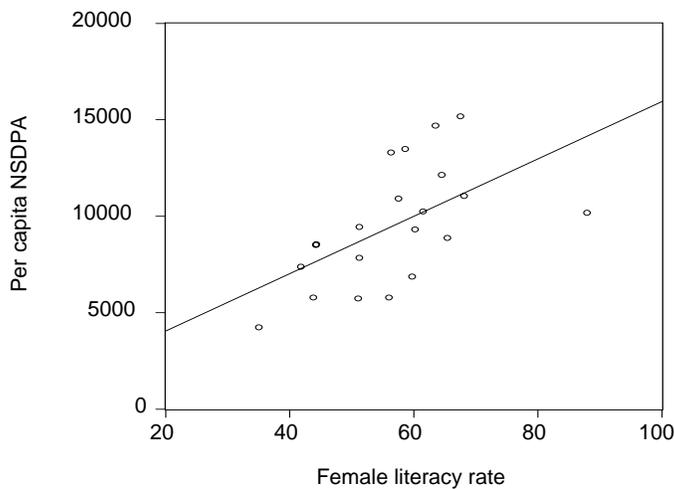


Figure 4.2

Table A4.1: Logistic Equations to explain participation as entrepreneurs								
	Binary Logit (database- women work force)				Multinomial Logit (database- Women entrepreneur Excl.tobacco)			
Categories	All Entrepreneurs		All Entrepreneurs (Excl. tobacco)		Agriculture		Manufacturing	
	Co-eff.	S.E.	Co-eff.	S.E.	Co-eff.	S.E.	Co-eff.	S.E.
Land class (Base is large)								
Landless	-0.386	0.009	-0.495	0.009	-1.667	0.026	14.935	0.024
Small	0.056	0.008	-0.148	0.008	-0.302	0.023	16.639	0.010
Medium	-0.175	0.008	-0.279	0.008	0.09	0.024	16.581	0.000
Age-Group(Base is >35 Years)								
15-25 Years	-0.679	0.002	-0.978	0.003	-0.216	0.009	0.462	0.008
25-35 Years	-0.363	0.002	-0.449	0.002	0.731	0.006	0.790	0.007
Household Status(Base is others)								
Head	-0.160	0.003	0.006	0.003	0.897	0.007	0.174	0.012
Spouse	-0.035	0.002	-0.013	0.002	-0.199	0.006	-0.070	0.007
Education (Base is others)								
Illiterate	-0.658	0.003	-0.601	0.003	0.670	0.008	-0.050	0.009
Up to Primary	0.065	0.003	-0.034	0.003	0.569	0.008	-0.020	0.010
Covariates-Household characteristic								
No. of children	-0.006	0.000	-0.025	0.001	0.011	0.002	0.090	0.002
Intercepts								
North	-0.595	0.012	-0.479	0.012	1.823	0.032	-0.851	0.030
West Central	0.119	0.012	0.226	0.012	2.718	0.032	0.124	0.030
East	-0.692	0.012	-0.168	0.012	0.253	0.032	0.518	0.029
Himalayan	-0.854	0.013	-0.856	0.013	2.301	0.034	0.278	0.034
South	-0.461	0.012	-0.216	0.012	1.106	0.032	-0.730	0.029
Constant	-0.378	0.050	-1.092	0.050	-0.768	0.039	-	0.032
							17.032	
Explanatory variables are as follows: Asset: Land class (possessed) as Landless, Small (less than 2 hectares), Medium (2 to 10 hectares), Large (more than 10 hectares); Age: Age group as 15 to 25 years, 25 to 35 years and more than 35 years; Household status: as Head, Spouse (of head), Others; Education level: Illiterate, Up to primary and beyond Primary; Children: number of children in household, Region: North, West Central, East, Himalayan and South where North=Punjab Haryana and Uttar Pradesh, West Central= Gujarat, Rajasthan, Maharashtra, Madhya Pradesh, East=West Bengal Bihar Orissa Assam Himalayan= Himachal, Tripura, Manipur, Meghalaya-Mizoram-Nagaland, South=Tamil Nadu, Karnataka, Andhra Kerala.								

Table A4.2 : Macro indicators of Development									
STATE	PCNSDP (Rs) at constant price	Sex Ratio (per 1000 male)	Urban (%population)	Bpl (%population)	Female Headed Household %	Literacy rate (%)	Total Fertility rate	Infant mortality rate	Daily Wage
Andhra	9445	978	27.0	11.1	12.1	61	2.3	66	26.48
Arunachal	8521	893	20.0	40.0	7.3	55	2.7	63	42.73
Assam	5785	935	13.0	40.0	8.4	64	2.4	70	35.55
Bihar	4245	924	12.9	44.3	9.6	49	3.6	73	31.57
Gujarat	13490	920	37.0	13.2	9.0	70	3.0	63	34.43
Haryana	13308	861	29.0	8.3	8.1	69	3.1	57	51.01
Himachal	11051	968	10.0	7.9	22.0	77	2.2	34	50.36
J&kashmir	7385	892	25.0	4.0	6.5	55	3.0	65	66.07
Karnataka	10912	965	34.0	17.4	13.9	67	2.3	52	27.14
Kerala	10178	1058	26.0	9.4	25.1	91	2.1	16	56.65
Madhyaprad esh	7849	937	25.2	37.1	6.0	64	3.6	86	24.91
Maharashtra	15186	922	42.0	23.7	9.8	77	2.7	44	25.28
Manipur	6873	978	24.0	40.0	9.3	69	3.4	37	47.40
Megh-miz- nag	8875	938	24.2	40.0	14.4	69	4.4	62	51.99
Orissa	5735	972	15.0	48.0	9.3	64	2.5	81	23.34
Punjab	14698	876	34.0	6.4	9.5	70	2.4	57	49.48
Rajasthan	8550	921	23.0	13.7	8.5	61	4.1	80	37.02
Sikkim	10250	875	11.0	40.0	9.2	70	2.9	44	40.60
Tamilnadu	12144	987	44.0	20.6	15.0	74	2.2	48	30.78
Uttar Pradesh									30.08
West Bengal									35.59
INDIA	93852	933	28.0	27.1	10.4	65.4	3.07	67.6	29.01

Definitions: PCNSDP=per capita net state domestic product (Rs) at 1993-94 prices
BPL=population below poverty line(%)AGSHARE=share of agricultural sector

Note:

.....

Annexe

Composite indicators

The interest in this study is brings out various different dimensions of development. The variables indicating development status of any state are varied, intuitively interrelated and with wide overlaps. Based on this understanding we have attempted to calculate

composite indicators for the different dimensions using the method of Principal components analysis (PCA). For each indicator, relevant variables of development are taken up and after examining the correlations among them the constituent variables are selected. In particular variables showing negative correlations are omitted from the PCA. The variables are appropriately manipulated for consistency of expected association. For example along with per capita income, the inverse of poverty level is desirable for the common indicator. The computer programme (SPSS) for PCA yields a score for each state centred around zero. The generated score is however scaled up for our use so that our score has a minimum value of zero. Further, the values are then ranked by the score and sorted for presentation in Tables A4.6.

The following sub-sections give the details of the variables considered, the constituent variables used to arrive at the composite indicator and the proportion of variance accounted for. For details of variable definition and abbreviations see Appendix 2.

Economic

Variables used for the purpose of studying enterprise cover per capita income, diversification from agriculture and inequality indicated by poverty. Sources of data are given in bracket.

Variables in this dimension:

PCNSDP-Per capita Net State Domestic Product (Central Statistical Organisation)1999-00

SHAREAG-Share of Agriculture sectors in Gross domestic Product (Central Statistical Organisation) 1999-00.

BPL-Share of population below poverty line (Planning Commission 1999)

Variables for PCA

- 1) PCNSDP
- 2) APL= 1-BPL

3) SHARENAG=1-SHAREAG

% Variance=63

Infrastructure

Good roads and power are considered as constituents of physical infrastructure for the purpose. In addition banks are considered as infrastructure. In this case what is relevant for enterprise in the amount of loans disbursed for the rural sector. All three variables are standardised with respect to population.

Variables in the indicator:

SROAD-Surfaced road length per capita in Km as of (Statistical Abstract of India) 1999.

POWER-Installed capacity in 000KW per capita in 2002-3 (Statistical Abstract of India).

LOAN-Loans per capita disbursed by Cooperative Banks 1998-99 (Statistical Abstract of India).

RLY-Railway

Variables for PCA

1) SRAOD

2) POWER

3) LOAN

% Variance=63.5.

Public Safety

This is closely related to infrastructure but is taken separately due to its special implications for women. We have taken incidences of crime, rape and abduction on women. Crime is total number of persons arrested deflated by population and rape and abduction are rates. However these relate to cases reported and not only omit many such

cases not reported but also higher reporting may actually indicate efficiency of the system. The nature of data available is a limitation in this case.

Variables in indicator:

CRIME-Number of persons arrested for any crime per capita ()2001.

RAPE-Rate of rape reported ()2000

ABDUC-Rate of abductions reported ()2000.

Variables for PCA:

1) CRIME

2) RAPE

3) ABDUC

% Variance=47.5

Awareness

Awareness is assumed to come from formal education captured by schooling as also literacy from formal or informal sources and also from media. For newspaper, Television and radio NFHS reported information had to be used. This relates to ever married women between ages 15-49 who are exposed to the media at least once a week. It is presumed the information reflects the general level of exposure of women of working age in the respective states.

Variables in indicator:

FLIT-Female Rural literacy rate (Census) 2001

MEDSCH-Median years of schooling for female above age 6years (1998) NFHS2

NEWSPAP-Proportion of women who reads a newspaper (1998) NFHS2

TELEV-Proportion of women watches television (1998) NFHS2

RADIO-Proportion of women listens to radio (1998) NFHS2

Variables for PCA:

- 1) FLIT
- 2) MEDSCH
- 3) NEWSPAP
- 4) TELEV
- 5) RADIO

% Variance=75.5

Health

Having good health is essential for an economically active and efficient life. While a healthy life-style is important for the purpose, civic hygiene, information and awareness and preventive action as well as curative facilities are necessary inputs to achieve the same. Public programmes and actions are crucial for assuring health of the citizen, especially the rural people majority of whom are poor. Morbidity reduces human capacity for work and takes away effective time from family members' routine also. Sometimes contagious infectious diseases pay havoc on communities that may range from common cold to AIDS. Tuberculosis and malaria are two common maladies in India that takes toll of human abilities and resources and are preventable by public efforts. Women usually take up responsibility of caring for the sick at home. In particular sickness and death of children including new born children are a source of anguish and disquiet. However, effectively designed programmes of public health and reproductive child care can bring down infant and child mortality rates. Women also devote time for pregnancy and child birth. The declining fertility rate is expected to enable women release time for income earning activities for a higher standard of living of the family. Finally, whether the issue is illness due to contagious or life-style disease, or problems of infants and early childhood or it is pregnancy the health facility available helps in accessing timely and quality medical attentions and a quick return to active life.

We have tried to cover a broader range of attributes affecting health. Fertility rate is considered to approximate women's pregnancy related constraints in health. Infant and Child mortality and morbidity in terms of tuberculosis and malaria are taken as proxies for sickness. Finally to account for the quality and adequacy of the health care facility, we have used the NFHS2 reported (ever married) women's perception through their report on waiting time in the health care centre in the last 12 months. The state level health information are all taken from NFHS2 though the fertility rate and mortality rates are based on Census data.

Variables in indicators and PCA:

TFR -Total Fertility rate for rural sector based on 2001 (Census) data. TFR

IMR-Infant Mortality Rate for rural sector based on 2001 (Census) data. IMR

CHMR-Child mortality Rate for rural sector based on 2001 (Census) data. CHMR

MORBTB-Tuberculosis incidence per one lakh rural population (NFHS2) 1998.

MORBMAL-Malaria incidence per one lakh rural population (NFHS2) 1998.

HFAC-Adequacy of health care facility as average waiting time in the facility (NFHS2) 1998.

% Variance=52.6

Reproductive constraints

This is a set of indicators that reflect the women's constraints due to marriage and motherhood. Although this is an undeniable role given by biology the extent of constraint in modern times can be considerably mitigated. Technology, public information and social changes are important instrument in raising marriage age, reducing the number of children, spacing the births of consecutive children and resultantly improving the quality of life of the children ever born. Much of this is closely but subtly related to education,

media and reproductive health care addressed in earlier indicators. In this group we have taken up the (singulate) mean marriage age of women, Exposure to family planning message in past few months and spacing between births measured by the median number of months between the most recent birth and the previous birth.

Variable in Dimension:

MAGMAR-Mean age of marriage of women (NFHS2) 1998

EXFP-Exposure to Family Planning (NFHS2) 1998

CLBS-Median closed Birth Interval (NFHS2) 1998.

Variables for PCA:

- 1) MAGMAR
- 2) EXFP
- 3) CLBS

% Variance=51.7

Household Amenities

It is known that women take up most of the household regular duties many of which are mostly drudgery, being time consuming and repetitive and hardly incorporating any element of creativity. Household amenities therefore particularly help women and generating extra time for leisure, child development and income earning. Household amenities are a wide range of facilities that make household duties easier including items of modern technology. Many of these involve affordability and rural distribution and service net working. We have considered some basic amenities that are amenable to public policy and that can in turn influence use of other amenities like electrical apparatus. We considered living space, availability of drinking water in the premises, use of LPG cooking gas and firewood for fuel and possession of bathroom facility in the house.

However, the PCA analysis is conducted over four variables and the scores computed from these indicators that measure the availability of electricity and water and use of cooking gas and possession of bathroom in the house.

Variables in Dimension:

POWER-Proportion of households having access to electricity (Census) 2001.

WATER-Proportion of households having access to water in premises from tap or hand pump (Census) 2001.

BATH-Proportion of households having bathroom in house (Census) 2001.

GAS-Proportion of households using cooking gas (LPG) (Census) 2001.

FWOOD-Proportion of households using firewoods (LPG) (Census) 2001.

Variables for PCA:

- 1) POWER
- 2) WATER
- 3) BATH
- 4) GAS

% Variance=64.0.

Women's Position at home

In this dimension we look for a set of variables that actually verges into the intra-household domain. These variables are greatly determined by social norms and practices as also human characters but yet can be manipulated by public information, demonstrations through media, public incentives, legal enforcements and above all by women's agency. The two way cause and effect relation between any indicator and women's work participation and enterprise can be expected to be most dominant in this case. Illiteracy is one aspect that makes women powerless and a victim of social

prejudices. Some manifestations of women's powerlessness in home and inferior positions are considered to be absence of access to money for spending, compulsion for permission to go out of house and mistreatment from husband, in-laws and any other persons.

In this indicator we consider the variables as absence of a good position of women. No access to money is surprisingly found to bear a negative correlation to most other indicators of position. In fact this variable and the variable measuring mistreatment from any member have negative loadings in the component vector and are omitted. The data taken from NFHS2 relate to ever married women used here in approximation and reference period is past 12 months. Household decisions relate to the following: What to cook, own healthcare purchase of jewellery and staying with parents.

Variables in Dimension:

LITF-Share of women who are literates (Census) 2001.

NODEC-Proportion of women not involved in household decisions (NFHS2) 1998.

NOMON -Proportion of women with no access to money (NFHS2) 1998.

MISHUS-Proportion of women reporting beating or physical mistreatment from husband (NFHS2) 1998.

MISLAW-Proportion of women reporting or physical mistreatment or from in-laws (NFHS2) 1998.

MISANY-Proportion of women reporting beating or physical mistreatment from any other person (NFHS2) 1998.

PERMIS -Proportion of women having to take permission to go to market (NFHS2) 1998.

Variables for PCA:

- 1) NLITF=1-LITF
- 2) NODEC
- 3) MISHUS
- 4) MISLAW
- 5) PERMIS

% Variance=53.8.

5. The Primary surveys: Coverage, Method and Profile

In the following Chapters we collate and summarize the findings of the primary surveys on women entrepreneurs conducted at the same time in various parts of India. A number of Agro-economic research (AER) Centres participated in the 'Coordinated' project in undertaking sample surveys in their assigned areas constituting nine different states in India. The 'Investigators'¹, as the undertaking Centres are referred to subsequently, and their assigned areas are as follows:

1. Agro Economic Research Centre of Punjab Agricultural Economics, Ludhiana-Punjab;
2. Agro-economic Research Centre for North-East India in Jorhat- Assam;
3. The Agro-Economic Research Centre of Sardar Patel University Gujarat-Rajasthan;
4. The Agro-economic Research Center of Himachal Pradesh University, Shimla;
5. The Agro-economic Research Center of Delhi- Haryana
6. The Agro-economic Research Center of Delhi- Uttarakhand
7. The Agro-economic Research Center of Bhagalpur-Bihar
8. The Agro-economic Research Center of Allahabad- Uttar Pradesh
9. The Agro-economic Research Center of Waltair- Andhra Pradesh

Overall, the study was designed by the author at the Institute of Economic Growth in consultation with the above Centres and the Ministry of Agriculture, Government of India. The Department of Economic and Statistics (DES) of the Ministry of Agriculture not only sponsored the project but also contributed by motivating an objective and unqualified enquiry into the subject. In this chapter, the methodology of sampling is explained against the background reality of the regions. The following sections also provide a summary description of the regions surveyed, the profile of the sample households and also an idea of the enterprises and how they are practiced. The

¹ The Investigators are actually teams of researchers representing the AER Centres who conducted the primary surveys. Endowed with qualified manpower with the required expertise and local knowledge, they have worked with their independent judgments though in a coordinated way. The individual reports they produced on the states by themselves are micro-studies on the same subject.

descriptive portions are entirely based on the perspectives brought out in the reportings of the Investigators (AERC, 2006-08 reports).

5.2. A Flexible Method

After the pilot preliminary surveys were conducted in the respective areas, when the investigators conveyed their first impressions, it was found that the subject involved a great deal of regional diversity and complexity making it difficult to conceptualize a perfectly uniform framework for all regions. Taking account of their concerns, the Coordinating centre in consultation with contact persons in the DES and the Indian Council of Agricultural Research (ICAR) who had initially proposed the theme of research, decided to accommodate and bring out the differences through a partly flexible design. It was found that only some areas had witnessed an active public programme for promoting entrepreneurship that also included support in various forms while some other regions already had a history of women's entrepreneurship that had evolved spontaneously. There were occasional training programmes in many areas that appeared to prove useful but successful entrepreneurship without any training programme was not uncommon in others. In contrast, some Investigators found it hard to locate in their jurisdiction any untrained entrepreneur as training seemed to have been the main stimulus for entrepreneurship. This was especially true for non-traditional products many of which were expressly launched by the promoting organization. In some cases the local Non-Governmental Organizations (NGO) were also active in organizing training programmes. In Rajasthan entrepreneurs benefited from an intensive NATP programme (see Chapter 2) that aimed for an all round empowerment of women but in Punjab entrepreneurs pursued the vocations without training and with less active intervention from NATP. Technological modernisation, innovative experimentation and improved Extension were at the heart of the programme in Himachal and integration of women in the programme was an important component. Such a singularly motivated approach was lacking in most other states.

Questions also surrounded the sources of training. As one of the intentions of the study was to assess the usefulness of training, it was decided that while ICAR organised training could be a preferred reference point, training received from other

credible government or non-government sources should be admissible in the survey. Further, to accommodate control groups for comparison, it was decided that non-trained entrepreneurs would also be studied. A question as to who would be constituting the woman entrepreneur also required some deliberation since entrepreneurs were found to work both as individual members, family or in social groups or as members of Self-help Groups. It was decided that the individual entrepreneur would be considered as the unit of study even if they worked in unison.

Entrepreneurship itself was rare in many of the surveyed areas depending on the economic conditions of the region, the vigour with which it was promoted as well as prevalent social norms. Some Investigators therefore found it hard to locate farm women who were entrepreneurs. When the prevalence varied, uniformity of sample size could not be a rigid condition and in fact it was felt that the size of sample would be potentially a measure of the difficulty of locating the subjects. Taking account of the expertise that the Centres possessed they were deemed to be the best judge of the situation given the ground level realities. While the Coordinator framed a detailed questionnaire, a sample framework and minimum guidelines, the individual Investigators would use their judgement in drawing their samples and making their queries to capture the best picture of the reality but under the broad guidelines for the sake of consistency.

A list of contact organisations and their addresses in the different regions was provided by the ICAR in Delhi and communicated by the Coordinator. The Investigators would consult with them as well as other knowledgeable authorities of the regions they could identify and create their frames and draw samples of trained and untrained entrepreneurs. They were however expected to use random sampling methods for each enterprise activity, target at least 3 most common enterprises of the areas and select a total sample size preferably not of a size less than 100. As far as possible the products under study would be based on raw materials that could be sourced from the surrounding nature and agriculture, though the enterprises promoted in the NATP covered also those that may not be perceivably linked to agro-inputs. Regular communication was maintained between the Investigator and the Coordinator.

The Centres contacted the regional KVKs and the State Agricultural Universities and identified activities of women entrepreneurship common in the area along with the specific regions that appeared to be intense in such activities. Three to seven activities of common enterprise are selected for study in each region. Using the attendances in training programmes, lists of trained entrepreneurs in the corresponding area are drawn out. Similarly lists of non-trained entrepreneurs were also made with the advice of the KVKs and the participating NGOs, to make the frame as balanced as possible. In certain cases, where training was not common or not considered necessary, the sample comprised mostly or entirely of non-trained entrepreneurs and in cases of new activities for which training became essential, there was no way to sample non-trained entrepreneurs. The women belonged to typical farm households though land ownership was not treated as a binding condition.

The Investigators then solicited various objective and subjective information on the enterprises, the entrepreneurs and their households. The survey was conducted between 2004 and 2005 but the sample enterprises initiated and operated during the period between 2001 and 2004. The regional results were compiled into individual reports.

5.3. Analytical categorization of Enterprises

The enterprises found commonly adopted and reported by the investigators mostly belonged to primary and food processing groups but diversification into handicraft items and also into new products with ecological importance were also in evidence by virtue of the public promotional efforts. While analyzing the results for the present purpose, in view of the large variety of activities covered, the enterprises were classified in four broad groups, namely Primary production (PP), Food processing (FP), New and eco-friendly products (NEC) and Crafts (CRF). The details of the activities covered under the broad enterprise groups and their input use tendencies can be understood from reading Table 5.1A.

5.4. Regions and Survey details

The total sample size added up to 1186 covering a number of activities falling into one or the other of the above four enterprise groups. The regional diversity in geography, social norms and economic conditions also was vast across the studied area. The states covered belong to northern, eastern, western and southern parts of India and the regions surveyed depicted coastal, fertile, desert and hilly landscapes, a variety of cropping patterns and varied endowments of infrastructure as also different population profiles. The search for samples also led to encounters with diverse issues that gave each case its uniqueness. We will therefore give a brief discussion of the survey procedure as reported by the individual investigator along with a short descriptive note.

5.4.1. Punjab

Punjab, situated in the fertile north Indian plains close to the national capital, is one of the economically advanced states of India. The state has shown spectacular growth in agriculture with the green revolution. Punjab is also second in India in Human Development Index, with a literacy rate of nearly 70% and low poverty ratio of 6.2%. The state is mostly agrarian with 40% of people employed in agriculture and allied activities. Despite the impressive indications, the place of women in society has not been exemplary. Women's work participation is low at 19%. Crime rate against women is low but many cases of domestic harassment go unreported, the sex ratio is poor and women's participation in Panchayat (local government) is less than the reserved 33% ratio. The social norms are largely against women's taking up out-door economic work.

The Investigator chose four most popular activities in two districts Gurdaspur and Amritsar falling into two enterprise groups. These are Dairy (DRY) and Beekeeping (BK) in the primary group (PP) and Papad-Badi (PB) and Pickle(PCK) making in food processing (FP) group. All four activities have a close link with agriculture. Other activities noted by the Investigators in the region but not surveyed are Basket and mat making, Mushroom cultivation, Jam-Jelly processing and Vermin composting. They observed that most respondents did not feel it important to acquire

training in order to start the business or even to upgrade their skill and knowledge and it was difficult to find women entrepreneurs who had acquired any training. While no specific training was given in Papad-Badi activity in recent times, at least 5% non-trained sample could be presented in the other cases. The list of entrepreneurs was prepared in consultation with the officials of Horticultural Department and KVK for Bee-keeping, Agricultural Dept. and KVK for the two food-processing enterprises and Women's cooperative societies in the districts for Dairy.

5.4.2. Assam

Assam is in the north east of India. The study is conducted by Agro-economic Research Centre for North-East India in Jorhat who obtained complete lists of women who were trained by ICAR. The Directorate of extension education, Assam Agricultural University (AAU), Jorhat facilitated the process. Two districts Jorhat and Golaghat having highest and second highest number of women trained under the AAU programmes were selected and then the common trades Livestock (animal husbandry, pig rearing, poultry farming), Bee keeping and Fruit and Vegetable-processing designated as LV, BK and FV respectively were earmarked for study. As a control group they took a sample of non-trained entrepreneurs at random from adjacent areas.

Both districts sampled fall in the plain area of Assam in Southern part of Upper Brahmaputra valley and are drained by the Brahmaputra River. Jorhat is surrounded by hills, has 73.9% villages electrified, 32% villages connected by all-weather-roads while in Golaghat 53.4% villages are electrified and 49% villages are connected. Road conditions are very poor in the area leading to transport difficulties. Though agriculture is important, Extension has been poor, irrigation projects are lacking, and there are no effective agencies for input supply or for procurement. Traders and middlemen are instrumental in deciding commodity prices.

The soil in the districts is alluvial, rich in organic contents and rainfall is heavy though uncertain (annual 2244 mm) but flood and erosion are persistent problems especially in Golaghat. With 22% irrigation in Assam and only minor sources like shallow tubewell serving in the districts under study, agriculture is hardly privileged.

Rainfall is the single most important determinant of agricultural production. Paddy is the most important crop but commercial crops such as tea, sugarcane, vegetables and fruits are also common. Poverty is widespread and respectively 41% and 47% of rural families in Jorhat and Golaghat districts are below poverty line. The average farm size is small and 82% of holdings are small or marginal. Different poverty alleviation programmes including those for self-employment are launched here including a Self-help-Group-bank linkage programme. Women's socio-economic status is reported to be poor. Their representation in Panchayats is limited and only 81% of the reserved seats were filled in Panchayat Election 2002. Women are hardly active in politics and apparently lack courage and self-confidence for leadership.

5.4.3. Rajasthan

The Agro-Economic Research Centre of Sardar Patel University Gujarat conducted the field survey of trained farmwomen in districts Udaipur and Chittorgarh of Rajasthan. Essentially they targeted the beneficiaries of the ICAR sponsored NATP project which was implemented there. As a control group they surveyed women who were not beneficiaries of the programme and hence were untrained since training was an integral part of the programme in this region. Required secondary information on programme details, beneficiaries and trainings were collected from Home Science College (HSC) and from the state government. After consultation with the faculty responsible for the implementation, they selected 110 trained (NATP) and 25 non-trained women in different enterprises.

The 'Mission Mode' NATP project on 'Employment of Women in Agriculture' was implemented by the Home Science College of Maharana Pratap University of Agriculture and Technology (MPUAT), Udaipur in Rajasthan between September 2001 and December 2004 with three objectives (1) to empower women farmers technologically (2) to reduce their drudgery and (3) to enhance their entrepreneurial skills for improving their quality of life. The programme was implemented through Self-help Groups. Need based area specific entrepreneurial activities were identified based on raw material availability, market potentials and women were trained and mobilized to undertake the income generating ventures. Technical support was

extended along with marketing support. The Group was also given thrift money of Rs. 5000 per entrepreneur and also facilitated to get credit. The training covered production, skills, and financial management, record keeping and marketing. Machines and tools were provided to start enterprise. Thus the entrepreneurs were subject of an important development program and benefited from extensive training as well as financial and technical support. In a significant supplementary step, various innovative implements were provided to reduce their drudgery in farm and animal husbandry operations.

The Investigator surveyed women engaged in five enterprises of (1) Vermi-Composting (VC), (2) improved Animal Feed (AF), (3) Nursery Raising (NR), (4) Fruit and Vegetable Preservation (FV), (5), Papad making (PM), (6) masala making (SPP) and (7) patta-dona (a kind of vessel, PD) under CRF. Thus the activities embraced three enterprise groups including the eco-friendly group (NEC). Various other enterprises like Khoya and Gajarpak (FP), Candle making (CRF), Soya products (FP), Leaf plate (CRF) were also found to be promoted in the area but are not included in the survey.

Rajasthan, the largest state in India is dominated by Aravalli hills and the Thar Desert. A patrilineal system characterizes the society and dowry, male child preference, poor sex ratio (922/1000), early marriage, high fertility rate are the features associated with women's position in society. Working women are mostly marginal or casual workers and exploited in the labour market. Apparently, they do not come out to public forums as men do and even if they do they avoid speaking in public. Poverty and male migration have increased women's work burden.

Udaipur is hilly, arid and tribally populated. Poor rainfall and soil erosion makes agriculture difficult. Land is mono-cropped mostly by maize and coarse cereals. However connectivity is good and industry is progressive. Chittorgarh has a rainfall of 852 mm, is fertile with rivers Chambal, Banas and Gambhiri, the land is irrigated to grow maize, wheat soyabean. The region is also well connected.

5.4.4. Haryana

Agricultural Economics Research Center, University of Delhi has conducted the survey in Haryana and Uttarakhand. In Haryana they have purposively selected the district of Hissar on the basis of the availability of women entrepreneurs, an outcome of the training given to rural women by Home science (HSC) Department, HISSAR Agricultural University under the National Agricultural Technology Project (NATP) funded by the World Bank. From a list of diversified enterprises the Investigator chose three enterprises namely, Dairy (DRY), Vermin-composting (VC) and Pickle making (PCK). Enterprises like tailoring (TL), shop-keeping (SHP), Dari making (DRM) are also covered but not taken up in this study because of their weaker link with agriculture.

Haryana in North West India is one of the economically advanced states known for its lead in both agriculture and industry. Hissar is the central and second largest district of Haryana. It is bordered by Punjab and capital Delhi. The climate is semi-arid and the soil is sandy loam. Share of rural population is 74% and rural literacy rate is low at 37% in the state. Literacy is only 8.7% in one of the surveyed villages. Women's work participation is only 15%. Haryana being well connected and integrated in the National capital region, employment opportunity outside agriculture is extremely favourable. However in terms of diversification, Hissar is lagging behind the state of Haryana. The proportion of scheduled caste (SC) population in surveyed area varies from 20% to 30%. Cultivation is practiced intensively with 84.5% irrigation available, paddy, sugarcane and wheat being important crops. Though commercialization are increasing, basic infrastructure is lacking and the shortage of drinking water imposes additional burden on women.

5.4.5. Uttarakhand

Uttarakhand (earlier known as Uttaranchal) is a hilly state with a little more than 7% of the area located in the plains. Soil erosion and moisture run-off are serious problems in the sloping terrains of the state. Forests occupy 60% of the state area, and only 13% of the area is cultivated. About 74% of the population lives in rural areas and industrialization is severely hampered by the difficulty of communication and the

scattered habitations. Tourism is an important occupation but agriculture is the dominant source of livelihood. Men usually migrate to the plain leaving women to have a prominent role in agriculture as also to suffer emotional isolation.

The survey is conducted in Udham Singh Nagar in the Southern region of the Himalayas, a district carved out of Nainital in 1995. Land in this district is largely cultivable and moderately irrigated by sources such as canals. Paddy, maize, mandua, coarse cereals and pulses are raised. There are some units of sugar, textile and paper industries in the region. The common entrepreneurial activities of the region were identified based on the attendances in the training courses organised at the G.B. Pant University of Agriculture and Technology, Pant Nagar. Consultations with the Department of Home Science also helped. A list of villages where the selected activities are undertaken was then prepared. Six enterprises were selected, namely Dairy (DRY), Papad Making (PM), Mushroom cultivation (MSH), Bee keeping (BK) and Quilt making (QLT). Other activities commonly taken up in the region but not studied include basket making, mosaic printing, and pickle making. The proportion of trained entrepreneur is only 17% in the entire sample but it is 100% for MSH and BK, 80% for QLT but zero for PM and QLT.

5.5.6.Uttar Pradesh

The district of Sultanpur in Uttar Pradesh lies on the bank of river Gomti, and has 65% reporting area under agricultural uses. The region is endowed with different kinds of soils, alluvium, sandy, clay and loam. The normal rainfall is 1005 mm, but the area is comfortable in both surface and ground water resources. Reserved forests and social forestry help preservation of natural vegetation. The population is less dense (577 per sq. km) than the state Uttar Pradesh and the sex ratio is only 980. A large part (95%) of the population lives in rural areas, 13% are Muslims and the literacy rate is poor at 45%. People mostly depend on agriculture, 44% being poor in the rural areas. Paddy is the most important crop but horticultural crops are also grown.

To start the procedure, the Investigator visited several districts in search of women's enterprises and found little success. Thus women's enterprise did not appear to be

common in the state. Finally the district Sultanpur was the only one decided to be the appropriate one for the study. Based on the training courses held in the past, a number of enterprises were identified but not all of them turned out to be popular in practice. Seven enterprises were finally chosen on the basis of the adequacy of sample. These are Agarbatti (AGB), Blanket making (BLK), Spice processing (SPP), Dalia, wheat product (DLA), Milk processing (MLP), Pickle preparation (PCK) and Mauni or Basket making (BSK). The sample size of 100 was allocated equally between trained and non-trained women.

5.5.7. Andhra Pradesh

The three sample districts East Godavari, Srikakulam and Visakhapatnam are all coastal and riverine, with rainfall above 1100 mm and are densely populated. In the deltaic EG, the soil is fertile and 65% of the net sown area is irrigated, canals being most important and rice and coconut are dominant crops. Female literacy is 53% in this privileged state. In Srikakulam crop yield rates are relatively lower and Mesta and cashew are important crops besides rice. Visakhapatnam has 42% forested area and only 32% of land is irrigated but mostly by ayacuts and tanks. Rice, sugarcane and oilseeds are dominant crops. Andhra Pradesh (AP) has the distinction of having one of the highest records for female work participation in the country but unfortunately, a large section of this workforce is in agricultural labour. There is also a high concentration in low paid casual work due to low literacy level and lack of skill. Recently poverty alleviation programmes and the DWACRA programme have been active in the state and about 50% of women SHGs in India belong to this state.

The Acharya NG Ranga Agricultural University (ANGRAU) in Hyderabad is conducting programmes leading to extension and training through the Krishi Vignana Kendra's (KVKS) in the states. Enquiries revealed that the KVK and the Coir Board (a para-statal body) have conducted a number of programmes in preparations of coir items in East Godavari. Coir is locally abundant since coconut is a common crop. In Vishakhapatnam it was found that the KVK under the management of a voluntary agency (Bhagavathulu charitable trust or Trust) and with ICAR assistance has given training in various food and handicraft items. Similarly, in Srikakulam training

in jute handicrafts were given by the voluntary organization (Youth club of Bejjipuram or YC) in collaboration with government agencies. Based on the information and lists provided by the KVKs, one activity was chosen for study in each district, namely Coir products (CP) in EG, Leaf plates (LP) in VSH and Jute handicrafts (JH) in SK and a sample is drawn from each region known to be intense in the activity. Using the lists simple random samples of trained and untrained women entrepreneurs were drawn from each region for the relevant activity.

5.5.8.Bihar

The study is conducted over three districts, Bhagalpur, Munger and Banka in South Bihar plains. The area is drained by river Ganga. The population density is high and agricultural labour constitutes 40 to 50% of the workforce. Infrastructure is fairly poor. In Bhagalpur, Munger and Banka districts, only 56%, 58.6% and 42.0% villages are electrified and there is widespread theft of wires and poles and break-down of transformers that make the situation worse. Also the road intensity is above 300 km/sq Km (more than state average of 200) but the condition of the roads is reported to be very poor. In Banka the irrigated area as a percentage of net sown area is high at 83%, in Munger it is 67% but in Bhagalpur it is below 40%. Female literacy rate is low, highest at 47% in Munger and 29% in Banka.

Agriculture is the dominant activity in this alluvial plain, 60% of the reported area being sown 23% and 15% of area in Munger and Banka being under forest. The normal rainfall in 1140mm to 1170mm and nearly 90% of the holdings are small. Paddy wheat pulses oilseeds and horticultural crops are grown.

Most entrepreneurial trades in agriculture for women are related to horticulture and forests. With raw material being abundant in this area, the study has concentrated on the food processing activities common among the women. The lists women beneficiaries of training programmes were taken from KVKs, Government organizations, Khadi Gramadyog (KG) and NGOs who were involved. Discussions with above authorities and with scientists helped in focusing on five activities: Beekeeping (BK), Presentation of fruits and vegetables (PFV), Preparation of pickles and Murabha (PPM), Preparation of potato chips, badi, papad (PPCBP), Preparation

of jam and jelly (PJJ). Local NGOs helped in identifying entrepreneurs and SHG women members undertaking the enterprises without undergoing ad skill development programme.

5.5.9. Himachal

Himachal Pradesh, situated in the western Himalayas in North India is a border state cradled in the slopes of the mountains. Like other mountainous regions, the state faces severe constraints both in agriculture and industries. The varied climate and topography offer opportunities of growing various temperate and off-season fruits and vegetables and organic farming techniques are often a feasible solution. The soil in Kangra and Bilaspur is susceptible to erosion with low water holding capacity. Forest cover is 40% in Kangra but only 11.5% in Bilaspur. Over 90% of the population in these districts lives in rural areas with expectedly high sex ratios, 1025 in Kangra and 990 in Bilaspur. ST population is very low but with the SC the two minority sections make up 24% and 18% in the two districts.

Work participation rate among women is 40% in Bilaspur and 44% in Kangra, lower than state average (49.2%) but more than all India average. Female share is significant among cultivators. Work participation is also more among marginal women workers. Literacy rate is fairly high in the state, female literacy being 69.5% and 73% in Bilaspur and Kangra respectively. Less than 30% of geographical area is sown and Maize, wheat and rice occupy about 90% of cropped area. Though irrigation by wells is possible due to the low relative altitude of the district the major sources as in other parts of the state are *kuhls* that are not maintained properly. Nearly all villages are electrified and provincial roads connect the villages. Commendably women's representation in Panchayats and as elected sarpanch is about 30%. The ICAR and many NGO's are important agents of developments. With agricultural holding size diminishing, recent attention of scientists, planners and institutions like ICAR has gone to employment generation within the villages though introduction of viable enterprises, since establishment of industries is difficult in the hilly topography.

The Agro-economic research center of Himachal Pradesh University, Shimla contributed to the present study. Six trades (Dairy), DRY) Beekeeping (BK), Vermi-Compost (VC) Chips Potato and Bio-pesticide (CPBP), Diversification (DV) and Fishery (FSH) were selected. Apart from the selected enterprises others like Dry flower production, Mushroom cultivation, Hybrid seed production and non-agricultural enterprises like Pot making, Soft-toy, Candle and Chalk, Embroidery and stitching were also in practice. Initially, lists of women's training modules were gathered from the directorate of Extension education in Palampur and after further discussion with the scientists and the head of the Institute, In the second stage, concentration zones for particular trades were identified and then a cluster of villages were selected from which 30 women with training and 30 women without training were selected randomly for questioning.

5.6. Socio-economic profiles of beneficiaries

Promoting entrepreneurship is not a welfare programme but nevertheless, it calls for intervention and canalization of funds in the absence of a ready market from the supply side. When public resources are constrained, the convention is to concentrate them on those who will benefit the most. In fact any programme that draws on public planning and expenditure needs to be assessed by the merit of its targeting efficiency among other considerations. What criteria would qualify a target? Economic programmes leading to (real) income generation such as the public distribution of food or public works are normally targeted towards the poorest and the most marginalized. Analogously, women's entrepreneurship viewed as a programme of income generation would raise similar expectations. It may be worthwhile to ask if the benefited women belong to poorest households, to backward castes of society, to women headed families and also to the less developed regions of the country. These criteria are more relevant to the context because the objective is to empower the women in the market which draws attention to the women who are currently under economic pressure to participate. Nevertheless, those staying out of the market because of household support are also notional victims of the same market and are only marginally privileged in being able to choose a non-market option.

Table 5.1: Socio-economic attributes characterizing the women entrepreneurs					
Characterization	CRF	NEC	FP	PP	Total
Belonging to SC or ST household(%)	12.30	10.50	5.60	8.50	8.80
Landless, Marginal or Small operator farmer(%)	96.80	98.60	82.00	68.00	81.30
Owning Pucca house (%)	44.40	68.80	58.10	62.10	60.20
Single head of household%	15.50	2.40	5.10	3.80	5.40
Illiterate or less than primary educated (%)	71.40	35.70	51.70	30.70	41.10
Owning transport vehicle(%)	16.00	45.40	33.70	38.90	36.00
Age (years)	36.50	35.80	40.50	37.50	37.60

The issue of women' empowerment however is more complex. Literature has often treated gender empowerment largely as an intra-household matter (see Chapter 1) and targeting based on household features will not achieve much in this respect. Women's empowerment has even been inversely associated with household affluence. It is not even clear whether the search for regional balance, an essential objective of Indian planning, is of much relevance in this context. With the literature providing a complex theorization on gender and development, it is not totally proper to have the conventional targets in mind while assessing women's entrepreneurship. On the contrary, it can hardly be denied that intra-household inferences require microscopic examination without generalization. Recognizing that entrepreneurship is also a programme of income generation, it may be wise not to underemphasize the economic criteria of targeting. In this background we have, at the risk of falling into the usual cliché, examined the socio-economic characterization of the beneficiary households while admitting that precise assessment of the targeting success could be an open-ended objective.

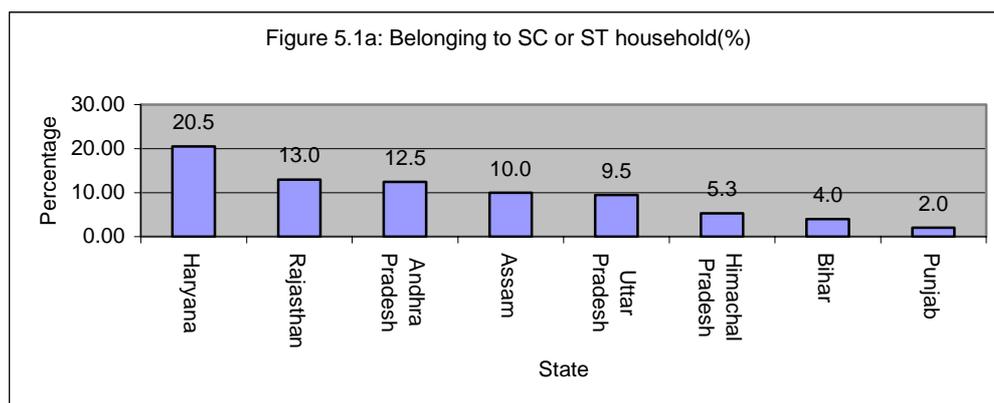
The women beneficiaries who have been sampled have come from varied backgrounds. The comprehensive descriptions show that the entrepreneurs on the whole are from a middle level background in most cases, rather than poor. Although the landless, marginal and small holding groups of farmers constitute over 80% of the sample (Table 5.1) most households have access to at least some homestead land. This observation perhaps agrees with the accepted notion that an access to land is important for empowerment of women (Agarwal, 1994), although the land in this case is rarely titled to the women, except when the entrepreneurs are widowed. This is hardly surprising since entrepreneurial activity does require some physical space. However, there is also a cause of caution regarding broad generalizations. The

Investigators in Punjab reported that certain households possessing no farm land but living close to urban areas enjoyed greater affluence because the location enabled some members to hold salaried employments in cities and because the enterprise of making papad-badi turns out to be extremely lucrative. In fact employment in salaried jobs by one or more members of family provides a window of awareness as well as an alternative way to prosperity. The proportion of such households in the samples is large in the cases of bee-keeping (70%) and papad-badi (100%) in Punjab, vermin-composting (42%) in Himachal, blanket making (40%) and pickle making (80%) in Uttar Pradesh. In Rajasthan even 5% of women themselves have a salaried employment apart, from the entrepreneurial occupation. Also as we will be discussed subsequently, the access to a separate work-place through a cost-effective way could circumvent the dependence on land as an essential asset. In fact, entrepreneurship has greatly benefited the women from landless households of Andhra and relieved them from excessive reliance on the wage labour market. Among other assets, most households possessed comfort items like television and fan and many of them also owned farm assets. Transport vehicles were owned by 36%.

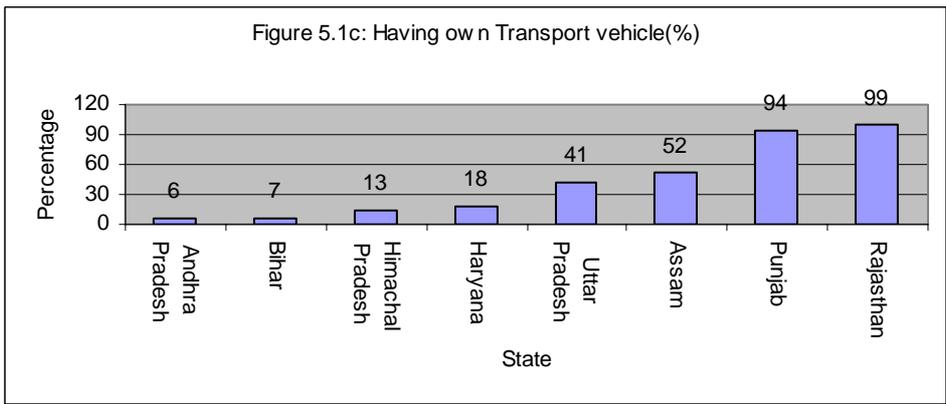
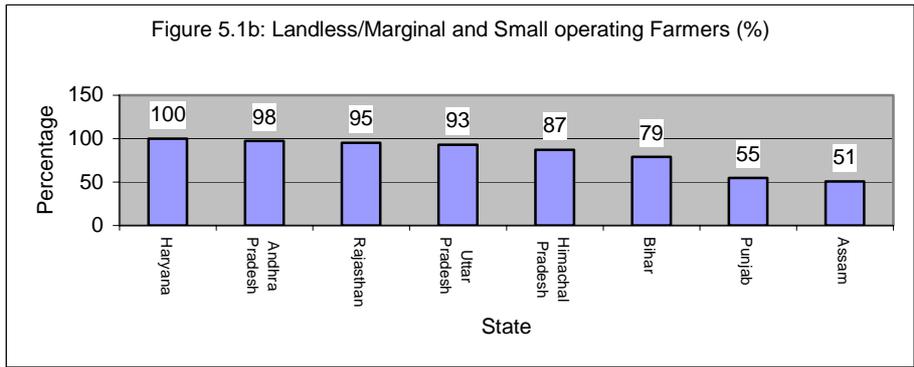
If land possession and the proportion of minority castes SC and ST are used as indicators of deprivation CRF and NEC appear to be better targeted. The enterprises PP and FP in most cases (such as horticulture, fruit and vegetable processing) depend on ample land possession over and above the basic requirements for farming. Alternate indicators of economic conditions, namely the ownership of a transport vehicle and a superior quality residence (pucca house) also suggest that CRF could be the enterprise of the poorest. Though it is possible that the entrepreneurship has also influenced the targeting criterion's realization, it is more likely that these assets have been acquired from past earnings. On the whole the representation of the two deprived castes at below 9% is poor². It is also notable that a mere 5.4% of the women are household heads and are also in the marital category of widow, separated or divorced and even in this respect CRF is found to record the highest concentration of widowed women. More than 40% of the women have education no more than the primary level and this share is also highest at 71% in CRF.

² The share of SC and ST is over 24% % in the Indian population.

Among the states, Haryana, Rajasthan and Andhra Pradesh have recorded the largest shares of SC or ST households as well as of small land holding classes³. However, when the ownership of a transport vehicle is considered as the indicator, entrepreneurship in Andhra Pradesh, Bihar and Himachal Pradesh turn out to be most targeted towards the deprived while Punjab and Rajasthan cater to the most privileged (Figures 1). An attempt to assess the household incomes net of the entrepreneurial incomes shows Punjab and Himachal samples to have modal income of over Rs 1 lakh per year, Haryana and Rajasthan of over Rs 50 thousand, Uttarakhand and Uttar Pradesh of Rs 30 thousand and Bihar and Andhra of only Rs 22 thousand. This is provided in Table 7.2 in Chapter 7 and reflects the state economic conditions more than the targeting efficacy. The report from Andhra Pradesh and Bihar present a varied group of households in the sample. In the Andhra sample OBC is the dominant group, 12% belong to SC and 5% of the women in both Coir and Jute enterprises are in the minority religious group namely the Christians. Only half of the women possess farm land and the rest have only homestead land. The households earn incomes from a variety of sources but wage labour is the most dominant. In Bihar too the OBCs are dominant in the sample and Muslims comprise 12%. Livelihood comes from varied sources including petty trade but cultivation is the most important. The average household income is about the same in both states and the educational profile is also diverse inclusive of graduates.



³ This group includes landless (operating no land), marginal (operating up to 1 hectare of land) and small (operating between 1 and 2 hectares of land).



Appendix

Table 5.1A: Details of Samples in various Regions				
State (MPCE)	Districts	Trained	Untrained	Activities
Punjab (847)	Gurdaspur Amritsar	20	80	Dairy (PP), Bee-keeping (PP), Papad-Badi (FP), Pickles (FP)
Assam (543)	Jorhat Golaghat	100	50	Live-stock (PP), Bee-keeping (PP), Fruit and Vegetable processing (FP)
Rajasthan (591)	Udaipur Chittorgarh	110	25	Vermi-composting (NEC), Improved animal feed (NEC), Fruit-vegetable, preservation (FP), Nursery raising (PP), Papad making (FP), Patta-dona making (CRF), Spice processing (FP), Papad making (FP) Dalia (FP).
Haryana (863)	Hissar	9	30	Dairy (PP), Vermin-composting (NEC), Pickle making (FP)
Himachal (798)	Kangra, Bilaspur	180	180	Dairy (PP), Bee-keeping (PP), Vermiculture (NEC), Potato production using Bio-pesticide (NEC), Diversified Farming (PP), Fisheries (PP).
Uttarakhand (647)	Udham Singh Nagar	16	66	Beekeeping (PP), Dairy (PP), Poultry (PP), Papad making (FP), Mushroom (PP), Quilt making (CRF)
Uttar Pradesh (533)	Sultanpur	50	50	Agarbatti (CRF), Blanket making (CRF), Spice processing (FP), Dalia making (FP), Milk processing (FP), Basket making (CRF)
Andhra Pradesh (586)	East Godavari, Srikakulam, Visakhapatnam	75	45	Coir products (CRF), Jute handicrafts (CRF), Leaf plates (CRF)
Bihar (417)	Banka, Bhagalpur, Munger	67	33	Preservation of Fruits vegetables (FP), Preparation of Jamjelly (FP), Preparation of Potato chips, Badi and Papad (FP), Preparation of pickles, and Murabba (FP)
Note: Figures of rural Monthly per capita consumption expenditures (MPCE) in Rs for 2004-05 (61 st NSSO round) are given in parentheses below the state names. All India MPCE is Rs 559.				

6. Women as Entrepreneurs: Commercial success

The viability of a firm, however small it may be cannot be assessed without considering its economic performance. Undoubtedly, such an assessment may not be easy when there could be multiple goals of functioning and when the firm is at a nascent stage. This chapter builds up the framework for the economic assessment of the entrepreneurial ventures of the farm women taking a view of various related aspects such as the economic and operational profits, unpaid costs and the advantage of having natural resources, the value of which may not be easily measurable. A comparative picture of the enterprises within the states is also provided.

6.2. Measuring Profitability

Profit is the key indicator for measuring business success in Economics. The assumption of profit maximization has its analytical appeal (Pindyck and Rubinfeld, 2002) as also its ability to explain most real life business decisions. However, in the complex industry set up the assumption is often questioned and several other objectives are also explored for their consistency with actual experience.

The enterprises under the present study are simple and micro entities operated mostly at the household level by the owners who are also supervisors and managers. For this class of organization possibly profit measured as the difference between total revenue and total cost is the best indicator of performance. Nevertheless, it is not inconceivable that the women entrepreneurs may have other commercial objectives to satisfy that deserve consideration. For example, in the short run it may make sense for the resource constrained entrepreneurs who are farmers first to concentrate on their production capability without much emphasis on the size of sales and total profit. On the contrary they may even be interested in expanding their market in the short run albeit at a low level of profit. Reaching out to distant markets could be of greater satisfaction than increasing profits for aspiring individuals.

Also, there are important differences between the enterprises under consideration and the typical firm conceptualized in standard text books. The women entrepreneurs belong to relatively lower income households with meager financial power. In fact they are at a disadvantage in obtaining credit from organized sources because of their poor ability to offer security for a loan. The risk of failure can also mean disaster for the women themselves especially when there are sunk costs involved. Unsold products can be a serious burden when the women have very little storage or inventory management facility. Above all, the women are beginners in the business and many tend to treat the enterprise as secondary in importance to their other household chores and farm work so that time itself can be a serious constraint.

The assumption of short run profit maximization in micro-economics presupposes that the scale can be adjusted freely to its optimum level, given the limitation of fixed inputs¹ that are typically visualized to be plant, machinery and overheads. The validity of this assumed flexibility may be limited in the present case when there are also limitations on working capital as well as time. When scale itself is so constrained by the access to most inputs and the access itself is indeterminate, what would be the optimum size? It is possible that the women would tend to optimize in relation to scarce inputs in order to maximize efficiency of resource use. We consider two outcomes that may be maximized, namely the profit per unit of time devoted or revenue per unit of the limited financial resources spent on various inputs. In other words although the profit from the enterprise might be a good indicator of commercial success, when the optimum scale is beyond reach or comes at other costs in the actual circumstance, it may not be adequate to be guided entirely by this measure.

In general we will look at three different profitability indicators measured for an average year during the period of survey. These are specified in the following ways

1. Profit= Total revenue – Total Cost
2. Return on Resources= Total Revenue/Total cost
3. Return on time used= Total profit/Total days of labour and supervisory time spent by entrepreneur.

¹ In the short run the typical text book firm operates with a fixed amount of capital and must choose the levels of its variable inputs (labour and materials) to maximize profit.

The concept of economic cost generally requires that even inputs that are not paid for be included. Such inputs may include family labour, family premises used for the enterprise and family resources. The imputation of such costs creates a problem especially when the opportunity cost is not known. In the following analyses, only the actually incurred cost is considered in the computations though the cost of materials provided by the supporting agencies is also imputed. This is because such support comes only as a temporary and initial measure and the expense would have to be incurred if business continues in the future. Imputation is also required for arriving at the total revenue (sales). This is because not all the product is sold but all or part of the unsold stock is reported to be used by the entrepreneurs' households as useful products. Such imputation is made using market prices.

As alternative measures of commercial success, we consider the returns on resources and the returns on time spent on enterprise as specified in the equations spelt out above. The income per day is notional since such returns are realizable subject to the adequacy of market and production capability to produce uniformly over time. In addition from the policy makers' view, it might be useful to look at the employment generated consisting of both family labour and hired labour.

6.3. Commercial Success

The enterprises as a whole generated an average annual income of less than Rs 20 thousand, that comes to about Rs 1500 a month. For an average family of five members this works out to hardly Rs 296 a month per capita, which is a little more than half of the monthly per capita consumption expenditure of rural people in 2004-05 and is low even compared to the national poverty line. Interestingly, for the rural farm women, primary production comes out as the most lucrative of the activities (Rs 415 per capita per month) followed by food processing. Considering the infant industry status of the initiatives, learning and education naturally work out to be important components of the experiment. Some of the products themselves are new and occasionally bring social benefits so that market formation is neither complete nor is market price the measure of their usefulness. The low profit (Rs 8600 per annum)

earned by the NEC group is not surprising. Profit is positively associated with the scale of operation with FP and PP being operated at the largest scale.

Economic Performance (yearly)	Primary Production (PP)	Food Processing (FP)	New/ Eco-friendly (NEC)	Crafts (CRF)	All Activities
Sales (Rs.000)	39.4	66.7	22.6	22.9	39.5
Profit(Rs.000)	24.9	15.9	8.6	10.9	17.8
Return on Resources (Ratio)	2.95	1.75	8.5	2.94	3.76
Return on time used (Rs./8 hour Day)	226.0	93.07	181.22	303.17	201.53
Employment(days)	117.14	155.9	86.1	240.7	132.5

The Return on resources gives a different ranking compared to profit. The NEC group of enterprises leads in this indicator with a high benefit cost ratio and intriguingly, FP that ranks high in scale and profit comes last with a ratio of 1.75. Overall the enterprises generate returns that are 3.8 times their resource cost. Employment generation is however highest for crafts and least for the group NEC. The average enterprise generated 132.5 days of employment in the year. The returns on the time spent are reasonably high at Rs 201 per day, being highest for craft and primary production and last for food processing. Thus for the time constrained, craft is a good choice but for those with greater constraint on finance NEC is feasible, provided time is at the disposal. For the entrepreneur with more flexibility to decide her scale primary production and food processing are found to be lucrative.

6.4. Family Labour

Measurement of cost is a subject that has always called for finer and realistic conceptualization in production economics. Economic cost, often used synonymously with opportunity cost, is the cost associated with the opportunities that are foregone by not putting the entrepreneurs' own resources to their highest value use. Thus economic cost is not simply the cost that is paid out of pocket. Family is the major source of labour for the enterprises. Most women got the help of household men, spouses in case they were married women, and children too helped in their free times. They hired labour only when the demand was high. To the extent family labour is otherwise idle, the opportunity cost is zero. There are however some indications on

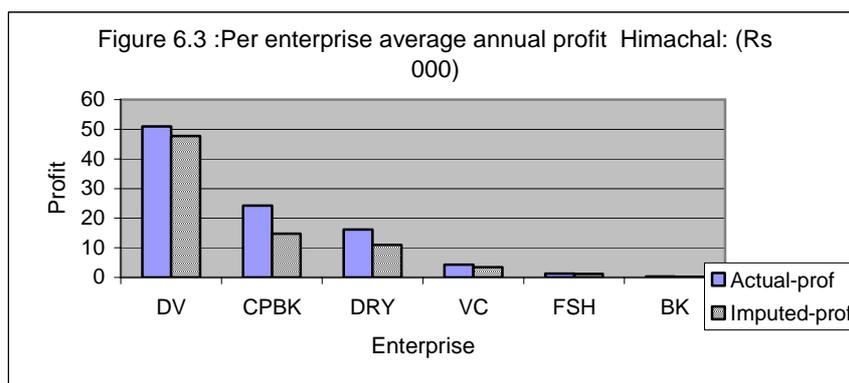
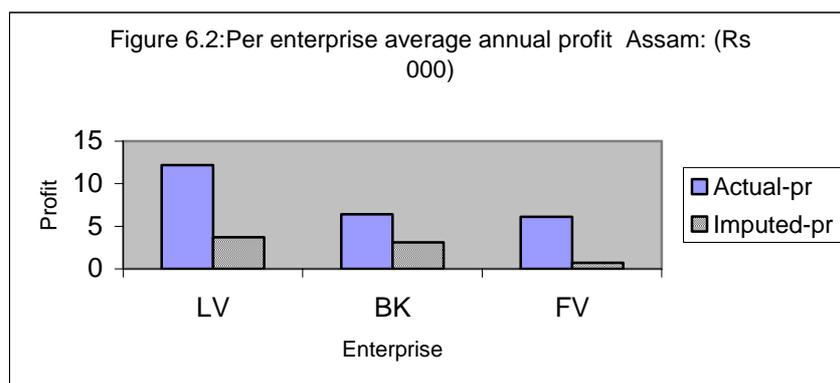
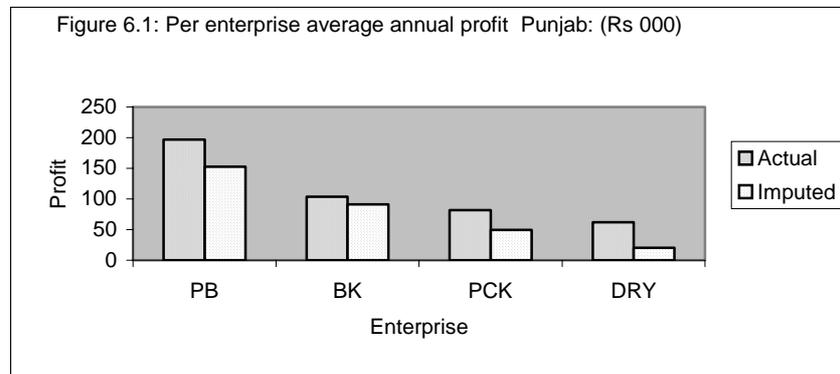
the contrary, as labour shortage arising in respect of male labour is reported when the men have other income earning occupations to compromise on. However, owing to the lack of reliable information of the opportunity cost the calculation made here takes account of all paid out cost, so that family labour is not valued in the comparison exercises. However, when we try to understand the degree of cost advantage enjoyed by the enterprises we do compare the paid cost with the notional cost in which family labour cost is imputed using market wage rates.

6.5. Cost advantages and the use of commons

Nearly all enterprises draw on some inputs that are accessible near at hand. They are either obtained at low cost commercially from local markets, procured in semi-commercial transactions from neighbouring farms, raised on own farms or found freely in the farms. In some cases they are freely available in the village commons. Dairy in all cases benefits from local availability of fodder. The rice, maize and wheat based cropping pattern in Punjab and Haryana and the abundance of grazing grounds, pastures and forests in Assam have helped the enterprise in procuring dry and green fodders. In vermi-composting, vermins and dung are collected freely from own farms or local fields indicating substantial raw material advantage. In most food processing activities, the raw materials are fruits, vegetables, spices or milk that the farmers themselves produce or these are grown by other farmers in the area. In Bihar fruits for preservation and processing are reported to grow even wildly to some extent and the entrepreneurs reported definite cost enhancement on account of deforestation. Crafts make use of natural and farm waste materials such as sticks, grass and leaves. In Andhra Pradesh the local coconut crops served as a source of coir for coir based enterprises. For producing leaf plates 'adda' leaves are collected from forests by tribal people and sold to the entrepreneurs. Jute and mesta grown locally help support the handicraft enterprises in Andhra Pradesh.

Some of the studies showed explicitly how the availability of free inputs that included family labour and local raw materials helped in gaining cost competitiveness of production. They worked out imputed costs that might have been paid if prevailing market prices were paid for such inputs. Needless to say that costs such as the opportunity cost of the space used for production and the interest on financial

resources invested out of family funds are not taken into account. Had they been the contrast would have been more glaring. Figures 6.1 to 6.3 plotted below give a comparison of the profits based on actually paid cost and the imputed notional cost of production in the Punjab and Assam samples.

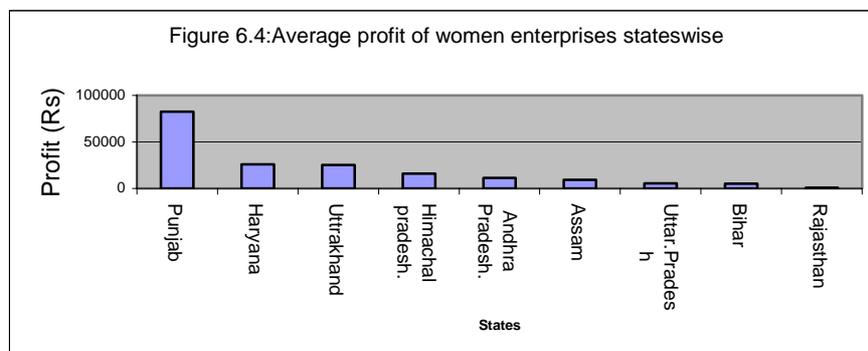


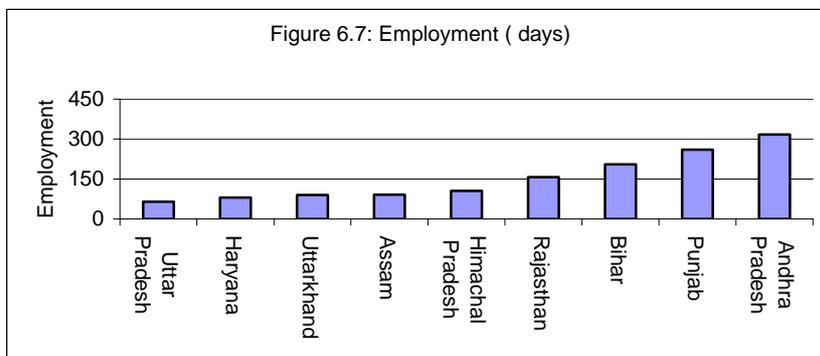
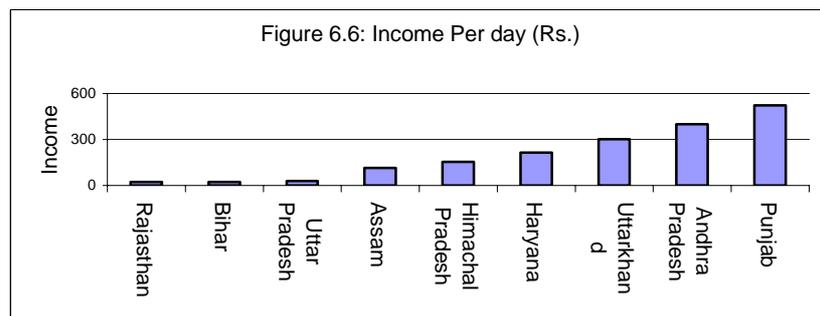
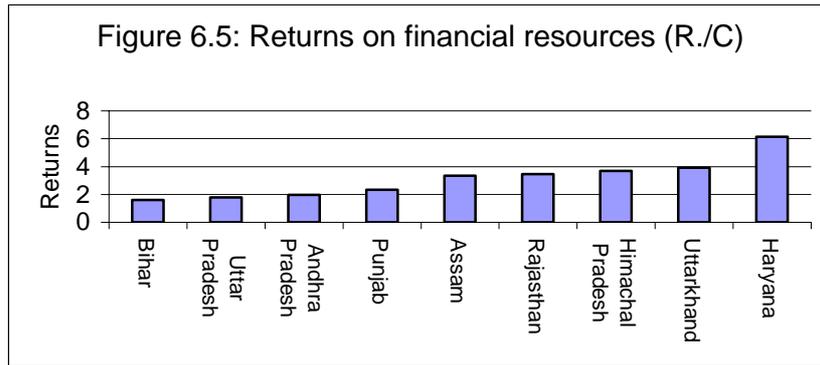
6.6. Natural cost advantages

Over and above these costs of inputs that were potentially purchasable, there are other implicit cost advantages originating from the ecology that could not be valued under the scope of the studies. One prime example of such a case is that of bee-keeping, that requires a pristine environment undisturbed by vehicular pollution. During a part of the year the bees feed on local orchards and mustard fields at no cost and in fact have a useful synergy (they help in the fertilization of the flowers) with the counterpart. For the rest of the year, the bees are fed with sugar in Assam or are migrated to nearby areas. Even in the new locations, they are supported by the forests as in Bihar or on eucalyptus flowers grown in the commons in Himachal. The valuation of such cost could have brought out the cost advantages of such enterprise more explicitly. In Himachal Pradesh, the case of fishery enterprise offers an example of how the topological advantage can help to create reservoirs necessary for the activity although technology and human designing are associate inputs in the plan.

6.7. Comparisons across states

The regional distribution of profitability is brought out in Figure 6.4 which ranks the entrepreneurial annual income by states. The development status of the state appears to have a close relation with the economic performance of the enterprises. Punjab and Haryana are at the top in terms of profit generated while the Bihar, Uttar Pradesh and Assam all known for their lag in development, are the last four states. The other indicators provide varying ranking of the states in commercial success.





It is not as if the disparities are on account of the choice of enterprises. For the same particular enterprise, the disparity across states is significant. For example in Table 6.2 it is seen that livestock or dairy enterprise earns about six times in Punjab and three times in Haryana on the average than that in Assam. Earning in Himachal is a little more than a quarter of that in Punjab. The reasons could be found in the institutions and marketing as would be discussed in the following chapter. In Bee-keeping, the range is wider from over Rs 1 lakh in Punjab to less than Rs 500 in Himachal owing to the variation in the scale of activity.

Beekeeping		Dairy/Livestock		Pickle		Vermicompost	
State	Profit	State	Profit	State	Profit	State	Profit
Punjab	103891	Punjab	62184	Punjab	81946	Haryana	6392
Bihar	7066	Haryana	34915	Haryana	10800	Himachal	4310
Assam	5753	Himachal	16088	Bihar	7205	Rajasthan	710
Himachal	339	Assam	11469	Uttar Pradesh	2862		

Brief summaries of the commercial results reported for each state follow and the relative ranking of the different enterprises covered in terms of different indicators are plotted for the states in Figures 6.5.

6.7.1 Punjab

The average scale of activity varied widely across enterprises but all are profitable. It is only Rs. 106 thousand for dairy (DRY) which is also the least profitable enterprise. Papad badi is the most profitable enterprise and the scale of operation is largest. The alternative indicator returns on resources indicates high levels of viability but the ranking is quite different with Bee-keeping (BK) emerging as the leader at a ratio of 2.79 followed by Dairy at 2.42 while Pickle making and Papad Badi (PB) register the lowest ratios. The reports indicate that the dairy activity is greatly benefited by the cooperative movement and managerial limitations are the only constraints while papad-badi, a vibrant activity spurred by the nearby Amritsar market is inhibited by the shortage of finance. Bee-keeping appears as an activity of simplicity and traditional strength that makes little demand on time. Pickle making is limited by lack of demand.

6.7.2. Assam

The profit earned per annum is highest for livestock (LV) at Rs. 12,500, followed by bee-keeping (BK) and then closely by Fruit-vegetable processing (FV). LV appears nearly double as profitable as others. However the Investigator also reported that profit for LV is highly variable and the enterprises face the inadequacy of marketing infrastructure. Comparing returns on cost ratio, however BK comes out as the leading at 5.1 and LV and FV have comparable figures of 2.96 and 2.09 respectively.

The enterprises BK and FV are facilitated by the natural ambience of the region but in FV seasonality and lack of market are found to have discouraged the women. In BK the affliction of diseases was the major cause of concern.

6.7.3. Rajasthan

All the women here pursue entrepreneurship only as a subsidiary occupation. The scale of enterprise is thus low and does not exceed Rs 1000 in three cases. Correspondingly, the profit varied from Rs. 682 from animal feed (AF) to Rs. 3950 for Papad making (PM). Thus PM, as in Punjab, is the largest in terms of scale and entrepreneurial income. Following PM are fruit-vegetable processing (FV), Nursery raising (NR) and vermin-composting (VC). In the case of VC we have included the imputed cost of raw materials actually received free from NATP and the actual profit enjoyed is higher at Rs. 925 if this is omitted. All enterprises are viable in terms of returns on resources with VC and PM leading. The activities VC and AF have poor demand yet but there were encouraging signs of the possible effects of these inputs in agriculture. Technical guidance was the main need felt by the women entrepreneurs.

6.7.4. Himachal

Potato (PCBP) seems to be the largest enterprise with sales amounting to Rs. 72,000, also yielding a large profit of Rs. 24000. Vegetables farming (reported as diversification or DV), is the most profitable among the enterprises. DV and PCBP yield monthly average incomes of over Rs 4000 and Rs 2000. The Investigator categorized the activities DRY, DV and PCBP as traditional while new ones Bee-keeping (BK), vermin-composting (VC) and fishery (FSH) are less lucrative yielding less than Rs 1000 monthly. Beekeeping gives the least profit. Notably the activities are also pursued at smaller scales. The performance of the newer enterprises is attributed to their relatively recent origin and the infancy constraints of the enterprises. In terms of returns to resource use ratio however, we find that VC has a very high ratio for its low cost and enterprises FSH also performs better. Despite, the low profits till date, the potentials seem to be positive in respect of all the enterprises. All of them gain advantage from the environment and commons and from scientific

research and the commercial limitations lie mostly in their recent origins and their social usefulness.

6.7.5. Haryana

Dairy (DRY) yields the highest average profit and is operated in large scale also. Pickle making (PCK) follows and vermin-composting (VC) has the smallest scale and profit. The employment created is least by VC but even here 119 days employment are generated. The return to cost ratio however is most favorable in VC and low in DRY and PCK. While the enterprise VC is encouraged by the training given, the demand factor is a strength in the other two. Simplicity and expertise make dairy highly preferable.

6.7.6. Uttarakhand

Poultry (PLT) leads in profitability measured by the enterprise level average profit, and Papad making follows while Bee keeping and Dairy are least profitable. However using Return to cost ratio as a measure, Dairy and Bee keeping appear more efficient though less compared to Quilt making but Mushroom culture come last in respect of both measures. The poultry activity is well organized and mushroom cultivation is popular for its flexibility.

6.7.7. Uttar Pradesh

The agarbatti (incense stick or AGB) enterprise followed by Blanket making (BLK) and spice processing (SPP) lead in scale but BLK has the highest nominal profit of Rs.20.3 thousand. Milk processing (MLP) is the second most profitable enterprise. However if profitability is measured as return on resources spent, Basket making (BSK) is the foremost enterprise. This is probably because the raw material is free. Also the revenue is notional, as the product of BSK is not sold at all. The scale of production is small. Similarly, Dalia (DLA) that comes third has a miniscule scale relatively to others. The agarbatti enterprise is faced with low demand. While BLK has good but seasonal demand and SPP has a steady demand, constraints on time, electricity and finance are felt in most cases. Competition is faced by entrepreneurs in

DLA, SPP and PCK (pickle) and under the given marketing institutions there is excessive dependence on a few traders.

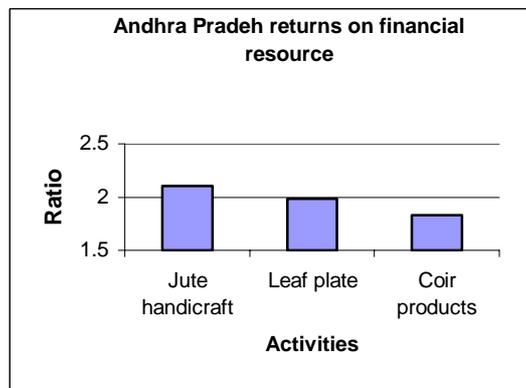
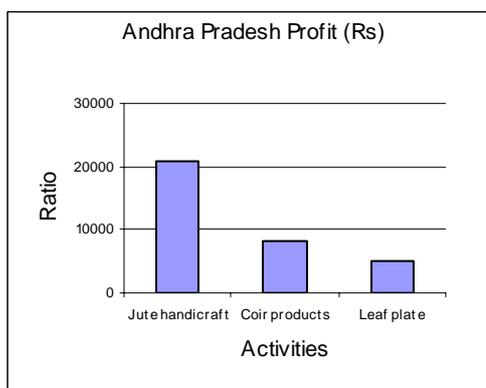
6.7.8. Andhra Pradesh

The Jute handicraft (JH) enterprise turns out to be the most profitable venture among the three, both in absolute profitability and in Return to cost ratio and is operated at a relatively large scale. The Leaf plate (LP) activity is conducted at a smaller scale the annual sales being of Rs 9,931. All three products have a raw material advantage though the inputs are purchased at a cost. The enterprises are advantaged by the local raw material availability, by the training activities of NATP and NGOs and the contractual tie-ups for marketing. Despite the more organized ambience marketing and procurement of raw materials are cited as a problem by the women.

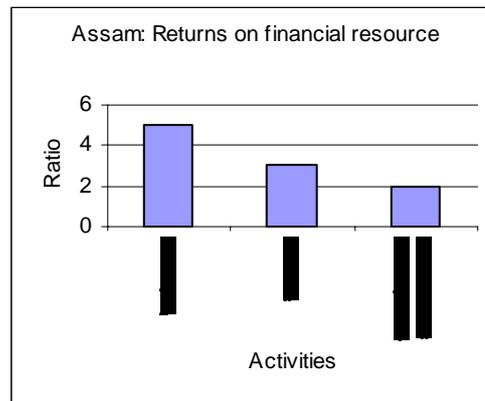
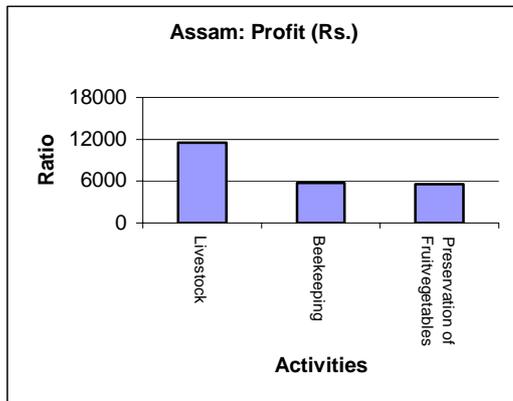
6.7.9. Bihar

In terms of profit, preparation of Pickles and Murabbas (PPM) and Bee-keeping (BK) lead and Potato chips (PPCBP) comes last. Employment generation is however highest at 288 days for PPCBP. Lack of finance, shortage of electricity and space are reported as problems.

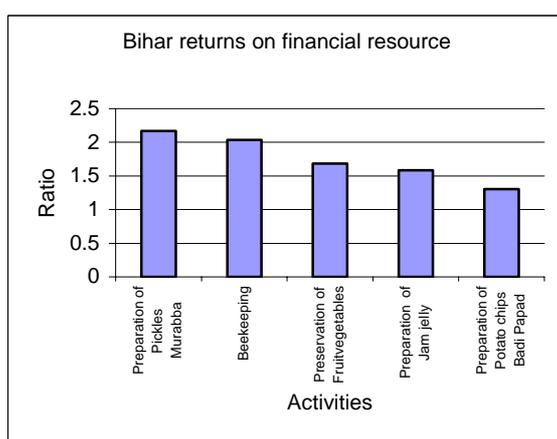
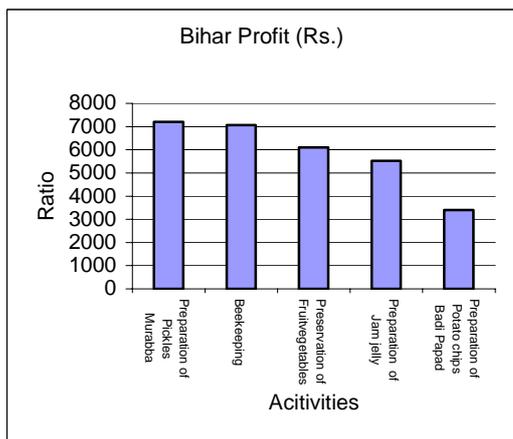
Andhra Pradesh



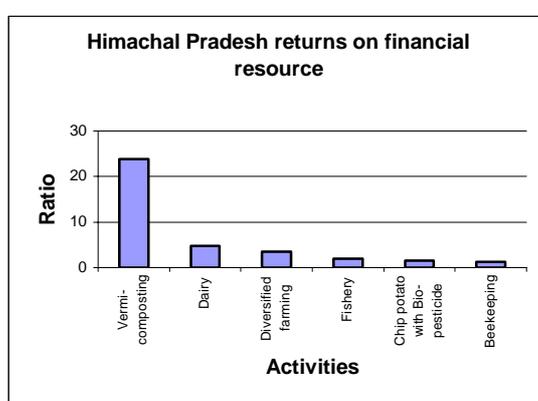
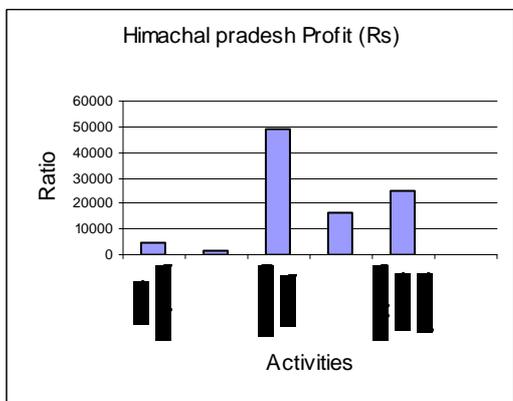
Assam



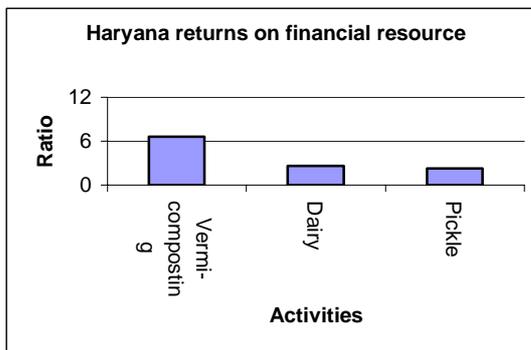
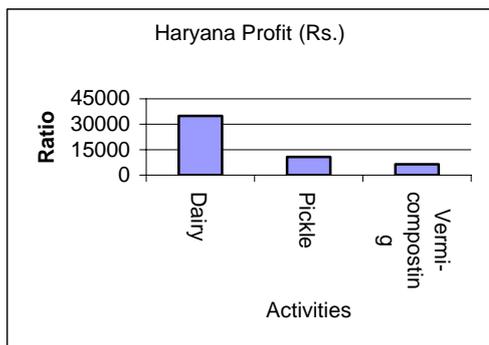
Bihar



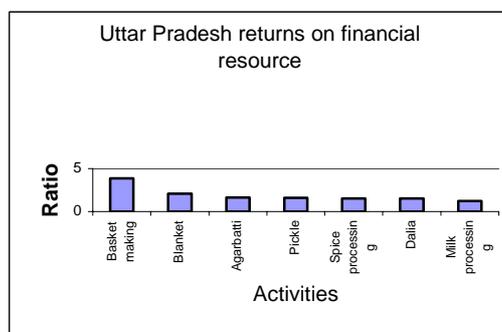
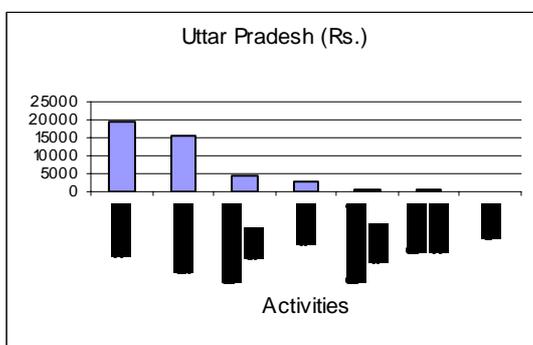
Himachal Pradesh



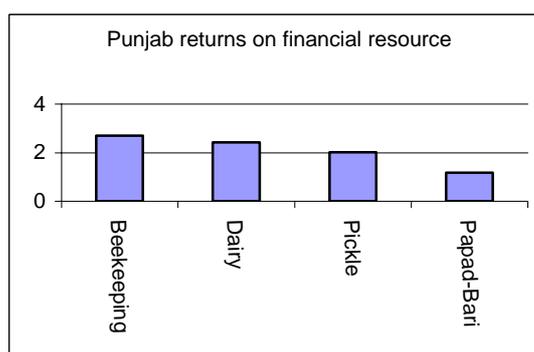
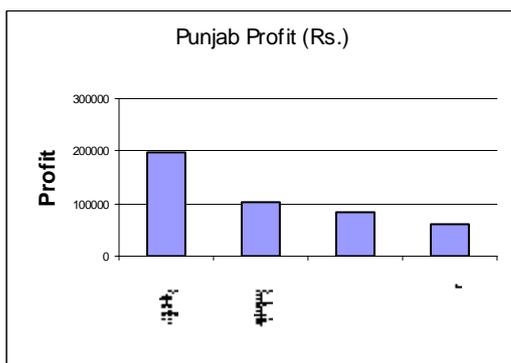
Haryana



Uttar Pradesh



Punjab



7. Factors for Success: Organization, Market intermediations and Training

The success of an enterprise depends on various organizational, institutional and policy attributes. The chapter outlines the way the enterprises operate by discussing the kind of support they receive from various agencies, the organizational structures and marketing channels and the training the entrepreneurs receive. Finally an exercise based on regression analysis of the data is made to quantify the impacts of various factors on potential profits of the enterprises.

7.2. Support from External sources

Enterprises are basically ventures that require starting capital and involve risk taking. Usually certain amount of promotional impetus is imperative to encourage the women in taking up the activities on a commercial basis. Many of the enterprises under study have been assisted in some form by governmental or non-governmental institutions and most of them specifically by the ICAR through the NATP scheme. Training is the key means of assistance. This aspect is taken up in more detail later in this chapter. The entrepreneurs have received other forms of help that have neither been always measurable nor uniform. For example, in Punjab the entrepreneurs in dairy not only receive support for marketing the product, but the cooperative society within which they operate also provides access to infrastructure and equipment, to improved animal feed and to finance at reasonable rates of interest. The other groups in the same state are left to their own devices except that they have occasionally sold their products in exhibitions organized by public agencies. The Haryana entrepreneurs have not reported any significant support other than the organizational help for forming the SHG. In contrast, the women from Himachal and Rajasthan have had a sound support system that was amply acknowledged. The nature of support however differs. In Himachal the major assistance came in the form of new and adaptive technology to which the ATMA, the KVK and the Bee Research Centre contributed. Part of this technology transmission took the form of supplies of superior inputs like improved animal feed, high quality seedlings and bio-pesticides for initiation. In Rajasthan, the

Home Science department working for NATP provided the equipment required for papad making enterprises, all entrepreneurs received some financial support and raw material support was reported by nursery raising and vermin-composting. In general all participants also received a starting grant. In Himachal the women producing vermin-composts received subsidies to compensate for the initial productivity loss of the users. In Uttarakhand all the entrepreneurs involved in poultry, mushroom and bee-keeping and over 60% of those in dairy received some form of support. In Uttar Pradesh no support other than training is reported and in Andhra Pradesh the Coir board and local NGOs helped in providing equipment and in marketing products. Besides there are other minor and subtle ways in which the enterprises have been supported such as by receiving veterinary support through community bodies, encouragement from the Panchayats and technical help from competent local agencies.

7.3. Work place, hired labour, use of electricity and borrowed capital

The enterprises under study are mostly operated from the entrepreneurs' houses in an informal way. Since the operations demand the availability of space, the household's access to land or extra space in their living quarters turns out to be a valuable advantage. While typical of rural informal units, a majority of the enterprises did report home-based production a considerable number of women had the privilege of working in sheds at a reasonable proximity of their homes. This was possible by virtue of the group operation that will be discussed subsequently. It is commonly believed that rural women would prefer home-based work that makes it convenient to combine economic work with their household duties. The survey shows that this is not necessarily true. Entrepreneurs working in Group find it a privilege to work together in isolation from household distractions. Entrepreneurs working from home in Bihar voiced their difficulty arising from the lack of a congenial work atmosphere.

Tiny enterprises are also known for their simple technology and manual practices. A majority of the enterprises surveyed report using simple equipment that is easily and cheaply available. There are variations of technology however some of the states reporting the use of relatively advanced technology in bee-keeping and food processing. Of all, the enterprises of fruit and vegetable processing activities are most

mechanized. Refrigerator, mixer and grinder are some of the equipment used. Sophisticated equipment is used for Papad-badi making in Punjab but in Uttarakhand the use of traditional *belan* is emphasized. Craft activities as practiced in Andhra Pradesh make use of motorized machines though other craft items elsewhere such as agarbatti and leaf plate are produced with typically traditional methods. Cultivation and other primary activities are pursued with little mechanized help. The use of machines is reflected in the use of electric power which explains the higher percentage of enterprises reporting significant power use among craft and food processing (Table 6.1).

Table 6.1 : Summary indicators: Economic, Organizational, Resource use					
	Primary Production (P)	Food Processing (FP)	New/ friendly (NEC)	Eco- Crafts (CRF)	All Activities
Non-institutional borrowing	7.8	34.3	19.7	17.1	17
Institutional borrowing	81.1	41.9	69.0	2.2	58.5
Electricity use	0	22.4	13.1	32	12.0
Group operation	10	42.3	13.1	66.9	26.1
Hired labour	55.9	60.3	0	14.8	38.9
Resources					
Water	13.8	20.1	27.5	0	15.8
Electricity	0	22.4	13.1	32	12.0
Male Labour	100	88.1	93.0	100	96.2
Figures are percentages of enterprise categories reporting members. There are overlaps and need not add up to 100. All enterprise use own capital.					

Finance is a most vital input to entrepreneurship. Yet the primary source of finance was the family resources of the women despite the implied compromise on household expenditures and the unwarranted dependence on family members. Non-institutional borrowing is relatively less important. Institutional loan is availed of by 58% of the women though the borrowed amount is reported to be a small part of the actual expenditure incurred since all entrepreneurs invest their own resources in the business. The largest record of institutional borrowing is recorded by primary enterprises at 81% followed by new and ecological products while craft enterprises reported the least dependence on institutional borrowing and more on informal credit. Food processing enterprises depend substantially on both formal and informal finance. Papad-badi, the most successful enterprise in Punjab is totally dependent on non-institutional finance and the women could take on greater load if simpler access

to institutional credit were possible. The SHGs have played a leading role in helping to access the credit. Women who are members of SHGs have obtained finance through this source though at fairly high interest rates such as 2 to 4% per month as reported in the Bihar study. Private lenders, including the traders have provided the finance at even higher rates ranging between 5 to 10% per month. The SHGs have been useful but cases of inefficiencies have been reported. For example, in Andhra the defaults of a section of women have hampered the credit flow to the entrepreneurs in the sample. The NATP programme has provided initial finance or free raw materials in some cases as Rajasthan but in turn created dependence.

The enterprises are generally labour and supervision intensive and much of the labour required is sourced from the family without cost. The entrepreneurs reported that the spouses usually help and even children extend a helping hand in their free times especially in packaging. The women depend on the men for their skill and for outdoor work. However, family labour is obviously not adequate and 40% of the entrepreneurs also hire labour at a cost but hiring is generally seasonal. Food processing and primary enterprises lead in the use of hired labour. Production of papd-badi in Punjab is one such enterprise in which considerable hiring takes place. Interestingly, for the group NEC family labour is enough and employment generation is meager in this group.

7.4. Marketing channels and Group based organization: Issues and evidences

Marketing is basically a method to connect the producer with the customer. Not only are two terminals located at a physical distance, in many cases each is unaware of its own potential relation with the other. Marketing not only fills up the information gap between the two but also completes at any point of time the process of demand and supply formation by helping to build up the customer mind-set and the producer capability. Marketing also 'smells discontinuities' or the potential demand for new products. We distinguish two broad methods of marketing that can be described as direct selling and intermediation by a third party.

For rural products market formation is severely hampered by the basic structure of the sector. Common methods of marketing of rural products include disposal in weekly or

periodic markets usually termed as 'haat' or to carry the products to a common market or *mandi* usually catering to a number of villages. Often such markets have limited potential for absorbing the products associated with the women entrepreneurs, especially the processed food and the craft items for which the demand is poor at prevailing income levels. Many of these products may have a market exclusively in cities only (Singh, 1994). Meaningful marketing, would then mean more than meeting local needs. In a more time consuming variant of direct selling that goes beyond the local confines, the entrepreneurs travel to distant places personally to sale their wares. But as an usual practice the entrepreneur is generally confined to a geographically small market¹, relying on door to door sales or supplying to local retailers (the entrepreneurs may even have her own outlet)². In the current market reality this reliance would mean limiting production to nearly unviable levels even though demand for the product may exist elsewhere. Moreover, with rural people also becoming conscious consumers, it may also be impossible to avoid competition coming from outside the local economy. Thus, the direct methods may be suffering from the following broad limitations namely, (a) having a limited radius of operation the demand is poor (b) uncertainty of market is considerable since the purchasing power is low locally and outside competition cannot be avoided and (c) the method is costly in terms of entrepreneurial time leading to compromises in production³. All the three constraints are likely to impose a severe constraint to the scale of activity. The main advantage is that the entrepreneur retains the market margin.

In sharp contrast, modern organized firms beyond a certain size usually have their own specialized marketing departments to conduct this function. In the case of rural enterprises, several constraints including the diseconomies of scale inhibit the marketing function and nearly rule out such specialization. In this situation the entrepreneur either depends on her own resources or builds up partnerships with other agents for functional specialization. In the current context the dominant marketing arrangement is noted to be an informal understanding with the trader, commonly

¹ Traditionally rural entrepreneurship was related to the practice of localized marketing rather and a vision of self-sufficient villages.

² Some of the reports mentioned and even studied shop-keeping as an enterprise.

³ Though there is some evidence of specialization by gender among family members, even in such a case the marketing activity eats into the time for income earning activities of family members.

known as the middleman. A less common but possibly more progressive method is marketing via an organized body with whom a formal contract is made.

Besides the individual operated direct method of selling and the intermediation by other agents we also found instances when the producers organized themselves in groups for certain specific functions and in a limited number of cases, performed the marketing function in a united way. These are the cases of cooperative and group marketing. In a similar but distinct process, the entrepreneurs sometimes also organize themselves in groups for certain pre-marketing functions. Usually this helped them to overcome the diseconomies of scale in production that accompany the indivisibilities of certain overheads and inputs. The women in this case work in groups but in this informal network they are neither partners nor complete proprietors. They share the common workplace or shed and the common machine whose services they allocate among themselves. Although purchase of raw materials and marketing of products take place separately, even in these functions there are substantial advantages since there are commonalities in raw material sources and market outlets leading to negotiating advantages, the raw materials are delivered at the shed and products are picked up from the common door step and scale advantage is reaped in transporting materials.

Building partnerships with other agents is nearly unavoidable for the tiny enterprises. A partnership such as that with the middleman is what is described in managerial literature as a 'strong' relationship built out of long-standing and frequent interactions of a complex nature between the involved parties (Larson, et al 1993) and the use of 'voice' to express their concerns rather than respond through termination of contracts. This tie has been the dominant instrument in respect to the marketing of other rural products including crop products. On the other hand, the formal tie or legally bound contract is likely to be more valuable as a source of widespread market information (Cooper et al 1975). Contracts are also becoming popular in marketing crop products. Having a larger network in both geographic expanse and a greater variety of products than the informal contacts handle, they are in a better position to exploit the synergies that exist in marketing.

More than 70% of the sample women reported home-based individual proprietary business as the only organization of production but among the rest, the practice of forming groups was in evident. Group operation is found to be prevalent among food processing and craft activities mostly in Andhra Pradesh and Bihar. The practice was not reported by the sample entrepreneurs in the northern states Himachal, Punjab and Haryana. In Andhra Pradesh the local NGOs and the Coir Board helped in the organization of the Groups, providing also machines or work places but in most cases, the NATP was instrumental in engineering this organizational innovation.

Table 6.2 : Summary Indicators: Marketing channels and attributes					
	Primary Production (P)	Food Processing (FP)	New/ friendly (NEC)	Eco- Crafts (CRF)	All Activities
Organization					
Marketing channel, success					
Cooperative	24.6	0	0	0	10.9
Contractual	16.8	0	0	71.0	18.3
Traders	66.9	31.1	26.2	62.1	50.6
Direct-Sales	66.7	68.9	100	55.6	72.4
Unsold/ Home Use	27.3	28.3	70.7	20.7	35.5
Brand	24.6	0	0	71.0	21.7
Melas/ Exhibition	7.4	20.1	0	23.7	10.9
Competition	37.9	64.9	31.1	21.5	36.3
Figures are percentages of enterprise categories reporting members. There are overlaps and need not add up to 100.					

Although the entrepreneurs in the sample are clustered by their products, their organizational behaviour and their marketing practices, an entrepreneur rarely relies on any single channel of market intermediation and the level of dependence on specific agencies differs. Owing to the multiplicity of marketing practices, the shares of the marketing methods adopted for the enterprise group do not add up to one in Table 6.2. Also, not all the output is successfully marketed but such instances are usually reported in a positive light as home use of a useful product. This is most common for the group NEC. These products have ecological and social value but awareness among potential users is far from complete. The commercial returns in the immediate context also may not justify their use. Accepting the producer's spirit, self-use is considered analogous to direct sales (to oneself) in this study.

A summary of the findings of marketing practices and the association of such practices with performance is provided below. The market channels are analytically viewed as three broad categories namely (a) Direct selling by the individual entrepreneur, (b) Assured sales through cooperative organizations or formal contracts with organized marketing agencies and (c) selling through the middlemen or traders. In a preliminary attempt we try to associate these practices with the entrepreneurial performance through graphical displays. Since any entrepreneur is likely to resort to more than one category, the mean profit of a direct selling entrepreneur considers only the sample of women who have sold directly though they may have also sold through middlemen or contracts. A regression based analysis presented shortly also addresses the effect of market channels. Also, since profit is only one indicator of marketing success we also look view the association of market channels with other financial indicators.

7.4.1. Direct selling

Direct sales to customers are the most important vehicle of selling. Reported by 72% of the sample entrepreneurs the method is common to all enterprise groups. In some cases as is reported for livestock products in Assam, the products are sold in local 'haats' and in many other cases the women have traveled up to distant places to meet the customers in fairs or exhibitions. Many of these fairs are organized by the DWACRA. Intuitively, physical sales could be constrained in this method but because of a modest demand for quality (assuming competition is low) the cost per unit could be low. However, the method falls short of the other two both in sales and profit. Expectedly, profit per hour invested is also poor probably due to the time demanded for marketing functions.

7.4.2. Marketing with assured Sales

Given other things, entrepreneurs would like to minimize or eliminate the uncertainty that surrounds the salability and price realizable of the products they undertake to produce. In the case of cooperatives, not only is the margin retained by the producers but it can be gainfully invested to strengthen the sales network and production

capability. The united character of this form of organization also bestows bargaining strength that individual based methods cannot bring.

The cooperative model is found in our samples only in Punjab and that too only for dairy, possibly influenced by the presence of a large number of small producers in the area and a ready market at a reasonably short distance for a product that is perishable. The cooperative in Punjab is found to be extremely progressive and active, has successfully acquired accreditation and a brand name and it competes effectively in the market. There is very little complaint from the members. Thus the selling cost, which is an overhead cost in the absence of any differentiation or competition among the individual producers, is incurred by the women together as a cooperative even while the benefits from the sales reach all individually. A similar but separate organization for marketing is noted in the neighbouring state Haryana where the women form a self-help group and arrange for their own collection centre. While not as advantaged as in Punjab, this system too appear to be relatively superior compared to other states such as Assam.

An alternative intermediary that can assure sales is an organized and competent body that ties up formally for a period with the entrepreneurs. This partner undertakes to provide technology and in most cases also inputs with a promise of buy-back of products. This is a powerful model but unfortunately is not so prevalent, with a meager 20% of the entrepreneurs reporting the practice. The practice is mostly confined to bee-keeping in Himachal where a large national corporate entity markets the honey across the country under their own brand name and in Andhra Pradesh where a para-statal body (the Coir Board) has agreed to buy the handicraft products for distribution through their outlets. In Andhra Pradesh, the local NGOs also support marketing of products by assured purchase. Such marketing bodies have a larger outreach than the other agents, enjoy considerable information advantage and their average selling cost is reduced by the existing infrastructure and experience. While these agents have a closer proximity to the customer by virtue of their general marketing experience, their interaction with the producer may be relatively costly in a vast scattered rural economy with relatively poor communication. It is not unlikely that the intense information asymmetry existing in the upstream supply chain would increase the cost of marketing and this would reflect on the procurement price. The

bargaining power between the rural women entrepreneurs and the organized marketing bodies is also enormously unequal. These limitations notwithstanding, assured marketing offers among the three methods the highest magnitudes of sales, profit as well as value for time though the cost per unit may be relatively high owing the demand for quality.

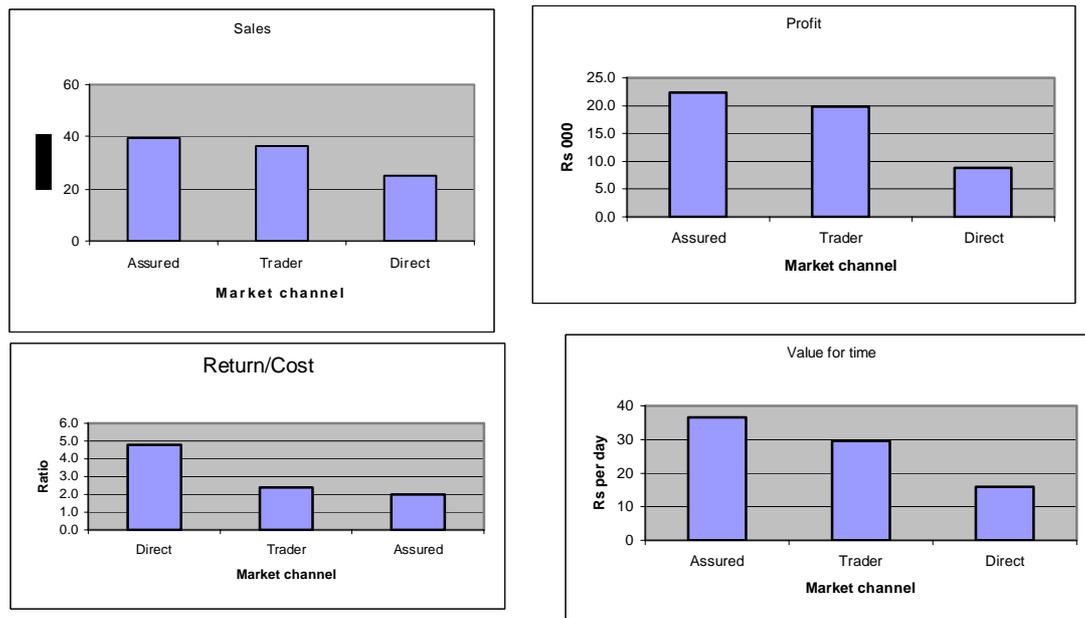


Figure 6.1

7.4.3. Marketing through Middlemen

The middleman is the most common and perhaps most maligned agent of marketing in rural areas. In the present case more than half of the sample entrepreneurs reported selling through the traders and this share is relatively high for primary products and in crafts, not surprisingly the importance far exceeds direct selling. In fact in contrast to cooperative and contractual marketing and similar to direct selling this medium is uniformly exploited by all the four types of enterprises. The traders are either local residents or are dwellers in nearby cities where they supply. In either case they make close and trust-based relationships with both ends, provide information of what the market desires, bring important feed-backs of customer responses in the absence of formal regulations and standards and possibly compete with other informal players to

sustain their key-supplier status. Due to the personalized nature involvement, the market remains constrained to certain limits as determined by the trader's abilities to control and fragment the market. Neither is their reach as wide as in the tie-up model nor is the information flow unrestricted as could be possible in a more competitive or a more organized situation. It is possible that the middleman takes advantage of the information gaps facing both the producer and the buyer. As a result there are frequent complaints of low prices being paid by the middlemen as compared to available information on market prices. However, the validity of such an argument needs to be tested since functions like promotion and brand (trust) build up, feed-backs and market surveys are all latent costs borne by the trader. In the absence of adequate modern devices and management methods operations of village traders could be more expensive than the organized agents. The entrepreneurs also reported having received raw material support and ready credit from the traders and in select cases the traders also provided machinery like their organized counterparts. Thus to what extent the middleman's margin constitutes exploitation and to what extent it is economic remains unresolved in this study.

Marketing is a multi-stage function (Drucker, 1970) leading to the ultimate commercial result that may be measured as profit though this may not be the only metric for measuring its success. Advertising, accreditation and packaging to create markets in cities and to combat competition from more reputed and resourceful sources are important aspects of marketing. Competition is most intense for the food processing activities and moreover, pickle making in Punjab and Bihar encountered poor demand. One offshoot of the demand problem is the concern about storage and packaging facilities for the perishable items. The advantages of a brand, license or a wider distribution are directly or indirectly reaped only in a few cases such as the coir and jute items of Andhra and honey in Himachal and Assam (one entrepreneur only).

7.5. Training

Training is considered as a most important policy instrument for promoting entrepreneurship among women. Training can be viewed as an education process of direct economic implication and a major step towards the creation of human resources among the rural women. By this means the skills required for producing certain

marketable goods or services of known potential are imparted to the women. Besides, training is also supposed to confer proficiency in other essential functions of business such as accountancy and marketing.

In Punjab the entrepreneurs reported that they did learn about the product and also the market in the training courses. Training was an integral component in the programme in Rajasthan where the NATP provided technical and financial support on its way. Training was about production skills, financial management marketing and record keeping as well technical and financial support. In Himachal training was closely linked with research so that evolving technology could be delivered to the users without delay. A close contact between scientists and the training programmes was maintained. Many of the enterprises surveyed in this state are not new but the novelty lies in inducting technological advancements into actual practice. In dairy, improved formulae of feed and care drawn from animal science and management were imparted. Though beekeeping is an old enterprise and bee research station of HPKVV helped to make honey from Kangra famous elsewhere, training was aimed to motivate women in particular to join in. The ATMA played a key role in effecting the revival of vegetable cultivation through eco-friendly and modern technology. New ways of storing potato and vermin-culture activity are new enterprises that are eco-friendly and help to revive soil fertility. Fishery is a known activity that used to be practiced even in the area by select communities but it became an option for the women in general only through training given to a wider body of women.

Training in many cases was associated with financial support. In most cases free inputs were distributed to the trainees to facilitate the initiation as well as trial. In particular in Rajasthan where the NATP was implemented through a Self-help-group approach, the Group was given thrift money and also facilitated to get credit besides machines and tools to start enterprise. Thus in Punjab, Rajasthan and Himachal improved feed for livestock was provided to the trainees without cost.

Training can be useful in attracting potential entrepreneurs and initiating them in business. Sometimes the practicing entrepreneur also undergoes training for refreshment of knowledge. In most cases training improves the applicant's eligibility for credit. For example in Assam training helped to initiate all the entrepreneurs in the

group FP but in livestock based and bee-keeping enterprises initiation had preceded training but nevertheless the training was found useful in upgrading the skills. Training was particularly important for the new and organic methods such as the vermin-compost in Himachal and Rajasthan in which case proper counseling and demonstration were essential for overcoming the hesitation of the agents and participation of the progressive farmers was an important component for adoption of the new technology that had social benefits.

However, despite its predictable merit, the usefulness as perceived by the women themselves is not uniformly positive. In Punjab, for the enterprises found to be popular, training was not considered essential at all. In fact the Investigator could locate only few trained women, mostly in pickle making, the performance of which is not remarkable as reflected by the low return to cost ratio and in the most profitable enterprise Papad Badi none of the entrepreneurs surveyed were trained. The activities of enterprise in this state are all traditional in nature, and the expertise already existed in the family through generations even if it was not commercially used. Even among the non-trained, few desired training. Among the entrepreneurs in Papad Badi no one thought training was important or desirable and in pickle, the trained women were more concerned about the viability of the enterprise. Much of the usefulness of training is determined by how the course is designed and how effectively the knowledge is imparted.

The usefulness of training can be gauged from a crude comparison of profits and other relevant indicators between trained and non-trained entrepreneurs. Table 6.3 suggests that the trained entrepreneur falls short in sales, profit, daily income and even the return to cost ratio and only in employment generation there appears to be a lead for the trained. Statistical t-tests also affirm that the differences between the two groups are significant when sales and profit are considered as indicators but in returns to cost ratio and daily income the differences are not significant. Thus training does not appear to have been substantially gainful. Among the states (Table 6.4) however, the trained entrepreneur shows a positive advantage in most cases barring the northern states, Punjab, Haryana and Rajasthan. The non-parametric analysis has a veritable limitation stemming from the disparities and diversities across states and their

enterprises. The regression analysis conducted in the next section views the effects categorized by the enterprise types.

Status	Sales (Rs)	Profit (Rs)	Employment (8 hour days)	Return/Cost (ratio)	Profit/Day (Rs)
Trained	23824	13008	142	3.72	184.87
Untrained	53788	22775	128	3.77	204.92
t-statistics+	4.2**	5.5**	-1.8*	0.16	0.17

Note: * Significant at 5% level and ** significant at 1% level.+ t-test for equality of means not assuming equal variances.

NATP and other ICAR sponsored initiatives were found to be the major training sources in all cases. The State Agricultural Universities, The Krishi Vigyan Kendras or Departments of Home Science or Agriculture were the institutions that were instrumental in organizing the training. In Punjab the State Agricultural department and the Punjab Agricultural University were the dual sources of training for bee keeping and pickle but in dairy a 3 day programme was organized by the cooperative formed by the women involved in dairy. In Assam ICAR sponsored training programmes were organized in the main campus of Assam Agricultural University, in which all the entrepreneurs received 3 to 7 days classroom training organized by the Directorate of Extension Education. Similarly, training was given to rural women in Haryana by the Home science (HSC) Department, HISSAR Agricultural University under the NATP and in Himachal, the Extension department of Himachal University was involved. Training was however a continuous process in Himachal where the HPKVV had a village linkage programme operating through innovative institutions named as the 'family' (yellow) card, 'information corners', 'agro-tech customs hiring service', 'technology prescription slip' and farmer club. The Government of Uttar Pradesh had promoted entrepreneurship by organizing training through the KVK and in Bihar several institutions like social Welfare Department, State Women Department Corporation, ICAR and NSS were involved in imparting training. The respondents in the survey reported to have received training from a ICAR sponsored programme held by KVK, UNDP – KVIC (Khadi and village industries commission). Beekeeping entrepreneurs were trained by Khadi Gramodyog Ltd. (KGL) and NGOs. They received 8-15 days training except bee-keeping for which the duration was 3 months. In Andhra the KVK Rajahmundry conducted training programmes in its

own premises. The duration was two months for coir products and 15 days for others. A stipend of Rs. 500 per month was also paid to the trainees.

7.6. Impact of training, marketing channel and organization on profit

A regression method is employed to examine the possible effect of training and marketing practices on entrepreneurial profit. The two key limiting constraints coming from the shortages of finance and time have been controlled for by including the variable for financial investment on inputs (INVESTMENT) actually made in the enterprise and the hours of labour put in daily by the women entrepreneurs (ETIME). In calculating the profit all paid out costs are deducted from the revenue along with the imputed costs of inputs provided freely by the promoters. Training, organization as group and the market channels are treated as dummy variables. Keeping in view the heterogeneity of the samples in terms of their associations with training and the varying incidences of entrepreneurship under any category in different states, alternative specifications of the model are estimated. The performance of the model is found to improve when the three factors namely INVESTMENT, ETIME and Training are interacted with the category of enterprise. Such a model also gives an opportunity to differentiate among the categories for the relative impacts of the factors. We therefore present the variants of this model in table 6.4 and 6.5. We also control for the state of location given the evident influence of general development.

The marketing channels are also represented by dummy variables. Two channels are taken as variables namely ASSURED standing for assured sales via cooperative, contract or self-help group and TRADER standing for sales by traders. Each of these variables represents cases when the entrepreneurs have reported marketing via these channels. Both variables can take the value of one since the two marketing channels are not mutually exclusive but when both the variables take a value of zero, the entrepreneurs resort to direct sales or self use.

In table 6.4 model 1 does not allow for effects to vary with state but in the more flexible model 2 that allows for state specific impacts, the variables ETIME, INVESTMENT and TRAINING have the expected positive and significant effects, with monetary investment having a meager marginal effect of 12 paise consistent with

the fact that the enterprises involved very little by way of input cost. The implication of the emerging practice of group production is not clear as the variable NOGROUP has a negative effect but the coefficient is insignificant in model 2 and is actually positive and significant in model 1. Among the states Punjab and Haryana have an advantage over others. Assured marketing ASSURED does not have an advantage over direct methods but marketing through trader does. Training has a negative coefficient in model 1 but when the state specific effects are included the effect is found to positive.

	Model 1		Model 2	
	Coeff.	T-stat.	Coeff.	T-stat.
Constant	-4707.59	-2.431	17750.74	8.23
INVESTMENT	.19	25.445	0.116	20.92
E-TIME	2737.25	6.933	2438.32	5.92
TRAINING (D)	-2210.43	-1.73	1699.90	1.94
NO-GROUP(D)	12600.36	9.03	-50.31	-0.04
ASSURED(D)	9664.05	6.45	-17362.37	-11.32
TRADER(D)	4616.36	3.68	1.687.82	10.44
U.P			-32256.57	-11.35
Rajasthan			-23013.59	-9.28
Punjab			48212.10	19.23
Haryana			9413.06	2.91
Himachal Pradesh			-9794.907	-4.48
Bihar			-26490.469	-8.74
Assam			-23444.82	-9.98
Adj-Rsquare				

Note: Andhra Pradesh is the base. Sample covers eight states. D stands for dummy variable.

More flexibility is permitted in the estimates presented in table 6.5. In the alternative specifications Model 1 to 4 the results show some variations. Model 4 controls for the effect of location and also includes the factors related to organization and market channel. Financial investment does not work out to be a factor of high relevance in FP and NEC though the marginal impact is significant and positive in all cases. This result possibly reflects the character of these enterprises that demands modest resources. The importance of finance is however considerable for primary production. The amount of time devoted to entrepreneurial task is highly relevant for the category food processing (FP) with an additional hour of work in a day yielding on an average nearly Rs 6000 as annual income. This calls for adequate labour supply and managerial proficiency. For NEC time does not appear relevant suggesting that the constraint on scale does not come from this quarter either. For CRF time is reasonably important for earning higher profits while for Primary enterprises the marginal effect

is moderate though in the alternative specifications it is actually negative. Training appears to be a relevant factor for success but food processing is an exception. The trained entrepreneurs may be earning a little less than Rs 2000 in excess over the untrained women in all the three categories PP, NEC and CRF. Although the effect of Group organization was, as in table 6.3, not favourable in Model 3, after correcting for the state specific effects the coefficient for the dummy variable No group becomes negative and significant testifying the merit of the new form of organization. In this complete model, compared to direct selling, which is the base, the assured route of marketing does not yield a higher income but interestingly marketing through traders do.

Table 6.5: Regression to explain Income from Entrepreneurship with distinction among types of enterprises								
Variables	Model 3		Model 4		Model 5		Model 6	
	Coeff.	T-stat	Coeff.	T-stat	Coeff.	T-stat	Coeff.	T-stat
Constant	1745.39	2.44	-2764	-2.1	244.25	.26	9493	6.4
<i>Primary</i>								
INVESTMENT	1.68	59.8	1.64	42.39	1.72	63.15	1.5	46.6
E-TIME	-787.8	-2.30	585.25	1.72	-509.6	-1.57	1259	4.4
TRAINING	4292.2	4.95	3826.4	4.55	860.3	1.0	1796	2.5
<i>Food Processing</i>								
INVESTMENT	0.18	44.46	0.144	32.57	0.18	47.5	0.14	36.5
E-TIME	1413.6	5.07	6744.6	15.62	1049.9	3.95	5816	15.4
TRAINING	-1018.1	-.79	-1787.8	-1.52	-168.6	-1.14	-3211	-3.15
<i>New & Ecological</i>								
INVESTMENT	.50	16.14	0.43	14.57	0.37	11.85	0.29	10.7
E-TIME	-471.2	-0.85	346.49	0.67	122.7	0.22	-1212	-2.6
TRAINING	164.22	0.132	2194.5	1.82	-779.7	-0.64	1998	1.9
<i>Craft</i>								
INVESTMENT	0.91	8.45	0.87	8.16	1.28	12.1	1.06	11.7
E-TIME	-755.21	-1.46	4575.9	7.21	-3036	-5.8	3365	6.2
TRAINING	425.53	0.26	2629.75	1.75	1733	1.13	2391.2	1.9
<i>Institution and Technology</i>								
NO GROUP					2371.8	3.04	-4825	-5.8
<i>Marketing</i>								
ASSURED					-8244	-9.4	-17630	-19.6
TRADER					4903	7.3	7800	12.2
<i>States</i>								
U.P			-20402	-10.2			-31471	-16.9
Rajasthan			-709.4	-.42			-7679	-4.36
Punjab			1165.4	0.50			6554.1	3.1
Haryana			801.9	0.35			6977.4	3.22
H.P			5818.8	3.97			-482.5	-0.3
Bihar			-22315	-10.1			-29581	-14.2
Assam			1503.5	0.94			-13548	-8.2
Adj-Rsquare								
Note.: Andhra Pradesh is the base. Sample covers eight states.								

8. The entrepreneurs as women: Beyond the economics

Empowerment is a concept that goes far beyond its economic connotations. It relates to the lives of individuals and their relations with society in essence. In this chapter we will in particular focus on the entrepreneurs' way of life as human beings and women. We will probe certain questions about them such who are these women? What constitute their different commitments as householders (mother, wives etc.), farmers and entrepreneurs and how do they allocate their limited time? What is their equation with their family members, spouses in particular in relation to the work at home and business? Do the men cooperate in their venture? How important is gender as a constraint to the enterprise? Finally we also probe on the basis of their own perceptions if economic intervention has made a difference in the status of their being. In sum we attempt to probe how effective entrepreneurship is bringing about the desirable social changes that relate to women's empowerment.

8.2. Socio-economic descriptions

Firstly, we ask who the women that entrepreneurship tends to seek out are. In other words we look for the socio-economic characters of the target beneficiaries. Table 8.1 provides some information on the identity of an entrepreneur as a householder and human in each of the surveyed states as could be gleaned from the reports. A large majority of the women entrepreneurs' spouses are the heads of the respective households and nearly all those entrepreneurs who are reported as heads themselves are widows. The entrepreneurial earning becomes an important support base in the latter case but no particular concentration is observed with respect to any enterprise in such incidences. However except Punjab, having a 10% share and Andhra having a 20% share, this group constitutes a small percentage of the sampled women. In Uttar Pradesh 5% of the entrepreneurs in milk processing are not reported as heads of households despite being widows and 10% in DLA (food processing) are neither single nor spouses of household heads. Similarly, in Bihar and Assam some of the entrepreneurs were related as daughters or daughters in law of the household head.

Table 8.1: Socio-economic status				
State	Widow/ Separated	%Less educated	% Wholetime entrepreneur	Average age
Punjab	10 (76)	41	90	44
Assam	2(72)	2	13	46
Rajasthan	3 (96)	47	0	45
Haryana	5 (95)	72*	100	43
Himachal	2 (98)	24	98	30
Uttarakhand	-	54*	-	36
Uttar Pradesh	2 (87)	100	86	42
Andhra	20 (80)	73	100	35
Bihar	7 (50)	70	12	36

Note: Figures in parentheses are %women who are heads of household, 'Less educated' indicates the proportion (%) not beyond primary schooling (include non-formal education). * non-schooled (as reported), Blanks indicate 'not reported'.

The average age of the entrepreneurs is over 37 years, possibly indicating the abatement of responsibilities of rearing young children. The average exceeds 40 years in the northern states Punjab, Haryana, Rajasthan and Uttar Pradesh but is low in Himachal. It appeared that within a state the average age is similar across the enterprises except that it is relatively low for pickle making entrepreneurs in Haryana and Uttar Pradesh and Papad-badi makers in Punjab. It has been mentioned that the women on the average are landed, with Punjab and Haryana recording an average farm size of more than 1 hectare. It can however be gathered that the share of small and marginal holders is large in Uttar Pradesh, Uttarakhand, Rajasthan and Himachal (Table 8.3). In Andhra a large section of the women indulge in exhaustive wage work on farms. Also with diversification of agriculture away from paddy the employment potential of the age workers are affected in the state. More than 40% of the women have no more than primary level education though the picture is not uniform. Basic education is lacking markedly in Uttar Pradesh, Haryana, Andhra, Bihar and Uttarakhand. Illiteracy is found to be more among the entrepreneurs engaged in dairy in Punjab and Haryana. In Uttar Pradesh none of the sample women have crossed the primary level. However, the samples also include women who have higher education even beyond school. In Assam the share of women without primary education is only 2% whereas 44% of the women have primary to high school education and more than half the women even have education beyond school level. In Rajasthan only in two of the enterprises namely, vermin-composting and fruit-vegetable preservation women with school education beyond primary levels are recorded. In Haryana all the entrepreneurs in pickle making and about a quarter of the women in vermin-

composting have up to class 10 education. In Andhra and Bihar the women also included graduates. Thus, in sum, the typical entrepreneur is a woman who is the wife of the household head, about 40 years of age and belonging to a reasonably middle order landed class. She is poorly educated.

Not all the women consider entrepreneurship as their main occupation. In fact all the women only in Haryana and Andhra Pradesh and in Punjab all except those in dairy reported themselves to be whole-time entrepreneurs. The share is high in the northern states Uttar Pradesh and Himachal but low in Bihar and Assam. None of the women in Rajasthan function as whole time entrepreneurs. Where entrepreneurship is subsidiary, farming is generally the main occupation but in some of the cases tailoring and petty trade (shop-keeping) are reported as important occupations and in a few cases reported in Rajasthan and Assam, the women are full-time service holders with regular jobs.

8.3. The entrepreneur's time budget

How does the enterprise fit into the woman's daily routine? Women in rural India have multiple responsibilities. Some of these functions are economic in nature by any definition such as tending the animal, sowing seeds and fertilizing land with manure or even cooking meals for the hired labour in their household kitchens (Rao, 2005). On account of the non-specificity of returns neither the women acknowledge their economic status (Hirway and Roy, 1999) nor can the statistical system capture their complete role in the data. The women also spend considerable time in performing semi-commercial work like collecting water and fuel. Such amenities are obtained from organized sources for suitable payment (as prices or taxes) in cities. In fact much of their day to day work could be done with greater ease, comfort and expediency if modern technology and civic amenities were available to them to the same extent as in cities. Such inadequacies weigh down especially on women. This has been discussed in Chapter 4.

Some of the surveys have reported the share of time spent by the women in various chores and activities. In most of the regions the women spend about 30% of their time on household work such as cooking, fetching fuel and water, family care. The time

allotted to farm work would vary depending on the availability of employment, farm size and social customs. Thus the share of time given in farm work and other income earning work in the sample is low in Punjab, perhaps due to custom but also in Andhra Pradesh but probably due to lack of opportunity as understood from the reporting. Incidentally the time share given to enterprise falls below 10% in Himachal, Bihar, Assam and Rajasthan and is between 10 and 20% in Punjab, Haryana and Uttar Pradesh and is comparatively high at 32% in Andhra where the enterprises are more organized. It is however not clear to what extent the low time share, wherever reported, is voluntary impelled by other commitments and to what extent it reflects the lack of adequate entrepreneurial employment.

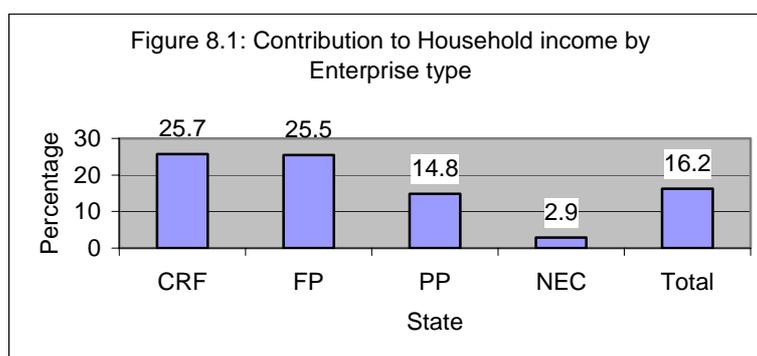
Table 8.2 : Time spent (%) by sample women entrepreneurs in farm, household and entrepreneurial activities								
Occupation	Punjab	Haryana	Andhra Pradesh	Assam	Bihar	Uttar Pradesh	Himachal Pradesh	Rajasthan
Farm-work	2.1	10.4	1.8	10.7	7.8	9.5	10.2	18.4
Household work	37.3	20.3	38.8	36.0	13.1	31.7	37.7	13.6
Enterprise	13.7	18.3	31.4	7.2	6.9	14.8	5.8	9.0

8.4. Contribution to household incomes

The women entrepreneurs' positions vis a vis their households can be viewed in context of the status of their households. Household incomes are obviously affected by the entrepreneurial incomes. Correcting for the entrepreneurial incomes the incomes are reasonably high in the northern states Punjab, Haryana and Himachal but falls below Rs 30,00 per annum in Uttar Pradesh, Assam, Andhra Pradesh and Bihar. The women are able to contribute through their enterprises up to a half of the household incomes. The contribution is poor at below 5% in Rajasthan, where entrepreneurship is a subsidiary activity. The contribution is also very low in Himachal, it is between 20 and 32% in Punjab, Haryana, Andhra and Bihar and is high in Uttarakhand and Uttar Pradesh (Table 8.3).

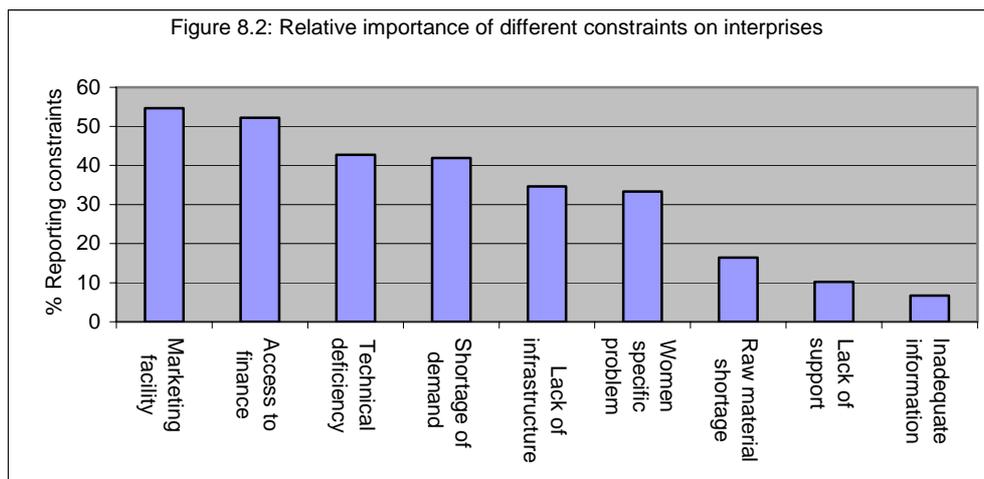
Table 8.3: Women's contribution and Male cooperation				
State	Farm class	Income class* (Annual)	% Contribution To income	Cooperation
Punjab	Average holding of 2.6 hect. (modal class 2-10hect.)	Modal income is >Rs 1 lakh	28%	Men help in procuring feed (Dairy), arranging hives, marketing honey and guiding operations (Bee-keeping), Marketing and in production when demand is very high (papad-badi), packaging and negotiating prices (pickles)
Assam	50% Marginal /Small (modal class 2-10hect.)	Average is Rs 18000	19%	Sell, procure inputs, purchase animals and arrange for artificial insemination (Livestock), purchasing medicines, sugar and marketing (Bee-keeping), packaging and procuring raw materials (fruit vegetable preservation)
Rajasthan	96% Marginal /Small	65% get <Rs 50,000	2%	Family help reported, but women work in groups outside home.
Haryana	Average holding of 1.1 hect.	Average is Rs 78,000	25%	Transport milk to collecting centre (dairy), transport products (vermin-composting) and bring raw material from nearby city Hissar (Pickles)
Himachal	88% Marginal /Small	Average is Rs1,29,000	3.5%	Marketing products, arranging inputs and in field operations in all cases.
Uttarakhand	Average holding of 0.65 hect.	Average is Rs 30,700	47%	Not reported
Uttar Pradesh	93% Marginal /Small/labour	Average is Rs 30,000	52%	Help in Marketing (reported for Milk processing, Pickles and Basket making), Outdooe and domestic work (Aggarbatti but no mention for Spice processing, Dalia and Blanket making.
Andhra	25% Marginal /Small, 70% do wage work	Average is Rs 22,200	31%	Family support acknowledged but most women work in groups in shed. No further details given.
Bihar	66% Marginal /Small	Average is Rs 22,600	24%	Male cooperation is acknowledged but no further details are provided.

Note: Compiled and calculated on the basis of the reported information. * Incomes from enterprises are excluded.



8.5 Constraints of the Women Entrepreneurs

Any empowerment programme, in the short run, has to work in the context of the existing paradigm for its own success but over time, seek to transform the very framework over which it works. It will hardly be pragmatic for a programme to ignore the constraints that are specific to women be it due to biology or social norms. In fact women are probably themselves an endogenous process to their disempowerment, where their own preferences and perceptions are largely carved out of the very system in which they operate. Cultural constraints and cultural relativism are a reality that cannot be ignored in the short term although collective habits do change over time (Murdoch, 1961). Any effective policy would do well to heed the constraints encountered by women as a gender by virtue of their history and the social and economic fabric of their being.



The Investigators had asked the respondents to point out the nature of the constraint categorized into nine groups. One of them related to the problems they faced specifically as women such as harassment and indifference in market, household workload and opposition from family all bunched into one big group. Lack of time and other forms of women related constraints have been reported to be serious in some of the reports. However, ranking the percentage of women who reported the various groups as significant constraints to enterprise it is noted that the gender related constraint ranks only sixth after marketing, finance, technical deficiency, lack of demand and poor infrastructure. More than 30% of the women reported facing

problems arising from gender. In Punjab the scale of operation in dairy was limited by this constraint, i.e., lack of time. The women also expressed a 'lack of confidence' in managing larger dairy farms since the men had enough farm work to preoccupy them. Similar shortage of time was experienced by the producers of papad-badi. In Assam the women in dairy found the lack of organized marketing of livestock products especially upsetting as they had little time for the job and an uncomfortable dependence on men was evident in the report on marketing honey. Dairy and Bee-keeping entrepreneurs of Uttarakhand also found shortage of time after discharging their household work and child care and found insufficient support from family members. Bee-keeping, vermin-composting and mushroom cultivation have an advantage in that they make less demand on time and served well as part time activities for supplementary income.

Only inadequate raw material, lack of support and insufficient information has been less constraining as problems than gender. This is not surprising because of the local resource intensity of the activities and the supportive role of the NATP in matters of technology. The biggest constraint appears to be in marketing the product (54%). This is not related to the lack of demand as the latter is a less significant problem (42%). Despite the existence of demand somewhere in the market the women feel their powerlessness to reach the potential clientele for lack of an effective institution. Next in importance is the constraint in obtaining finance, afflicting a little over half the women entrepreneurs. The dominant source of finance for the enterprises has been family savings that effectively limits expansion, compromises on family consumption and increases the women's dependence on immediate relatives. Institutional financing is rare but women who are members of SHGs have obtained finance through this source at fairly high interest rates such as 2 to 4% per month as reported in the Bihar study. The SHGs have been useful but instances of inefficiencies have been reported. For example, in Andhra the defaults of a section of women have hampered the credit flow to the entrepreneurs in the sample. Papad-badi the most successful enterprise in Punjab is totally dependent on non-institutional finance and the women could take on greater load if simpler access to institutional credit and subsidies on the purchase of larger costly machines were awarded. Technical constraints are also reportedly considerable. Even in these largely household based enterprises, women have mentioned the importance of space, describing the working environment at home to

be ‘uncongenial’ (the women working in groups have afforded a separate work space).

8.6. Male cooperation and Empowerment effects as perceived

Empowerment is an effect that will tend to gradually turn the societal relations, within and outside the household domain towards greater gender equality. The empowerment comes from both within oneself i.e., undoing the ‘internalized opposition’ (see chapter 1) and from outside through transformation of equations with other members of family and society so as to emerge more equal and more integrated. In societies where women had remained outside the economic world and sometimes a stigma is attached to participation, the responses of the spouses to the occupational choices of wives who are earning are a matter of interest as well as significance. Secondly, the changing perceptions of the women themselves who had for long been integral parts of the same system are also of immense relevance in understanding the empowerment effect. To what extent the women became involved with various facets of the entrepreneurship is a crucial associated question.

The communication between the respondent and the Investigator itself is a testimony to the women’s involvement and acquaintance with their own vocation. They appeared to be fairly conversant with the prices, market prospects and constraints in relation to their enterprises but in most cases there was a notable disconnect between the nature of the women’s work profile within the enterprises and the typically market related activities that are essential to the exercise. Cooperation of men was generally needed in most out-door and market related functions such as procurement of inputs, packaging, arranging transport and selling of products. Some women expressed a degree of resentment over this dependence. Given, that the men were also tied up with their own earning activities, this weakness made the women also deeply reliant with immediate agents, generally the middlemen.

However, the encouragement and cooperation shown by men in general signal a progress in the right direction. The need for male cooperation in enterprise is less where women work in cooperatives or groups. Men are hardly reported to help in the housework in deference to the fact that the women are also gainfully occupied. It may

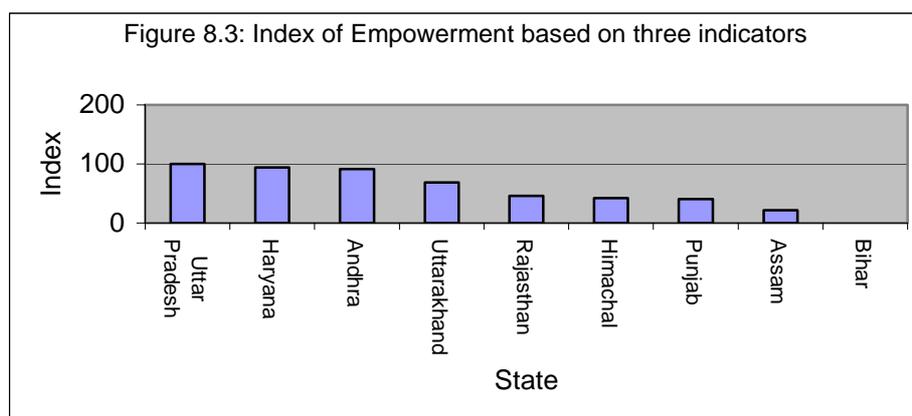
be noted however that Uttar Pradesh is an exception and in this state the enterprises contribute over half of the household incomes. Also, even in the entrepreneurial work it is hard to miss a gender related specialization that is consistent with the ‘inside-outside’ and ‘private-public’ demarcations noted in the literature on gender. No opposition was however reported to the women’s income earning activity.

Table 8.4 : Summary Indicators: Gender Empowerment with subjective measures by States							
Women (%) reporting improvement	Family status	Household education/health	Decision making	Freedom to spend	Community status/participation	Communication	Drudgery
State							
Andhra	94	60	68	-	76	56	6
Assam	41	-	48	-	49	51	-
Bihar	46	37	22	22	11	19	22
Himachal	82	84	-	83	51	-	-
Haryana	81	86	-	-	98	-	22
Punjab	27	-	22	-	79	-	-
Rajasthan	72	26	21	42	67	94	33
Uttar Pradesh	89	86	62	69	71	51	-
Uttarakhand	62	71	-	-	62	-	-
Total	68	61	38	55	60	59	22

Note: Blanks indicate ‘not reported’.

Besides the quantified share of income contribution to household, the investigators also asked certain perception based and subjective questions on the after-effect of entrepreneurship. These related broadly to the women’s status within the household and the community. Underlying this approach is the understanding that empowerment comes from both capability and participation. Thus women’s own self-esteem in being able to contribute visibly to the household standard of living is an important constituent of the family status. Added to this is her sense of being recognized by the household member for being able to make a meaningful contribution. The success of earning through enterprise could confer the competency to participate in important decisions in the family. The access to her own earning also empowers her to have greater freedom in spending money. Similarly, the improvement in status in the community is also taken as part of empowerment. Communication skill, participation and leadership in community organizations, greater awareness are some of the important dimensions in this empowerment. Only some of the Investigators reported details on these items.

Table 8.4 shows that entrepreneurship has given the women the satisfaction of having been able to contribute to the education and health of family members especially since they feel that these utilities have become more important and more costly also. Those reporting an improvement in family status constitute more than 80% of the respondents in the states Andhra, Uttar Pradesh, Haryana and Himachal but were remarkably low in Punjab and were moderately low in Assam, Bihar and Uttarakhand. Women have greater say in household decisions such as children’s education and marriage and purchase of assets as reported in Andhra Pradesh and Assam and in matters of agriculture in Punjab. In Himachal the Investigators reported that over 73% of the respondents could attend their parental obligations and 66% their own personal needs more independently after taking up entrepreneurship. About 68% reported improvement in status in family and 60% reported improvement in status in the community. Almost all the respondents reported some improvement in the status in society in the state Haryana but the record was reasonably modest in the other states varying from 50% to 80% excepting Bihar, where the record is poor. Three attributes namely income share, status in family and status in community are combined as a composite index¹ and plotted in Figure 8.3 to compare the states’ achievements. The first of these is a quantity based indicator whereas the other two measuring the share of positive respondents are based on perceptions. Uttar Pradesh and Haryana seem to have gained substantially whereas Assam and Bihar lag. Interestingly, Punjab despite the economic benefits is not of the leading states in respect of the composite indicator.



¹ The values of the three indicators are summed up for each state and the sums are then indexed to lie between 0 and 100.

A very important component of empowerment relates to the kind of function and exposure the participation offers. The expectation is that the experiences of marketing negotiations, exposure to market realities and interactions with various agents including other entrepreneurs, bankers, buyers and SHGs could have profound returns in terms of the gains in confidence, bargaining power, communication skills, awareness, collective or team spirit and leadership roles in community. The weak linkage of the women from marketing activities possibly reduces these powerful non-economic returns of an economic intervention. It is observed that for the entrepreneurs in dairy in Punjab despite the major economic benefits made from the cooperatives, the empowerment effects were moderate because bargaining and marketing were not part of the challenge. Similarly, in Uttarakhand, papad-badi products are marketed by the men who traveled on their bicycles with the wares to nearby towns and the empowerment effect on women was weak. Nevertheless, the reports do establish the empowerment potentials of the initiative. In Himachal, Uttar Pradesh and Assam investigators solicited the women's perceptions on the impact on their level of general awareness to which over half of respondents reported significant improvement. Only Bihar this share was low at 29%. The women also reported improvement in communication skills. Women who never spoke out in public are now less hesitant in voicing their views and concerns at forums. Women who never traveled unaccompanied by household members went to kisan melas and other exhibitions in their groups and tasted some independence.

One important extra-economic fall out of the gain in confidence in social dealings is the possibility of greater community participation and leadership among women. Political empowerment of women has been a central objective in India in recent years when the decentralized governance is associated with inclusiveness and participation at the grass root levels. The hesitation of the women has been a serious hindrance despite the policy of reservation. Entrepreneurship and all that it involves could be a source of the social transformation required for the collective governance so far as it provides necessary confidence, self-esteem, communication skills and awareness. Participation in Panchayat (local government) proceedings has improved as reported in Himachal. Many women felt that entrepreneurship and market dealings increased their leadership qualities though the percentages shares of positive respondents are fairly modest at 20% in Punjab, 33% in Himachal, 46% in Andhra and only 17% in

Bihar. In Andhra all the women are members of DWACRA and many have been member even prior to the initiation of business. Their leadership qualities were already formed due to participation in DWACRA but entrepreneurship further sharpened the acumen. In fact the training programmes have an inbuilt course for improving communication and leadership among participants. Some of the women acted as resource persons in other training programmes. Demonstration of leadership in practice includes one sample woman placed as the President of the District Women's Bee-keeper Society in Punjab but political leadership is yet not perceptible.

Finally it may be mentioned that although the income generated by entrepreneurship is important by itself the linkage between subjective and social empowerment and the level of earning is weak. For instance in Rajasthan and Himachal where entrepreneurship has by far yielded only low levels of income, success measured by subjective empowerment has been considerable. The novelty of the activities, the continual interaction with extension agents in well designed trials, practical interface with scientific innovations and the women's positive attitudes have all created a constructive atmosphere in Himachal. As a result there is an air of optimism even if the income is low as in the case of the eco-friendly products and the women reported improvement in self-esteem, status, confidence and community participation. In Rajasthan, although the women are subsidiary status entrepreneurs and the incomes are poor, the enthusiasm generated is enormous. The women have gained vastly in confidence, are participating in community life and feel they can speak out against injustice. If the signs are correctly read, the gain can be immense in a region where the reputation on women's status is one of the lowest. Nevertheless, visible income is also a requisite for sustaining the self-esteem gained through industry and bee-keeping in Himachal and mushroom cultivation in Uttarakhand are two cases in which the paltry incomes generated have not led to any perceptible impact on empowerment. Drudgery reduction is one of the aims of the NATP programme that has a component of supplying the women with gender sensitive and improved farm implements. The entrepreneurship possibly requires the women to take some time off farm work and depend on other family members to lighten the household load but eventually also faces shortage of time especially for leisure. Nevertheless, because of the nature of work, visibility of income and the social interactions drudgery is reported to have been alleviated though marginally.

9. Concluding Remarks

Transformation of the lives of the women who live and work in agriculture still remains an unfinished task in Indian agricultural development. Evidences have suggested that concerns related to the farm women have their own distinctions and may be substantially more complex than in other spheres. Empowerment of the women in farm households is an issue that spans inextricably across the household, the community and most importantly, the market. It is a most welcome step that the Government of India is intervening through economic programmes to transform their lives and promotion of entrepreneurship in local resource intensive activities is one promising method. This study enquired about the status and features of enterprises among the farm women and examined the viability of select enterprises that are commonly promoted by public programmes. The study also asked if entrepreneurship could empower women in a fuller sense.

9.2. An aggregative view through analysis of secondary data

The data on farm households extracted from NSSO's 55th Round survey was analysed to study the status of women's entrepreneurship. The women in these households are found to be more participative in economic activities even compared to the average rural woman but, like the latter, mostly work as family help with no visible income or casual labourers who are known to face a harsh and discriminating market. They mostly engage with crop cultivation. Only less than 10% of the women are self employed in own enterprises (entrepreneurs) dealing in primary activities, processing food, craft work and bidi making. The enterprises are organised in an outdated manner.

Spatially, the tendency for entrepreneurship among workers especially in primary activities is strong in the northern region Punjab, Haryana and Gujarat although the women here have a lower tendency to be workers in general. Processing activities are more popular in the eastern states like West Bengal, Orissa and Bihar besides Jammu & Kashmir. More than half of the entrepreneurs are to be found concentrated in the

four states Tamil Nadu, Uttar Pradesh, Gujarat and Andhra Pradesh. In respect of processing however, the four eastern states West Bengal, Bihar, Orissa and Assam account for 43% of the women entrepreneurs and together with the three southern states Tamil Nadu, Andhra Pradesh and Karnataka the share is over 70%. In industrialized states like Maharashtra and Gujarat the share of processing women entrepreneurs is poor. Analyzing the association of entrepreneurship with various indicators of economic distress in the states, the tendency is found to be positively correlated with several development indicators but in others the linkages are weak especially for processing suggestive of the positive role of distress in this case. However, analysis also suggested that entrepreneurship as an intervention can improve wages in the labour market by providing an alternative livelihood.

9.3. Study based on primary surveys

The nine primary surveys conducted for this study provide a broad vista of entrepreneurship as was promoted in recent times. The entrepreneurs came from different classes of households and possessed varying levels of education. Though, a large proportion of the women came from landless, marginal and small holding households and their education level did not go beyond the primary level, there was a great deal of divergence in the profiles among the different regions. The women from the eastern states came from poorer households and the household incomes fell short of the monthly per capita consumption expenditure reported by the NSSO. These women also tend to have higher education than in the north. The enterprises enjoyed significant cost advantages both as access to family labour and unpaid inputs sourced from their own farms, local markets, forests and commons and as ecological compatibility as in the case of bee-keeping. All the enterprises are profitable though some of activities, being constrained in scale, could reap limited absolute returns but even then the returns to financial resources invested and the income per time devoted are considerable in relative terms. Thus the enterprises are viable.

As a starting measure the enterprises received organizational, input and sometimes financial support from the promoting agencies. In many cases the women were organized in Groups working from common workplaces with common equipment. Family was the main source of labour though hiring was made when necessary and

similarly, finance came mostly from family sources though some amount of borrowings from institutional and non-institutional sources supplemented the funds. Marketing was a major constraint, conducted mostly through middlemen and informal tie-ups. Formal contracts are also reported in a few cases. Direct selling was very popular and sometimes the women travelled to exhibitions at distant places. A most effective method was the cooperative selling in Punjab dairy. Cooperative and Group selling were reported only in Punjab and Haryana only. Training was given by ICAR and other sources but they were not popular in all cases. A regression analysis showed training to be a significant input to enterprise in all cases but food processing, finance to be a significant input with limited returns and time as an important input in food processing and primary activity. The women could contribute substantially to the household income through the enterprises and the men were reported to be encouraging and collaborative. However it is noted that there was a distinct and familiar pattern in the male contribution since their cooperation is sought in outdoor and skill intensive work and men hardly helped in family work. Many of the women expressed the view that the enterprises have helped to improve their status at home in community though about 30 to 40 percent denied this. Also a weak link with the marketing activities limited the gains in empowerment since this prevented the women from having enough exposure to market negotiations and social interactions.

9.4. Targeting

Any programme of economic intervention requires public expenditure and planning. Promotion of entrepreneurship, as part of agricultural extension, demands public resources for publicity, research and development, training, technology transmission, as well as financial support as grants or for items like the initial raw material supply, provision of equipment and so on. Besides, careful designing of the programmes inclusive of the identification of activities as well as the kind of intervention necessary, regular monitoring, feedback and evaluation and the mobilisation of other institutional support such as credit and marketing require administrative inputs from the government. In view of the requirement for such allocations it is also desirable that entrepreneurship is chosen by those who would benefit the most.

Market is seen to be the central point from which disempowerment arises and also spreads to other spheres of life. Since the empowerment of farm women is a concern

that is most intimately linked with those who are likely to be adversely affected by the unjust rural labour market, targeting would possibly be best if the beneficiaries include a sizable number of the women who would choose to work as farm labour in the absence of the intervention. However, desirably the beneficiaries would also include women who do not work as labour as even such women might potentially be job seekers but have chosen to stay away from the labour market because of the demeaning conditions. Arguably they could be more privileged in having this choice of refuge than the wage workers who are likely to be facing greater economic distress. Further, the women who have not joined wage work are likely to be vulnerable to intra-household disempowerment and entrepreneurship would come as the sought after alternative. Entrepreneurship as a policy instrument should come as a choice to the women in agriculture and the choice should be inclusive as far as possible.

The samples show that although more than 80% of the households do not possess more than 2 hectare of land, the landless. However most of the women had access to some land and except limited cases as in Andhra Pradesh, wage labour is not reported as an occupation in the households. This fact is however of limited relevance because with entrepreneurship as the occupation it is difficult to reach the counter-factual possibility. The general household affluence is therefore treated as an indicator for the vulnerability of the women. The average monthly incomes exceed the MPCE in four states all in northern or north-western India including Rajasthan but in the eastern states Bihar and Assam and the southern state Andhra Pradesh they fall short. The households in all cases own some comfort items and sometimes also transport vehicles. Salaried members have augmented the household incomes and shares of minority groups inclusive of castes and religions and of widows or women heads of households are poor. It is more probable that targeting could improved by drawing the poorer sections. Although the question of intra-household empowerment remains, it is not easy to determine whether the women who have taken up entrepreneurship were already relatively empowered and if there was an exclusion of the real target group due to its latency. All this suggests that much remains to be done for drawing the real targets to the programme.

9.5. Viability

The enterprises in the samples are all found to be financially viable generating moderate amount of profits even when the raw materials provided freely by the promoter is included in the cost. The annual income exceeds a threshold level of Rs 10,000¹ in all cases except the new and ecological group for which market valuation of the product may be gross underestimates. A substantial advantage arises from the proximity to raw material. Since the total profit is constrained by the scale of operation which in turn is limited in most cases by the availability of other scarce resources which may not be easily valued using market prices, profitability in terms of returns on financial investments and time could be possible alternative indicators. Thus for women who can spare limited time to the income earning enterprise under current conditions activities like bee-keeping and vermin-composting may be suitable as measured by the high income rate they offer although the total profit and scale may be relatively low.

9.6. Regional dimension

A strong regional dimension is sensed in the findings. In northern states women entrepreneurs tend to be more privileged in terms of household affluence but in the eastern and southern states the economic conditions are poorer but more educated women are drawn to enterprise. Also, the profits are higher in the northern samples in Punjab and Haryana and low in the poorer states like Rajasthan, Bihar and Assam suggestive of a regressive potential. Enterprises in the low income states have yielded average annual incomes short of Rs 10,000 the notional threshold. It is very important to study why this perversity occurs across states as well to work out corrective actions. The regional dimension also raises a possibility of examining the best practices and arrange for exchange programmes by which the women from regions with lesser attainments can learn from the practices in the more successful regions and the latter can more often join the training classes as resource persons in other regions. It may also be worthwhile to examine if activities found to be successful in one region

¹ The threshold for consideration at Rs 10,000 is purely notional and not based on any cost of living benchmark. It may be compared with the household income that may be expected from participation in the NREGA public work programme that promises to provide employment to at least one member for at least 100 days in a year at a wage rate of Rs 100 per day. This leads to an income of Rs 10,000.

can have potential in other regions. In general, in view of the indications from the secondary and primary data, greater attention is required for the eastern regions.

9.7. Finance and Organization

Although inputs can be sourced cheaply with little out of pocket pay-outs, use of family funds could be replaced by institutional credit. Some of the primary and food processing activities reported finance as a serious constraint and a lack of access towards institutional sources was mentioned. The successful papad-badi activity of Punjab was among such candidates. In general, organizations have evolved according to what was appropriate to the context but the Groups formed by deliberate intervention have proved to be economic and may be extended. In particular, the availability of workspace and costly equipment could be a boon to women from resource poor households. The more successful enterprises as in Punjab and Haryana deserve to be studied scientifically for replication. At the same time since they have reached a stage when managerial constraints are proving an obstacle, training in management techniques and greater professionalization of management could be encouraged simultaneously with more inducement to expansion of the industry.

9.8. Empowerment issues in the non-market sphere

Empowerment is a profound concept but nevertheless it is important to recognize that women's participation in income earning, risky and market related activities could have valuable fall-outs in terms of recognition, confidence and communication. Entrepreneurship could be a way to greater decision making, choice and voice in households and society. Although associated with the economic programme are possibilities of important non-economic benefits often not related with the income generated, the economic viability of the enterprise is nevertheless important for the sustainability of such effects. This is all the more relevant because the entrepreneurs draw on various direct and indirect supports from the household including financial resources and space and failure of the enterprise may undermine their positions.

Acceptance of women's entrepreneurship in more affluent rungs and the encouragement and cooperation of men are positive signs but the study cannot affirm

if the participants represent those who were more privileged to start with. Stereotyping of work profile evident in the findings indicate the limitations of the programme which possibly needs to be reinforced by greater education of men and women, better infrastructure and public safety and child care facilities and a greater attention to marketing networks. Besides, the training programmes play a versatile role not only in creating useful skills but also in building up leadership, awareness and communication skills. These qualities, besides helping to develop successful enterprises can also contribute to a more participative governance process. As highlighted, entrepreneurship can have important non-important benefits leading to empowerment of women, The kind of function and exposure the participation offers is relevant in that context. The weak linkage of the women from marketing and other out-door activities possibly curbs the returns from the intervention.

9.9. Entrepreneurship and Public works

A comparison with public works as a policy option cannot be avoided when the National Rural Employment Guarantee Act or the NAREGA is revolutionizing the policy towards rural employment in India in an extensive manner. Whether entrepreneurship as a programme for economic empowerment has any relevance is a question that needs consideration. Both are economic interventions via the employment route and calls for some public resources although one is legally enforceable while the other is not. The main distinction lies in the basic nature of the intervention. Public works are self-selecting programmes that involve unskilled and hard labour for fixed and assured returns. They are essentially welfare programmes but to the extent that would succeed in building up productive assets leading to higher production for the market, they become investment and prove sustainable and market compatible. However since this is not assured, they are seen to be a burden on the public exchequer. On the other hand entrepreneurship is anything but a welfare programme. The programmes basically aim at human capital development and the enterprises necessarily have to be responsive to market signals in order to be meaningful. Only for products with social value it is desirable that the government shares the cost. In fact, unlike NAREGA, in which the government has the major role, entrepreneurship could benefit significantly from corporate sector participation although the government role in facilitation of the nascent market can be justified

through an infant industry and an investment on human argument. The incomes from enterprises are far from assured and essentially the undertakings are risky. So although both the NAREGA and entrepreneurship promotion policy try to provide an alternative to the rural labour market to the women who want the opportunity, they differ in respect of their relation to the market, the risk of participation and the outcome of human capital. The income potential in spite of the uncertainty is comparable as the average annual income of Rs 17000 based on the current study exceeds Rs 10,000.

9.10. Policy implications

The most important lesson drawn from the studies is the potential of the programme. Entrepreneurship offers to be a promising method towards employment and income generation for rural households as well as for the empowerment of the women in agriculture. It is also a way of linking agriculture with industry and generate valued added to agriculture. Above all it is a productive method that is compatible with a free market approach to development and can be sustainable without continuous allocations from the budget.

Although this study focused on specific and agro-related activities, the range of activities covered for promotion could be expanded after due market survey and consultation with local women but the cost advantages enjoyed by the activities in relation to local expertise and local raw materials are important criteria for promotion. This would help to increase the value added from agriculture and the profit from the enterprises. While every attempt needs to be made to harness and attract entrepreneurial talent and skill, the beneficiary pool desirably should also draw the less privileged and poorer women who would benefit from the alternative livelihood. In fact the programme can be designed to learn from the success of the first group of entrepreneurs and disseminate the lessons. The regional differences also raise possibilities of transmission of knowledge. There are indications that the eastern and southern region may require greater attention. Organization in groups could help the poorer women get over the problems of input indivisibilities.

Support from public resources needs to be provided with caution. Dependency, complacency and wrong incentives are to be avoided as the programme is developmental and not welfare based. Support can only be justified on grounds of human capital formation and infant industry argument. The commercial success of entrepreneurs in Punjab and the limited attainments in Rajasthan despite the support are a pointer that market could be a more relevant route to success. For products deemed to have social or ecological value and a short run production reducing effect on users, public support is amply justified. Research on advancing technology and a search for new and promising product could important forms of public support. The private sector can be persuaded and tempted to participate in skill formation and marketing and even the traders could be given incentive to promote the market formation for the products produced by the farm women. Sales at exhibitions and melas could be facilitated and supported through fiscal and infrastructural means and the products could be branded.

Training courses are important but the designing has to be mindful of the actual needs of the women, need to be re-conducted and should also address the emergent concerns that could be represented by the women already in enterprise.

References

- Agarwal Bina (1994) *A Field of one's own*, Cambridge
- Agro-economic Research Centres (various) *Viable Entrepreneurial Trades of Women in Agriculture (Haryana, Rajasthan, Punjab, Assam, Himachal)*
- Alkire Sabina and Rufus Black (1997) "A Practical reasoning theory of Development Ethics: Functioning and Capabilities approach" *Journal of International Development* 9(2)
- Badatya K.C., B.B. Wadavi and S. Ananthi (2006) *Microfinance for Microenterprises*, National Bank for Agriculture and Rural Development (NABARD).
- Bardhan Pranab (1978) "Some Employment and Unemployment Characteristics of Rural Women", *Economic and Political Weekly* March 1978.
- Basu Saswati and Parikshit Basu (2007) *Income generation programme and empowerment of women- a case study in India*, memo, Charles Stuart University, New South Wales, Australia)
- Becker Gary S. (1981) *A Treatise on the Family*, Harvard University Press,
- Bhagavatula Suresh (1998) 'Managing Networks for Entrepreneurial Success: Academic Perspective' *IIMB Management Review* 2009.
- Boserup Ester(1975) *Women's Role in Economic Development* , George Allen and Umasin LTD.
- Carolyn Fleur-Lobban and Janet Mancini Billson (2005), "A critique of social change Theories" in Billson Janet Mancini and Carolyn Fleur-Lobban (ed) *Female Well-Being*, Zed Books, London.
- Census !981, 1991,2001 Primary Census Abstract*
- Chen Martha (1995) "A Matter of Survival" in *Women, Culture and Development* edited by Martha Nussbaum and Jonathan Glover, Oxford
- Coorper A. C., T. B. Folta and C. Woo (1995) ' Entrepreneurial Information search' *Journal of Business venturing* Vol 10.
- Dandekar V.M., (1982), "Integration of women in economic development" *Economic and Political Weekly* October 30.
- Dandekar V.M., (1982), "Integration of women in economic development" *Economic and Political Weekly* October 30.

Dasgupta Partha (2001) *Human Well-Being and the Natural Environment*, Oxford University Press

Dreze Jean and Amartya Sen (2003), *India Development and Participation*, Oxford.

Dreze Jean and Amartya Sen (2003), *India Development and Participation*, Oxford.

Drucker Peter F. (1970) "Marketing and Economic Development" in Neelamegham (ed) *Marketing Management and the Indian Economy*, Vikas..

Engels F., (1884, 1972), *The origin of the Family, Private property and the State* (Ed) E.B. Leacock, International Publishers.

Firestone, S. (1970) *The Dialectic of Sex: The case for Feminist Revolution*, Morrow

Government of India (various) *Statistical Abstract of India*.

Guettel, C (1974), *Marxism and Feminism*, Hunter-Rose

Guha Khasnobis Basudeb and Gautam Hazarika (2006) "Women's status and Children's Food Security in Pakistan" Discussion Paper WIDER

Gulati L., (1978) "Profile of Female Agricultural Labour", *Economic and Political Weekly* (Review of Agriculture) 13(12) 25 March.

Hariss B. (1990) "The intra-family Distribution of Hunger in South Asia" in J.Dreze and A.K.Sen (ed) *Political Economy of Hunger*.

Hindustan Times August 8, 25, 2006.

Hirway Indira and Anil Kumar Roy (1999) "Women in Rural Economy: The Case of India" in Indian Journal of Agricultural Economics , Vol 54 No 3.

Indian Labour Journal Vol 46 No11 2005

Indian Labour Journal Vol 46 No11 2005

Institute of Applied manpower Research IAMR (2004) *India Yearbook Manpower Profile*.

Integration of women in economic development V.M. Dandekar, EPW, October 30,1982.

International Institute of Population Sciences (1998-99) India: National family Health Survey (NFHS-2).

John Rawls (1971) *The theory of Justice* Cambridge Kalpaz Publications.

Kaur Satnam and S.K. Goyal (1996) "A Study of Wage Discrimination against Women Agricultural Labourers", Agricultural Situation in India, Vol.53 No.4, July.

Klasen Stephan and Claudia Wink (2006) "'Missing Women': Revisiting the Debate" in Bina Agarwal, Jane Humphries and Ingrid Robeyns (ed) *Capabilities, Freedom and Equality*, Oxford

Kumar S.K. (1978) *Role of Household Economy in Child Nutrition at low Incomes*, Occasional Paper No. 95, Department of Agricultural Economics, Cornell University.

Kundu Amitabh, Niranjana Sarangi and Bal Paritosh Das (2005) 'Economic Growth, Poverty and Non-farm Employment: An analysis of Rural-urban Inter-linkages' in Rohini Nayyar and Alakh N. Sharma (ed) *Rural Transformation in India*, Institute of Human Development, Delhi.

Larson A. and J. Starr (1993) 'A Network Model of Organization Formation' *Entrepreneurial Theory and Practice* Vol. 17.

Lewis W.A. (1954) *Economic development with Unlimited Supplies of Labour*, Manchester School.

Lipton, M. (1977), 'Why Poor People Stay Poor: Urban Bias in World Development', Cambridge, Harvard University Press.

Manser Marilyn and Murray Brown (1980) "Marriage and Household Decision Making: A Bargaining Analysis", International Economic Review 21(1).

Mathur G.C. (2000) "Technology for reducing Drudgery of Rural Women" in *Women in Agriculture and Rural Development*, Discovery Publishing, New Delhi.

Mathur Y.B. (1973) *Women's Education in India*, Asia Publishing House, Bombay.

McElroy, Marjorie and Mary Jean Horney (1981) 'Nash-bargained Household Decisions: Towards a Generalization of the Theory of Demand' International Economic Review 22(2)

Mencher J.P. and K.Saradmoni (1982) Muddy feet and Dirty Hands: Rice production and Female Agricultural Labour” Economic and Political Weekly, Vol. 17 No. 52 December.

Mulky Avinash G. (2008) Enhancing Marketing performance: Academic Perspective IIMB Management Review

Murdoch, G.P., (1961) ‘How culture changes’ in H.L. Shapiro (ed) *Man, Culture and Society*, OUP

Myrdal Gunnar (1957) Economic Theory and Under-developed Regions, Gerald Duckworth & Co Ltd.

Myrdal gunnar (1968) *Asian drama: Inquiry into the poverty of the nation*. Allen lane, The Penguin press, London

Narayan, D. et al (2000) *Voices of the poor : Crying out for change*, New York Oxford.

Nash John F. (1950) ‘The bargaining problem’ Econometrica

National Council for Educational research and Training (various) All India Education Survey.

National Sample Survey Organisation, Government of India (2001) *Employment and Unemployment Situation in India 1999-2000 Part I and II*.

National Sample Survey Organisation, Government of India (2001) *Employment and Unemployment Situation in India 1999-2000 Part I and II*.

National Sample Survey Organisation, Government of India 2001 *Employment and Unemployment Situation in India 1999-2000*

Nurkse Ragnar (1953) Problems of Capital formation in under developed countries, Oxford.

Parthasarathy, G. (1996) “Recent Trends in Wages and Employment of Agricultural Labour”, Indian Journal of Agricultural Economics Vol.51, No. 1 and 2, Jan-June.

Parthasarathy, G. (1996) “Recent Trends in Wages and Employment of Agricultural Labour”, Indian Journal of Agricultural Economics Vol.51, No. 1 and 2, Jan-June.

Pindyck Robert s and Daniel L. Rubinfeld (2001) *Microeconomics* Pearson Education

Punia R.K. (1991) *Women in Agriculture: Their Status and Role*, Northern Book Centre.

Rajagopal Rural (1995) *Marketing Administration in India*, Kaveri Books

Raju Saraswati (2005) 'Limited Options- Rethinking Women's Empowerment' in Gender Technology and Development 9(2).

Rao C.H. Hanumantha (2005) 'Growth in Rural Non-farm Sector: Some Lessons from Asian Experience' in Rohini Nayyar and Alakh N. Sharma (ed) *Rural Transformation in India*, Institute of Human Development, Delhi.

Rao Nitya (2005) "Gender Equality, Land Rights and Household Food Security" Economic and Political Weekly VolXL No 25 June18-24.

References

Rathakrishnan, L.(2008), "Enterprise among Farm Women in India and Understanding their Constraints: An exploration of NSSO's Household data" article included in Book '*Empowerment of Women through Entrepreneurship*', Gyan Publishing House, New Delhi.

Registrar general and Census Commissioner India (1981 1991 2001) Primary Census Abstract.

Registrar general and Census Commissioner India (2001) Tables on Houses Household Amenities and Assts.

Research and Information System for Developing countries RIS(2006) *Towards Employment oriented Export Strategy: Some Exploration*

Robert, J.M. (1995), *History of the World*, The Penguin.

Robins Ingrid, (2006) 'Sen.'s Capability approach and Gender inequality' in Bina Agarwal, Jane Humphries and Ingrid Robeyns (ed) *Capabilities, Freedom and Equality* Oxford.

Rosaldo, M.Z., and L. Lamphere, (1974) *Women, Culture and Society* Stanford University Press.

Samuelson Paul A. (1956) "Social Indifference Curves" Quarterly Journal of Economics 70(1).

Schultz Theodore W. (1964) *Transforming Traditional Agriculture* Lyall Book Dept.

Sen Abhijit and Praveen Jha (2005) 'Rural Employment: Patterns and Trends from National Sample Survey' in Rohini Nayyar and Alakh N. Sharma (ed) *Rural Transformation in India*, Institute of Human Development, Delhi.

Sen Amartya (2006) "Development as Capability Expansion" in Bina Agarwal, Jane Humphries and Ingrid Robeyns (ed) *Capabilities, Freedom and Equality*, Oxford.

Sen Amartya (2006) "Gender and Cooperative Conflicts" in Bina Agarwal, Jane Humphries and Ingrid Robeyns (ed) *Capabilities, Freedom and Equality*, Oxford.

Singh Gurdev (1994), *Non-Farm Rural products* Oxford and IBH Publishing Co. Pvt. Ltd.

Sudha Rani P., V.T. Raju, P. Raghuram and G. Munaswami Naidu (1990) "Wage Differentials and Factors Governing Employment of Women in Agriculture" *Agricultural Situation in India* Vol. 45 No.4., July.

The Times of India, New Delhi(November10, 2006)Gender: India better than neighbours.

Tuteja Usha (2006) Contribution of Women Agricultural Workers in Family Income and their Status in Haryana *Indian Journal of Agricultural Economics* Vol. 55 No. 2 June.

United Nations (1990) *Handbook of National Statistical Data base in Women and Development*

Verma Roop Rekha (1995), 'Femininity, equality and personhood in Women', *Women, Culture and Development* edited by Martha Nussbaum and Jonathan Glover, Oxford

Wasinik, K.P. (2005) *Women in Agriculture : Strategy for Socio-economic Empowerment*, Kalpaz Publications

Weber M. (1946), " From Max Weber" in H.H. Gerth and C.W. Mills (ed) New york, OUP.

Wilson P. (1996), Employment Counting economic development from the inside out, *Urban studies* 33.

Zimmerman, M (1984), "Taking on empowerment research: on the distinction between individual and psychological conception, *American Journal of community psychology* 18.

Participation

Punjab

Shri. Sanjay Kumar and Shri Gurpreet Singh Gill
Agro Economic Research Centre, Punjab Agricultural University,
Ludhiana-Punjab;

Assam

Shri. Ranjit Borah
Agro-economic Research Centre for North-East India Assam Agricultural University,
Jorhat- Assam; 785013.

Rajasthan

Smt. Rajashree A. Dutta
The Agro-Economic Research Centre, Sardar Patel University
Gujarat- 388120.

Himachal

Shri. M. L. Sharma, Shri N. K. Sharma, Shri. K. R. Sharma, Shri. C. S. Vaidya
The Agro-economic Research Center of Himachal Pradesh University,
Shimla-171005.

Haryana

Smt. Usha Tuteja
Agricultural economics Research center,
University of Delhi – 110007.

Uttaranchal

Shri. C .S. C. Sekhar
Agricultural Economics Research center,
University of Delhi - 110007

Bihar

Shri Ranjan Kumar Sinha and Shri Shambhu Deo Mishra
Agro Economic Research Centre (Bihar and Jharkhand)
Tilka Manjhi Bhagalpur University
Bhagalpur-812007.

Uttar Pradesh

Smt Bharti Sharma
Agro Economic Research Centre, University of Allahabad
Monirba Building, Chatham Lines
Allahabad - 211002

Andhra Pradesh

Smt. K. Annie Nirmala
Agro Economic Research Centre, Andhra University
Visakhapatnam

Coordinator

Smt. Nilabja Ghosh
Institute of Economic Growth, Delhi
University of Delhi Enclave (North)
Delhi 110007

Action Taken Report

Comments

1. Topic is relevant, good coverage under the study and some dimensions are well .and extensively dealt.
2. Title fails to adequately communicate the theme and thrust of the study. The word 'women' is repeated twice in the title. Hence the title needs to be suitably modified.
3. Undoubtedly, some chapters are well written. But the appropriateness of these chapters, particularly first few, seems remotely related to the topic dealt. As such there is too much attention on the historical perspective which makes the report voluminous. Some chapters can therefore be avoided to reduce the volume of the report. Ideally a good deal of editing is to be done to limit the report to 150-160 pages for arousing interest in the readers.
4. Many corrections have to be made in different paragraphs, particularly in the first few chapters some of which are indicated in the text. Therefore careful review of the texts in paragraphs of different chapters is needed to rectify the errors already crept into.
5. There is ample scope to restructure the contents under different heads to add value to the information generated and findings of the anlyasis and for maintaining the flow and continuity of the report.
6. PCA is either for data reduction or interpretation. Principal components have been identified showing the extent of variances they are contributing and variables of PCA has been used for further analysis. But these two parts should be presented together in one chapter rather than putting in different chapters for better clarity continuity and comprehension of interpretation in the context of enterprise development.
7. Instead of presenting the information state wise some kind of synthesis of available information could have been done for a better perspective highlighting the similarities and differences among states.
8. Large part of the text from initial chapters has been largely repeated in conclusion chapter. It is not sure whether it is deliberate or inadvertent. Conclusion should be 3-4 pages.
9. Summary of the study may be presented before the beginning of chapter 1 and should be restricted to 4-5 pages. Similarly, background information of states and sampling plan should have been given in the beginning.
10. In some cases data updation is required. Data for the year 2006-07 on enterprises promoted under different schemes may be included.

Actions taken:

1. The title is corrected for the repetition but adheres to the name of the project as given in the proposal (Comment 2).
2. The structure of the earlier version of the report was shaped by the sequential arrival of the individual state level reports and the time constraint. The report is now significantly

edited, corrected and restructured keeping in view the comments. The conclusion is shortened. The number of pages is now reduced (comments 3, 4, 5, 7, 8).

3. The two chapters involving the PCA analysis are merged in the course of the restructuring (Comment 6).

4. The summary is provided at the beginning and so is the information on sampling (Comment 9).

5. After discussion with the relevant departments in the Directorate of Extension, the schemes addressing women in agriculture are outlined in Chapter 2 mentioning the activities promoted.