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Determinants of an entrepreneurial performance of coir yarn spinners in Tamil Nadu- An analysis

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ABSTRACT

An empirical analysis was made to estimate the determinants of entrepreneurial performance of coir yarn spinners operating in one of the Coir cluster regions promoted by the Government of Tamil Nadu. Demographic, social, economic, personality, work experience and competency on coir spinning profile of the coir yarn spinners and the enterprise profile such as size and geographical location of the spinning units were considered as predictor variables effecting for entrepreneurial managerial performance. The study found that there were differences and variations in the entrepreneurial managerial performance among coir yarn spinners. Such differences and variations in the performance are contributed by personal, personality, social, economic and competency variables of the coir yarn spinners and also by the size and geographical location of the enterprise. However, the study finds that the most important determinants of entrepreneurial performance are concerned with the competency level and the personality of the entrepreneur. High competency particularly on machine capacity utilization, management-oriented style coupled with high level of contact with change agents are the most important determinants of the entrepreneurial managerial high performance of the coir yarn spinners.

Keywords: *Entrepreneurial Performance, Coir yarn spinners, Socio-economic, Personality, Entrepreneurial Competency, Determinants, Machine Capacity Utilization.*

1. INTRODUCTION

Several studies indicate the indispensable relationship between the socio-economic status and the entrepreneurial performance. Socio-economic status and entrepreneurship are a complement to each other and interdependent (Afsaneh Bagheri et.al. 2009). Commensurate with social and economic status, entrepreneurs seem to be more competent, forceful and empowered (Jackman, 1994; Masanari Sakurai, 2002). Charles Desforges (2003) found that socially and economically advantaged people have high competence level which reflects in management performance. According to Nadim Ahmad (2007), economical and sociological factors coupled with personal attributes including personality traits of the entrepreneurs affect the outcome of the entrepreneurial process. While situational environment, social factors, and personality characteristics are viewed as a vital component determining the entrepreneurial success (Mariassunta Giannett, 2004). Viral Acharya et.al. (2004) confirm the relationship between personality features and the heredity of the entrepreneurs, which in turn have an effect on the managerial performance/success of the enterprise.

Studies by Kristiansen et.al., (2003), Marc Cowling (2004) evidence that former work experience have an impact on the entrepreneurial intention and endeavour while, knowledge gained through prior experience help to perform successfully in the markets (Prof. Tapan, 2005) and on the managerial /operations performance (Nonaka, 1994) particularly to perform and compete in global markets (CRIC, 2000). Thus the studies confirm that “entrepreneurs are not born; they are made”.

1.1 A Case of Coir Yarn Spinning Entrepreneurs

Coir yarn spinning, which is one amongst the traditional occupations of weaker sections of the population in regions where coconut palms are prominent, of late, is being encouraged as an entrepreneurial activity with the sole objective of creating self-employment especially among youth and women who do not have coir yarn spinning as their traditional occupation. Technology innovations on coir yarn spinning through automated machines/devices resulting to mass production and the increased demand for coir based

Gnanasaranya. S, Pranmalai K. Raja Alias; *International Journal of Advance Research, Ideas and Innovations in Technology* products in global markets coupled by the special initiative measures of the Govt. for coir based entrepreneurial development and the like, have pulled a many to venture into entrepreneurship on coir yarn spinning mostly in semi-urban and rural areas. In Tamil Nadu, it is reported that there are about 5399 coir yarn spinners (units) and create employment to 100,840 people in the state (*Industries and Commerce, GOTN, 2016*).

During field visits it was observed that a few of the coir yarn spinning entrepreneurs were found to be happy with their enterprise; a few of them could able to maximize their production and create employment; a few possessing high competency and skill relating to the enterprise seem to be successful; those who possess social capital coupled with good economic background seem to perform well; coir yarn entrepreneurs having prior work experience and involvement in coir related entrepreneurial activities perform well and others could not do so. In this broad context, issues such as: why do a few coir yarn spinning entrepreneurs perform well in business when the effect of macro environments governing the coir yarn spinners are more or less constant? Why do the performances of the coir yarn spinners vary from one another? Do the personal, personality, economic, social, work experience and competency characteristics (attributes) of the coir yarn spinners influence their entrepreneurial performance? Which of their characteristics/ attribute(s) contribute to entrepreneurial high performance? & the like require an empirical in-depth analysis among coir yarn spinners. Hence the attempt.

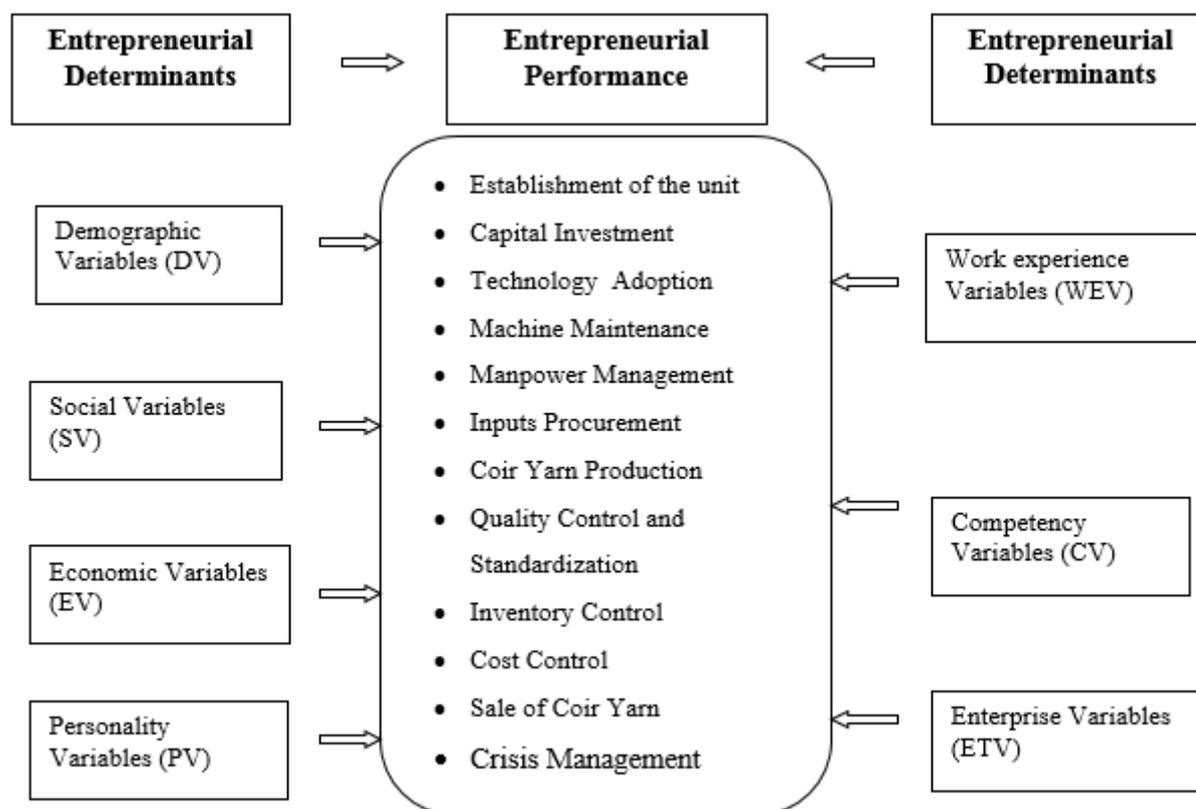


Chart 1: Conceptual Model

Study Focus

The study aims at disclosing the determinant attributes/ variables of the entrepreneurial performance of coir yarn spinners. Towards these in view, the conceptual framework as shown in Chart 01 is designed for analysis. The study considered that the attributes/ variables such as age, gender, educational status, marital status, type of family, size of family, community and religion under Demographic characteristics; occupation, habitat assets, land assets, vehicles owned, household, and other assets, family annual income, investments and debts related to coir spinning unit under Economic characteristics; social participation, mass media exposure, contact with change agents and neighborliness under Social characteristic; involvement in coir yarn spinning process, skills acquired and involvement in coir related entrepreneurial activities under Prior work experience variables; size of the enterprise and location of the enterprise under Enterprise variables; scientific orientation, achievement and risk taking orientation and management orientation under Personality characteristics; and knowledge about coir sector, coir yarn spinning unit, coir yarn, production process, machine capacity, machine maintenance, inventory norms and markets under Competency variables as predictors.

Methodology

The study is an empirical analysis. Field survey method and personal interview technique were employed. The simple random sampling procedure was used to select the geographical area for the study while, census method was used for selection of the respondents (coir yarn spinners) (see endnote). Cumulative index scores on Personal, Personality, Economic, Social and Work experience including Entrepreneurial competency of each respondent were estimated, while cumulative index scores on

Entrepreneurial Performance of each respondent were estimated with the help of ratted scales. Analyses were done with the help of SPSS by using statistical tools such as percentages, means, ANOVA and Linear Multiple Regression models.

2. MAJOR INFERENCES

Table 1 Performance in Entrepreneurial Managerial Activities of the Coir yarn spinners

S. No	Entrepreneurial managerial activities	Number of respondents under Performance category (N=154)			Total
		Low	Moderate	High	
1	Geographical location	16 (10.3)	98 (64.0)	40 (26.0)	154 (100)
2	Capital and Investment	47 (31.0)	66 (43.0)	41 (26.6)	154 (100)
3	Technology adoption	75 (48.7)	57 (37.0)	22 (14.3)	154 (100)
4	Machine maintenance	69 (44.8)	45 (29.2)	40 (26.0)	154 (100)
5	Manpower management	83 (54.0)	36 (23.3)	35 (22.7)	154 (100)
6	Input procurements	67 (43.5)	48 (31.2)	39 (25.3)	154 (100)
7	Machine Capacity	88 (57.1)	42 (27.3)	24 (15.6)	154 (100)
8	Coir yarn production	67 (43.5)	74 (48.0)	13 (08.4)	154 (100)
9	Quality control	88 (57.1)	41 (26.6)	25 (16.2)	154 (100)
10	Inventory control	80 (52.0)	54 (35.1)	20 (13.0)	154 (100)
11	Cost control	80 (52.0)	54 (34.1)	20 (13.0)	154 (100)
12	Sale of Coir yarn	85 (55.2)	47 (30.5)	22 (14.3)	154 (100)
13	Crisis management	34 (22.1)	120 (78.2)	--	154 (100)
	Total	879(44)	782(39)	341(17)	2002(100)

Figures in brackets are percentages to row total.

2.1 Entrepreneurial Performance: Performance in entrepreneurial managerial activities such as Selection of the site and establishment of spinning unit, Capital mobilization and investment, Technology adoption, Machine maintenance, Capacity utilization of machines, Manpower management, Inputs procurement, Production of coir yarn, Quality and Inventory control and standardization, Cost minimization, Sale and marketing of coir yarn and Crisis management were estimated with the help of ratted scale and index scores of each respondent were computed. For instances, the performance of the coir yarn spinners so far as selection of the geographical location and site for the establishment of the spinning unit was assessed by obtaining responses to a set of ten questions/statements in 5 point ratted scale and index scores of each respondent were estimated. Index scores on each entrepreneurial managerial activity ranging from 34 to 50 denote ‘High performance’ while the scores ranging from 17 to 33 denote ‘Moderate performance’. The scores up to 16 denote ‘Low performance’.

As shown in Table 01, on an average 44 per cent of the coir yarn spinners are ‘low performers’, while only 17 per cent of them exhibit ‘high performance’ in their entrepreneurial managerial activities. The performance of coir yarn spinners also varies in each of the entrepreneurial managerial activities. For instances, only 10 per cent of the coir yarn spinners has low performance in the selection of geographical location and site for the establishment of the spinning unit, whereas 57 per cent of them were found to be low performers so far as quality control and management is concerned. These indicate the existence of not only the differences in the entrepreneurial performance among coir yarn spinners but also the variations in the performance of each entrepreneurial managerial activity. Thus the above inferences serve as a base for further inquiry on the determinants of entrepreneurial performance of the coir yarn spinners.

2.2 Determinants of Entrepreneurial Performance – Results of LMR Model

The variables/ attributes under Demographic (personal), Economic, Social, Prior work experience, Personality and Competency profile (variables) of the entrepreneurs and the Enterprise variables such as size and geographical location of the spinning units are fitted in the LMR model to find out the effect on the entrepreneurial managerial performance of coir yarn spinners. The results of LMR model show that among demographic variables viz., the community (OC=1, BC/MBC=2 and SC/ ST=3); among economic variables viz., extent of debt possessed; among social variables viz., possession of contacts with change agents; among personality variables viz., management orientation style; among competency variables viz., knowledge about machine capacity and the enterprise variables such as size of the enterprise and geographical location of the enterprise (urban area) have positively effected significantly for the entrepreneurial high performance among coir yarn spinners. The economic variable viz., possession of land holdings has a negative significant effect (land less=0, possessing land holdings below 2.5 acres=1, land holding from 2.5 to 5 acres =2 and land holding above 5 acres =3) ie, the variable land less/ possession of fewer land holdings have significantly effected for high entrepreneurial performance. Among above variables effecting significantly, however, the β coefficient is the highest for management orientation ($\beta=0.346$) followed by contact with change agents ($\beta=0.154$). Therefore it may be stated that the entrepreneurial performance of the coir yarn spinners is determined by both the entrepreneur-oriented variables such as personal, personality, social, economic and enterprise variables such as size and geographical location of the spinning unit. However, the most important determinant variables contributing to the high performance are the personality viz., high level of management orientation and the social attribute viz., high level of contact with agents of the coir yarn spinners.

Variables Entered/Removed(b)			
Model	Variables Entered	Variables Removed	Method
1	Age, Gender, Educational Status, Family Size, Community, Occupation, Land, Total Assets, Investments, Debt, Social Participation, Mass Media, Contact with Change Agents, Neighbourliness, Scientific Orientation, Achievement Orientation, Management Orientation, Involvement in Entrepreneurial Practices, Duration of Involvement of Coir Production Process, Size of the Enterprise, Geographical location of Spinning unit, Knowledge about Coir Sector, Knowledge about Coir Yarn, Knowledge about Coir Spinning Unit, Knowledge about Production Process, Knowledge about Machine Capacity, Knowledge about Machine Maintenance, Knowledge about Inventory Norms, Knowledge about Market(a)		Enter

a All requested variables entered. b. Dependent Variable: Entrepreneurial Managerial Activities

Model Summary				
Model	R	R Square	Adjusted R Square	Std. The error of the Estimate
1	.999(a)	.997	.997	4.74317

a Predictors: (Constant), Age, Gender, Educational Status, Family Size, Community, Occupation, Land, Total Assets, Investments, Debt, Social Participation, Mass Media, Contact with Change Agents, Neighbourliness, Scientific Orientation, Achievement Orientation, Management Orientation, Involvement in Entrepreneurial Practices, Duration of Involvement of Coir Production Process, Size of the Enterprise, Geographical location of Spinning unit, Knowledge about Coir Sector, Knowledge about Coir Yarn, Knowledge about Coir Spinning Unit, Knowledge about Production Process, Knowledge about Machine Capacity, Knowledge about Machine Maintenance, Knowledge about Inventory Norms, Knowledge about Market

ANOVA(b)						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1017432.817	29	35083.890	1559.444	.000(a)
	Residual	2699.723	120	22.498		
	Total	1020132.540	149			

a Predictors: (Constant), Age, Gender, Educational Status, Family Size, Community, Occupation, Land, Total Assets, Investments, Debt, Social Participation, Mass Media, Contact with Change Agents, Neighbourliness, Scientific Orientation, Achievement Orientation, Management Orientation, Involvement in Entrepreneurial Practices, Duration of Involvement of Coir Production Process, Size of the Enterprise, Geographical location of Spinning unit, Knowledge about Coir Sector, Knowledge about Coir Yarn, Knowledge about Coir Spinning Unit, Knowledge about Production Process, Knowledge about Machine Capacity, Knowledge about Machine Maintenance, Knowledge about Inventory Norms, Knowledge about Market

b Dependent Variable: Entrepreneurial Managerial Activities

Table 2 Effect of Socio-economic, Personality, Entrepreneurial prior-experience and Competency variables on the Entrepreneurial Performance – Results of LMR model Coefficients(a)

Coefficients(a)						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-46.044	66.593		-.691	.491
	Age	2.819	2.070	.024	1.362	.176
	Gender	.719	2.385	.004	.301	.764
	Educational status	-.472	1.802	-.004	-.262	.794
	Family size	.181	1.939	.001	.094	.926
	Community	5.739	1.690	.047	3.397	.001
	Occupation	-2.723	5.860	-.016	-.465	.643

Possession of land holdings	-3.636	1.089	-.124	-3.338	.001
Total assets	1.559	1.267	.042	1.231	.221
Investments	-6.162	2.750	-.088	-2.240	.027
Debt	13.014	3.020	.123	4.309	.000
Duration of involvement in coir production process	1.659	2.463	.030	.673	.502
Involvement in entrepreneurial practices (coir related)	1.350	1.583	.028	.853	.396
Social participation	-5.176	2.098	-.108	-2.467	.015
Mass media exposure	2.891	1.879	.037	1.539	.126
Contact with Change agents	2.076	.491	.154	4.231	.000
Neighborliness	2.564	1.265	.058	2.027	.045
Scientific orientation	-1.324	1.432	-.078	-.924	.357
Achievement orientation	-.389	.702	-.046	-.555	.580
Management orientation	3.437	.708	.346	4.854	.000
Size of the spinning unit	3.873	1.153	.129	3.359	.001
Geographical location	28.796	7.914	.268	3.639	.000
Knowledge about coir sector	5.668	2.443	.097	2.320	.022
Knowledge about coir yarn spinning unit	-1.561	1.310	-.060	-1.191	.236
Knowledge about coir yarn	2.426	.939	.089	2.583	.011
Knowledge about production process	1.983	1.552	.047	1.278	.204
Knowledge about machine capacity	2.948	1.030	.118	2.864	.005
Knowledge about machine maintenance	-2.614	5.274	-.014	-.496	.621
Knowledge about inventory norms	-.629	2.113	-.011	-.298	.766
Knowledge about market	-.232	1.688	-.006	-.137	.891

3. CONCLUSION

An analysis made among coir yarn spinners in the study reveals that there are differences in the entrepreneurial managerial performance among coir yarn spinners and also variations in the performance of coir yarn spinners in each of their entrepreneurial managerial activities. Such differences and variations in the performance are contributed by personal, personality, social, economic and competency variables of the coir yarn spinners and also by the size and geographical location of the enterprise (coir yarn spinning unit). However, the study finds that the most important determinants of entrepreneurial performance are concerned with the competency level and the personality of the entrepreneur. High competency particularly on machine capacity utilization and management, management-oriented style coupled with high level of contact with change agents are the most important determinants of the entrepreneurial managerial high performance of the coir yarn spinners.

4. END NOTE

Sampling procedure for selection of the geographical area and the respondents:

So far as the selection of the geographical area for the study is concerned, the study considered that the Coir Board (GOI), Kochi have notified a few geographical regions in Tamil Nadu where coir and coir based entrepreneurial activities are prominently found. According to the Coir Board, Coir clusters comprising the geographical regions of Coimbatore, Madurai, Dindigul, Kanyakumari, Salem, Tiruppur, Pudukkottai, Dharmapuri, Krishnagiri and Tirunelveli Dindigul Coir Cluster which covers the geographical area of Theni and Dindigul districts, was selected on 'simple random sampling basis' as the geographical area to launch the study. All the coir yarn spinning entrepreneurs operating in the study geographical area were considered as the respondents i.e., 154 entrepreneurs spinning coir yarn through automated spinning machines/devices in Dindigul Coir Cluster comprising 48 and 106 in Theni and Dindigul districts respectively (DIC, 2016).

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