

Entrepreneurial Behaviour of Tribal Women regarding Vermiculture Technology

Latika Vyas¹ and Piyush Jani²

Abstract

The study was conducted in purposively selected Rechhawar village of Jhadol block of Udaipur district in order to know the entrepreneurial behavior of tribal women in terms of their socio-economic, psychological and family background attributes. The results of the study revealed that majority of the respondents exhibited medium to low level of entrepreneurial behavior, while very few of them exhibited high level of entrepreneurial behavior. The study further shows that education, family income, risk willingness of the respondents and training received by them had positive relationship with their entrepreneurial behavior. The study also concluded that age, family occupation, owning responsibility for failure, family type, family size, birth status in parental home, present status in in-law's home and length of experience had negative relationship with entrepreneurial behavior. It is further concluded that dual responsibility, lack of responses, poor family support, late payment by clients, mobility and marketing constraints were the major impediments perceived by the tribal women.

Introduction

Social and economic development of women is necessary for overall economic development of any society or a country. The term "Women Entrepreneurship" refers to an act of business ownership and business creation that empowers women economically, increases their economic strength and position in society. Despite all the social hurdles, Indian women stand tall from the rest of the crowd and are applauded for their contributions to their respective field and the economy as a whole. Women need to be lauded for their increased utilization of modern technology, increased investment, finding a niche in the export market, creating a sizable employment for others and setting the trend for other woman entrepreneurs in the organized sector. On the other hand women form almost half of the population. Expansion of women's employment is essential for accelerating economic growth. It has been increasingly realized that the women entrepreneurs

¹ Associate Professor, DEE, MPUAT, Udaipur, Rajasthan.

² Associate Professor, DEE, MPUAT, Udaipur, Rajasthan.

have vast entrepreneurial talents which could be harnessed to create employment opportunities.

In view of the importance of women entrepreneurship the present study was carried out in Reechhwar village, P.S Jhadol, Udaipur District, Rajasthan. In Rajasthan about 77 per cent of the population is living in rural areas and 70 per cent depends primarily on agriculture and subsidiary on animal husbandry as source of their livelihood. The State has diverse agro-climatic situations with desert, Aravali hills and fragile ecosystems. Udaipur is dominated by tribal population and the main occupation of tribal families is agriculture. Traditionally, the tribal farmers of Udaipur district are growing and maintaining local landraces of important crops *viz.* maize (Malan & Sathi) foxtail millet, horse gram etc. However, the scenario is changing day by day due to erratic and uneven distribution of rainfall, frequent famines, reducing land holding with less percentage of irrigated land etc. Besides these, the farmers are not aware about the importance of local landraces and for the same reason they are switching over to monoculture for high economic returns. The situation in case of animals and fisheries is almost the same. There are 347 families residing in Reechhwar village. During recent times, increasing population, fragmented holdings and change in life styles has forced tribal farmers to adopt subsidiary occupations to sustain their livelihoods.

Vermitechnology is a promising technique that has shown its potential in certain challenging areas like augmentation of food production, waste recycling, management of solid wastes etc., (Tripathi *et al.*, 2005). The word Vermiculture biotechnology implies a modern technique of harnessing the ecosystem for effective utilization of the organic waste with the help of earthworms, which results in generation of useful organic manure. It helps to avoid environmental pollution and expenditure of resources to treat organic waste (Singh, 2004). Soil with vermicasts has roughly 100 times more bacteria than soil without worms. Vermicompost production has proved a promising livelihood in tribal areas.

The present study was conducted to explore entrepreneurial behavior of tribal women, analyse the relationship of entrepreneurial behavior of tribal women entrepreneurs with their attributes and also identify the constraints experienced by them in implementation of their enterprise.

Materials and Methods

The study was conducted in Reechhwar village, Jhadol block of Udaipur district of Rajasthan, India which was purposively selected. A list of tribal women entrepreneurs in the village was prepared. A total of 60 respondents were selected for the study by using simple random sampling method. All the respondents were individually interviewed using pretested interview schedule. In view of the purpose of the study and literacy level of the respondents, interview method was considered appropriate for data collection. This method helped to collect factual and accurate information from the respondents. Entrepreneurial behavior is the study of human behavior involved in identifying and exploiting opportunities through creating and developing new ventures (Bird & Schjoedt, 2009) and was assessed by using parameters (drive and energy, self-confidence, low fear of failure, moderate risk taking, use of resources, clear goal setting). Socioeconomic characteristics of a population expressed statistically, such as age, sex, education level, income level, marital status, occupation and average size of a family. The entrepreneurial success index developed by Sharma (2005) was used to measure the entrepreneurial behavior of tribal women. This index included five indicators viz. net profit / gross return per unit of investment, level of diversification and improvement / enterprise diversification, share of profit reinvested, degree of satisfaction and have identified and planning to start a new enterprise. Pearson's Coefficient of Correlation test, regression coefficients, t and z test were statistically analyzed as described by Panse and Sukhatme (1989).

Details of interview schedule

1.	Background information	Information related to personal, socio – economic and communication characteristics of the respondents.								
2.	Personal characteristics	Age, Education, Marital status and Occupation								
3.	Socio-economic characteristics	Caste, Family type & size, Organizational membership, Landholding, Livestock size, Dwelling for livestock, Farm and home assets, Socio – economic status. categorized: <table border="1" data-bbox="486 1379 1130 1530"> <thead> <tr> <th>Category</th> <th>Score range</th> </tr> </thead> <tbody> <tr> <td>High</td> <td>Above 50</td> </tr> <tr> <td>Medium</td> <td>30-50</td> </tr> <tr> <td>Low</td> <td>Less than 30</td> </tr> </tbody> </table>	Category	Score range	High	Above 50	Medium	30-50	Low	Less than 30
Category	Score range									
High	Above 50									
Medium	30-50									
Low	Less than 30									
4.	Entrepreneurial Behaviour	Drive and energy, self-confidence, low fear of failure, moderate risk taking , use of resources, clear goal setting.								

Results and Discussion

Entrepreneurial Behavior of Tribal Women Entrepreneurs

Majority (60 %) of the respondents were found to be medium in their entrepreneurial behavior, followed by 23.3 per cent of the respondents with low level of entrepreneurial behavior. Only 16.7 per cent of the respondents were found to be high in their entrepreneurial behavior as may be seen in Table 1.

Table 1. Distribution of respondents according to their entrepreneurial behavior

Entrepreneurial Success	No.	%	Mean	S.D.
Low (< 9.5 score)	14	23.3	13.0	3.5
Medium (9.5 to 16.5 score)	36	60.0		
High (> 16.5 score)	10	16.7		

It could be inferred that 83 per cent of the respondents possessed medium to low level of entrepreneurship. This is in conformity with the findings of earlier studies by Patil *et al.* (1999), Choudhary (2006), Subramanyeshwary *et al.* (2007) and Jain and Patel (2008).

Relationship between socio – economic and psychological attributes of the respondents and their Entrepreneurial Behavior

To find out the relationship between socio-economic and psychological characteristics of tribal women entrepreneurs and their entrepreneurial behavior, correlation coefficient was worked out and is presented in Table 2. It was observed that out of ten socio – economic and psychological attributes studied, the correlation values of seven variables were found to be significant with entrepreneurial behavior of tribal women, while the values of three variables *viz.*; land holding , material possession and economic status were found to be non significant. The relationship between age and entrepreneurial behavior was found to be negative and significant. This shows that if the tribal women entrepreneur is young, her entrepreneurial behavior would be high. Education status of the respondents was found to have positive and highly significant relationship with entrepreneurial behavior. It shows that education is an important factor determining the entrepreneurial orientation of an individual as cited by Patel *et al.* (2004) and Sudhakar and Tamilselvi (2007). The relationship between family income and entrepreneurial behavior of tribal women was found to be positive and significant. This explains that if the family income is high, the entrepreneurial behavior would also be high. Similar findings

were reported by Sudhakar and Tamilselvi (2007). Risk taking willingness also showed positive relationship with entrepreneurial behavior. An individual could be an entrepreneur when he is willing to take risk. The relationship between owning responsibility by the respondents and their entrepreneurial behavior was found to be negative and highly significant. The variables like land holding, material possession and economic status did not show significant relationship with entrepreneurial success. It clearly indicates that these variables did not have any impact on entrepreneurial behavior.

Table 2. Relationship of socio-economic and psychological attributes of rural women entrepreneurs with their Entrepreneurial Behaviour

Sl. No.	Characteristics	Correlation coefficient (r)	Regression coefficient (b)	Standard error for regression (b)	Computed 't' value
1.	Age	-0.558**	-0.11	0.006	1.64
2.	Education	0.725**	1.20	0.426	2.80**
3.	Land holding	0.007	-1.54	1.18	1.31
4.	Material possession	0.066	-0.42	0.52	0.80
5.	Family occupation	-0.287*	-0.56	0.62	0.91
6.	Family income	0.280*	0.41	0.66	0.62
7.	Economic status	0.056	0.28	0.34	0.81
8.	Risk taking willingness	0.387**	0.46	0.21	2.09*
9.	Owning responsibility for failure	-0.346**	0.7	0.38	0.68

R = 0.61 Intercept = 13.48

F value = 7.71** with 105 48 DFS

*Significant at 5% level of probability

** Significant at 1% level of probability

The above data shows that education is an important factor determining the entrepreneurial orientation of an individual as cited by Patel *et al.* (2004) and Sudhakar and Tamilselvi (2007).

Regression Coefficients between Entrepreneurial Behavior of Tribal Women Entrepreneurs with their socio-economic and psychological attributes

The regression coefficients between entrepreneurial behavior of tribal women entrepreneurs with their socio-economic and psychological attributes is presented in Table 2. The analysis of Table 2 indicated that all the ten independent variables taken together explained 61 per cent of the variation for entrepreneurial success. The 'F' value 7.72 was significant at 1 per cent level of probability. The result implied that all the ten variables accounted for significant amount of variation

for entrepreneurial behavior. Further, it is observed that 't' test of significance expressed in coefficient of regression 'b' values are positively significant at 1 per cent level of probability for education status, whereas, coefficient of regression 'b' value is positively significant for risk talking willingness at 5 per cent level of probability. On the contrary coefficient of regression 'b' values are not significant for age, land, material possession, family occupation, economic status, and owing responsibility for failure. The results of the analysis indicate that education status and risk taking willingness of tribal women entrepreneurs were the most important predictors in entrepreneurial behavior.

Relationship between Family Background characteristics of Rural Women Entrepreneurs with their entrepreneurial success

With the assumption that entrepreneurial success of rural women entrepreneurs was influenced by their family background characteristics, the relationship of various family background variables with entrepreneurial behavior, coefficient of correlation between entrepreneurial success and ten selected variables was computed and compared and the results are presented in Table 3. It is clear from the table that family type of rural women entrepreneurs showed negative and significant relationship with entrepreneurial behavior. It showed that a tribal women entrepreneur from a joint family has low level of entrepreneurial behavior. The possible reason behind this could be that, in a joint family, an entrepreneur has partial or no command on the resources owned by the family. Similarly, family size, birth status in parental home, present status in in-laws home also showed negative and significant relationship with entrepreneurial behavior. Out of the ten family background variables, training received was positively and significantly correlated with entrepreneurial success. Shailja *et al.* (1996) also found a positive and significant relationship between training received and entrepreneurial behavior. The variables like family type in parental home, earning members, working hands and time use pattern did not show significant relationship with entrepreneurial behavior.

The regression coefficient between entrepreneurial behavior of tribal women entrepreneurs with their family background attributes was also presented in Table 3. The analysis of Table 3 indicates that all the ten independent variables taken together explained 38 per cent of the variation for entrepreneurial behavior. The 'F' value 2.95 was significant at one per cent level of probability. The result implies that all the ten variables accounted for significant amount of variation for entrepreneurial behavior.

Table 3. Relationship of family background attributes of rural women entrepreneurs with their entrepreneurial behaviour

Sl. No.	Characteristics	Correlation Coefficient (r)	Regression coefficient (b)	Standard error for regression (b)	Computed 't' value
1	Family type	- 0.312*	- 0.24	1.54	- 0.17
2	Family size	- 0.383**	- 0.36	0.28	-1.31
3	Earning members	0.018	1.91	1.14	1.67
4	Working hands	0.047	0.32	0.76	0.41
5	Training received	0.276*	1.46	1.15	1.28
6	Length of experience	- 0.276*	1.46	1.15	1.28

R² = 0.38 intercept = 19.69

F value = 2.95 with 10 & 49 DFS

*Significant at 5% level of probability

** Significant at 1% level of probability

Further, it was observed that 't' test of significance expressed in coefficient at 5 per cent level of probability for present status in in-laws home. On the contrary, coefficient of regression 'b' values were not significant for family type, family size, working hands, length of experience, training received, etc. The results of the analysis indicate that present status in laws home was the most important predictor in entrepreneurial behavior.

Constraints experienced by Tribal Women Entrepreneurs in implementation of their enterprise

Constraints experienced by tribal women entrepreneurs in implementation of their enterprise as perceived and prioritized by tribal women entrepreneurs are presented in Table 4. The results revealed that dual responsibility was ranked first among of tribal women entrepreneurs (96.66%). Lack of resources was ranked second. Poor family support was the next in order of importance. Lack of awareness (78.33%) was ranked fourth followed by late payment by clients (75%), mobility constraints (70%), marketing constraints (65%), non-payment by clients (62%) and non availability of funds from institutional sources (53.33%). Finally, the non availability of guarantor (41.66%) was ranked last. Similar findings were reported by Singh (2008).

Table 4. Constraints experienced by Rural Women Entrepreneurs in the implementation of their Enterprise N=60

Sl. No.	Constraints	N	%	Rank
1	Dual responsibility	58	96.66	I
2	Lack of resources	55	91.66	II
3	Poor family support	50	83.00	III
4	Lack of awareness	47	78.33	IV
5	Late payment by clients	45	75.00	V
6	Mobility constraints	42	70.00	VI
7	Marketing constraints	39	65.00	VII
8	Non-payment by clients	37	62.00	VIII
9	Non availability of funds from institutional sources	32	53.33	IX
10	Non availability of guarantor	25	41.66	X

Conclusion

The study concluded that majority of respondents possessed medium level of entrepreneurship education. Family income, risk willingness of the respondents and training received by them had positive relationship with entrepreneurial behavior. The study also concluded that age, family type, family size, status in in-law's home, and length of experience had negative relationship with entrepreneurial behavior. The study further, concluded that dual responsibility, lack of resources, poor family support, late payment by clients, mobility constraints and marketing constraints were the major constraints perceived by the majority of the tribal women entrepreneurs.

Socio-Economic Implications During the study it was observed that entrepreneurship in adoption of vermiculture technology not only increased their income but significantly improved the fertility of the soil. It was reported that use of vermicompost in fields led to drastic reduction in use of fertilizers and pesticides; further its use improved the quality of produce which fetched them better return from the market. As far as income is concerned, respondents earned a sum of Rs 2000-10000/ per year by selling vermicompost and earthworms. It was also observed that farm women who adopted vermiculture technology gained a special prestige in the village and looking at the benefits, it aroused interest in the farmers of the neighboring areas who continually contacted these respondents and sought advise.

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