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A Study on The Development of Entrepreneurial Task Motivation Scale

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ABSTRACT

This is an outgrowth of a research Study on the development of a forced-choice scale for measuring entrepreneurial task motivation based on the task motivation theory of Miner (1985). The scale comprises 26 items in four areas of task motivation i.e planning for the future, personal innovation, self achievement and risk avoidance. Psychometric analyses showed that the reliability and validity of the scale were quite satisfactory. The predictive power of the scale was also measured with respect to success rate which indicates that the scale can be used effectively for identifying entrepreneurial talent.

Keywords: Entrepreneur, Task Motivation, Planning, Personal Innovation, Self Achievement, Risk Avoidance, Entrepreneurial Task Motivation Scale (ETMS)

INTRODUCTION

Entrepreneurs play an important role in the economic development in the country. Therefore, identification and measurement of personality characteristics of successful entrepreneurs yield valuable information to the government and lending organizations.

The most promising theory of entrepreneurship has been proposed by McClelland (1961) who regards achievement motivation as the most important characteristics of entrepreneurs. According to McClelland and Winter (1969), the need for achievement (n-Ach) is responsible for economic development. Hagen (1962) gives less importance to economic variables but emphasizes certain aspects of personality. Bird (1989) examines entrepreneurial behavior by focusing on work and family background, personal values, and motivation. Hisrich (1990) gives emphasis on (a) certain conditions that make entrepreneurship desirable and possible, (b) the childhood family background (c) level of education, personal values and motivation (d) role modeling effects and other supports systems.

Miner (1985) outlined a task motivation theory of individual behavior within specified task systems. The essence of this approach is that an individual must possess the motivation to perform the role requirements of relevant system for being

successful within that system. In this system there are five separate motive patterns which are found in persons who are attracted to entrepreneurship. To be successful in a task inducement system an entrepreneur must possess a strong desire for (a) self achievement, (b) risk avoidance, (c) feedback of results, (d) personal innovation and (e) planning for the future.

There is a close relationship between the theories of McClelland and Miner. Only difference is that Miner's task theory places greater emphasis on the concept of role and specifies five separate motive patterns rather than a single. Further, McClelland emphasizes the importance of moderate risk taking while Miner emphasizes risk avoidance.

Important methods for measuring entrepreneurial potential appear to be attitudinal and motivational tests. Thematic Apperception Test is a projective test and a promising method for measuring entrepreneurial potential. But the test is non directive and subjective in nature and can be interpreted only by a highly trained psychologist.

Miner (1986) developed a Sentence Completion Scale Form-T for measuring task motivation involving the five task components described in his theory. The scale is semi projective in nature and its items were deliberately selected to make the theoretical variables operational, while at the same time hiding the true purposes of the measurement. In view of the wide applicability of the Miner Sentence Completion Scale (MSCS), the scorer reliability becomes an important issue. A check on the accuracy of scoring, involving comparison with another scorer was reported to be 0.95 for the total score and subscale correlations ranged from 0.91 to 0.96. Significant relationship of task motivation with success index indicates satisfactory validity of the scale (Miner et al., 1989). Chakraborty and Ghosh (1997) repeated measurement using MSCS after a time gap of one year for a group of 50 entrepreneurs and obtained positive correlations of 0.58 (Scorer 1) and 0.53 (Scorer 2) for the total score. The subscale correlation values ranged from 0.58 to 0.80 (Score 1) and 0.61 to 0.81 (Score 2). In another study Ghosh (1996) did a comparative analysis with a group of 40 executives. It indicated that entrepreneurs scored significantly higher than the executives on all the five dimensions of task motivation. Results indicated the relative importance of three motivational variables namely, planning for the future, self achievement and personal innovation in discriminating entrepreneurs from executives.

The present study aims at developing a scale for measuring motivational disposition of entrepreneurs based on the task motivation theory of Miner. As the MSCS uses the sentence completion format and is a semi-projective test it has problem in scoring the responses because it can be scored only by a trained psychologist. The goal of this study is to develop an objective measuring instrument which will have the advantage of a simple format and ease of administration and interpretation. It aims at developing Entrepreneurial Task Motivation Scale (MSCS)

in forced-choice format, thereby increasing the efficiency in scoring but at the same time without losing its basic assumptions.

METHODOLOGY

Development of Entrepreneurial Task Motivation Scale (ETMS)

At the initial stage of development of the scale 51 small scale entrepreneurs (sample-1) were selected randomly from the list available in the district Industries Centre of three districts of West Bengal. All of them had at least five years of experience in their respective fields.

The sentence completion scale for measuring entrepreneurial task motivation was prepared based on MSCS (Miner, 1986). Fifty items were written covering the four areas of task motivation namely, (i) planning for the future, (ii) personal innovation, (iii) Self-achievement, and (iv) Risk avoidance. After editing, 44 items were retained. Feedback of results was not included in the scale as it was not found to be important (Ghose, 1996). Though avoiding risk was also not found to be important but it was included in the present scale as McClelland has laid emphasis on moderate risk taking for entrepreneurs.

This initial form of the test was tried out on this group of 51 entrepreneurs. The data collected were then scored on the basis of guidelines provided by MSCS-Form T (Miner, 1986). The scores varied from positive to negative including neutral or indifferent responses. The significant item-total correlations of 26 items are reported in Table I.

Table I: Significant Item-total Correlations under the four Dimensions of ETMS (N=51)

Planning for the future		Personal Innovation		Self Achievement		Risk Avoidance	
items	r	Items	r	items	r	items	r
1	.35	14	.61	16	.95	15	.91
13	.56	18	.95	21	.96	22	.62
17	.62	19	.95	36	.55	26	.59
20	.55	24	.54	41	.29	29	.59
23	.95	25	.56	42	.24	33	.90
31	.53	28	.57	43	.41	34	.58
37	.95	35	.59				

Experimental Version of ETMS

The 26 item ETMS was administered to a group of 65 small scale entrepreneurs (Sample 2) who were running their units for at least three years. They were asked to complete the sentences. The responses obtained were grouped into positive, negative and neutral categories. Positive category was used for such responses when there is an expression of positive feeling, an indication of positive consequences, a favorable view and/or an activity that reflects a personal goal. Negative category was used for those responses when there is a rejection of the activity, an unfavorable view, inadequacy or lack of confidence. Neutral or indifferent responses were used when the statements are purely descriptive, unclear, and ambiguous and refer to other rather than the self. It was observed that a number of entrepreneurs gave similar positive responses. This was true for negative and indifferent responses too.

The actual sentence completion responses were used as multiple choice alternatives for forming the triads. For this, highest percentage of positive responses obtained for a given item was chosen for the multiple choice alternative. Similarly, more or less equivalent agreeable percentages of negative and indifferent responses were also selected for the other two alternatives for that particular item. Thus, the triad for each item consisted of one positive, one negative and one indifferent response having more or less equivalent agreeable percentage of responses. The three alternatives were randomized separately for each item. To minimize the social desirability bias, it was decided to introduce the positive, negative and indifferent responses for each item as equivalent as possible. In this way, a 26 item forced-choice scale was prepared by putting relevant items under the dimensions described as follows.

1. Planning for the future: It indicates a desire to plan, to set personal goals that will signify achievement and anticipate future possibilities.
2. Personal innovation: It indicates a desire to introduce novel, innovative or creative solutions.
3. Self-achievement: It indicates an intrinsic desire to achieve through one's efforts and ability and attribute success to personal causation.
4. Risk avoidance: It indicates a desire to avoid high risks and to take only moderate risks that can be handled through one's own efforts.

In this scale positive response was given a weight of +1, negative response was given a weight of -1 and for neutral response zero weight was given. The total score is a comprehensive index of task motivation which is determined by adding the positive scorings of all the subscales and then the number of negative scoring are subtracted from it. The total score may vary from +26 to -26. The

subscales values ranged from +7 to -7 for planning for the future and Personal Innovation and +6 to -6 for Self-Achievement and risk avoidance.

The final version of ETMS was administered on a group 100 small scale entrepreneurs (Sample 3) selected randomly from four districts of West Bengal, namely, Howrah, Midnapur, Birbhum and Nadia. There were 77 males and 23 females. All of them had formal education at least up to Secondary level. They were manufacturing different types of items like leather goods, shoes, readymade garments, food products electronic items etc.

Table II shows that all the subscales are correlated significantly with the total score. Also all the subscales were positively with each other.

Table II Inter correlations among the Subscales and total score of ETMS (N=100)

Areas of ETMS		1	2	3	4	5
1	Planning for the future		.24*	.44**	.48**	.76**
2	Personal Innovation			.43**	.38**	.69**
3	Self Achievement				.33**	.73**
4	Risk Avoidance					.74**
5	Total Score					
	Mean	2.17	2.86	2.91	1.43	9.33
	S.D	2.42	2.02	2.00	2.19	6.34

**p<.01 *p<.05

Reliability

Split-half reliability of ETMS was estimated at 0.80. Cronbach's alpha for the total score was also found to be 0.75. Both the values are highly significant. The co-efficient alphas for the different subscales are as follows: Planning for the futures: 0.47, Personal innovation: .39, Self-achievement: 0.51 and Risk avoidance: 0.48. All the values are significant at 0.01 level which indicate the consistency of the scale.

It is important to know whether the forced-choice scale is a good reflection of the original scale. That is, whether both the scales measure the same thing. For this, a small group of 30 entrepreneurs (Sample 4) were given both the forms i.e., incomplete sentences blank and forced choice scale after a time gap of three months. Table III shows that there is considerable degree of consistency between the two measurements as it is clear from the high significant positive relationship between all the subscales and the total score of the Incomplete Sentence Blank and the Forced- choice Scale.

Table III Correlation between Incomplete Sentence Blank and Forced choice ETMS (N=30)

Dimension	Incomplete Sentence Blank		Forced-Choice Scale		r
	Mean	SD	Mean	SD	
Planning for the future	4.25	1.75	4.21	1.79	.95**
Personal Innovation	3.20	1.80	3.25	1.75	.86**
Self Achievement	3.10	1.90	3.77	1.23	.93**
Risk Avoidance	2.71	1.29	2.89	2.89	.83**
Total Score	15.23	6.77	15.69	15.69	.88**

**p<.05

Validity

This newly constructed ETMS was given a to new group of 70 entrepreneurs (sample 5). The coefficients of correlation between the different scales and achievement value, locus of control individualism and collectivism are given in Table IV. The results indicate the following trends.

Table IV Correlation's between Forced choice ETMS and other Measures (N=70)

Measures	r	p
Achievement Value	.90	<.01
Locus of Control	-.68	<.01
Individual	.61	<.01
collectivism	-.74	<.01

- Entrepreneurial motivation is significantly positively related to achievement value. The entrepreneurs, who have high task motivation for achieving the task also have a strong verbalized desire to compete successfully with a standard of excellence or vice versa.
- There was a significant negative relationship between ETMS and locus of control. That is, the entrepreneurs having high task motivation were found to be internals or vice versa. Previous researches (Brockhaus, 1975; Durand & Shea, 1974 Pandey & Tiwary, 1979; Venkatapathy, 1983) have shown that internal locus of control is one of the important characteristics of entrepreneurs.
- Significant high positive relationship was obtained between ETMS and individualistic orientation of an entrepreneur. It indicates that the entrepreneurs having high task motivation are self-reliant and independent.

On the other hand, entrepreneurs having high task motivation were found to possess low collectivistic orientation or vice versa. This shows that the entrepreneurs with high task motivation do not give much emphasis on interdependence and family integrity. These trends suggest that the validity of the scale is satisfactory.

Predicting Entrepreneurial Potential

As the forced choice scale measures entrepreneurial task motivation it can be used for identifying entrepreneurial potential before sanctioning loans by the funding authority. Therefore, it is necessary to know the predictive power of the measuring instrument. To this end success rate for a group of entrepreneurs (Sample 5) was correlated to ETMS scores. Success rate was calculated both in terms of turnover and profit of the enterprise. Significant positive relationship of ETM with turnover ($r = .79, p < .01$) and profit ($r = .78, P < .01$) was found.

Table V shows that the success of an entrepreneur can be predicted successfully by one's motivation to perform the task. In about 60% of the case it can be predicted successfully. Thus, the predictive power of the ETMS is established and it is intended to be applicable within the domain of task system.

Table V Results of Multiple Regression of Entrepreneurial Task Motivation on Success Rate (N=70)

	R²	F	p
Success rate(profit)	.60	104.32	<.01
Success rate(Turnover)	.62	112.07	<.01

Relationship of the ETMS with Miner Sentence Completion Scale-Form T

The forced-choice ETM scale of along with the Miner Sentence Completion scale (MSCS) – (Form T) was administered on a group of 100 college students (Sample 6) to find out the concurrent validity of the scale. First the MSCS was administered, then after a time gap of 2 months, the Forced-choice scale was given. The correlation coefficients between different subscales and total score of the two scales are presented in Table VI. It may be noted that all the correlation values are significant. It indicates that both the scales are measuring more or less the same dimensions of task motivation.

Table VI Correlations between Forced-choice Scale ETMS and Miner Sentence Completion Scale (N=10)

Dimension	R	P
Planning for the future	.93	<.01
Personal Innovation	.98	<.01
Self Achievement	.96	<.01
Risk Avoidance	.89	<.01
Total Score	.95	<.01

CONCLUSION

The findings of this research indicate that the forced-choice ETMS has satisfactory reliability and validity. The scale can be used for identifying entrepreneurial talent in an objective manner. It would be helpful for banks and financial institutions to provide loans to potential entrepreneurs by early identification of their task motivation. Further validation studies will strengthen the applicability of the scale.

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