Original Research Article

A Tool to Measure Entrepreneurial Skill among Agripreneurs

ABSTRACT

Entrepreneurship skills are an individual's ability to make business in a profitable way. The study focused on to develop a tool to measure the entrepreneurial skill among the agripreneurs by reviewing of literature. Item selection and scoring procedure had been included in this study. Based on the reliability and validity testing, this study finalized the instruments to yielding seven indicators, namely, marketing dimension, psychological magnitude, managerial skill, behavioural skill, technical skill, communication competency, cognitive skill. It is recommended that future researchers apply and thereby extend the developed measure by cross-examining the instruments presented in this study across different entrepreneurs study. The results obtained will be helpful in planning and implementing the capacity development programmes. Among seven indictors and the respective sub indicators, the indicators and sub indicators having above 0.75 relative weightage score had taken for final index. The study found that marketing skill (0.88), psychological magnitude (0.89), behavioural skill (0.79), technical skill (0.83), communication competency (0.93) and cognitive skill (0.89) were the major skill of the agri entrepreneurs, should possess to run their business effectively and efficiently.

Keywords: Agripreneurs skill index, Entrepreneurship skill, Agribusiness, entrepreneur's competency, agripreneurship index

1. INTRODUCTION

An entrepreneur is an individual with knowledge, skills, initiative, drive and spirit of innovation who aims at achieving goals (Mohanty,2009). The ability to come up with innovative mind-sets, proceed with an effective and resourceful way of creation and

establish a new business. Similarly, skills are equally important for all those who want to become self-employed. The widely quoted skills were leadership, technical, personal, and managerial, problem solving, innovation, risk taking propensity, and social networking and considered as key competences. However, entrepreneurship research lacks consensus regarding the issue of what are the main skills an entrepreneur has or needs (Morales & Marquina, 2013).

Competence is an elusive construct which is not defined adequately in entrepreneurship literature (Phelan & Sharpley, 2012). Competence is an underlying quality of an individual, which results in effective and/or superior performance in a job (Klemp, 1980). The construct of competence embraces a range of skills, abilities, and other characteristics related to perform a specific task or being proficient and competent (Chell, 2013). In literature of entrepreneurship, the constructs of skills and competences used interchangeably (Phelan & Sharpley, 2012; Chell, 2013). Though, some researchers argue that skills are also fall under the construct of "competencies" (Mischel, 1973).

Parry (1998) distinguished between competencies and skills, as "skills tend to be situational and specific, whereas competencies are generic and universal''. Kanungo and Misra (1992) differentiated the skills from competences as "skills refer to the ability to engage in an overt behaviour whereas competencies relate to the ability to engage in cognitive activity".To be more focused on skills, they are multidisciplinary, and contain cognitive, affective, and behavioural elements (Chell, 2013).

Kavinila et al., (2019) stated that most of rural youth entrepreneurs were said that, in the business Leadership skills, time management skills, communication skills, network buildings, customer care, identification of opportunities were most important traits and it leads a business in a successful way.

Jardim (2021) revealed that the nine competencies that make up model - creativity and innovation, initiative, self-efficacy and resilience, strategic planning and evaluation, problem-solving, transformational leadership, clear and visual communication, teamwork and networking, and digital communication - need to be

investigated. So that they integrate the study curricula of the younger generations, and the entrepreneurial pedagogy is improved.

Chaudhery (2020) stated that the enterprise, which has strong leadership and strong marketing strategies, could grow in competitive environment easily and contribute to the economy of the nations. To build a strong entrepreneurship network in a country we need to polish our entrepreneurial skills, build a big dream, positive attitude, and we need to become job creator, not a job seeker.

2. METHODOLOGY

The study mainly focused on construction of index to measure agripreneurial skill of agripreneurs. An index is defined as a technique of totalling or reducing a single composite series data on a number of distinct, but related variables expressed in different units of measurement (Hooda,2001). Agripreneurial skill index measures the skill of individual agripreneurs. Agripreneurial Skill Index refers to ability and capability of entrepreneur to turn ideas into action by devoting necessary time & effort and sustain the process of enterprise resulting in rewards of monetary, personal satisfaction and independence. The study was conducted in Namakkal, Madurai and Salem districts of Tamil Nadu based on highest number of established agri-ventures. Among these districts totally 204 agripreneurs were selected by using Proportionate Random Sampling technique. The measurement of entrepreneurial skill was made through composite index procedure. Composite index procedure has been followed by Janani (2015). For relevancy rating of indicators, 60 judges were selected. Among them 30 judges were responded to the relative degree of relevant ness.

2.1. Establishing Agripreneurial Skill Index

2.1.1 Selection of indicators and sub indicators

Identification of indicators are carried out through literature review. Seven indicators were identified to measure skill of agripreneurs. Agripreneurs Skill Index developed considering seven indictors viz., Marketing skill, Psychological magnitude, Managerial skill, Behavioral skill, Communication competency and Cognitive skill. For each indicator, a list of sub indicators were identified through literature review and discussion with experts. The selected indicators and sub indicators are screened and subjected to judge's opinion.

2.1.2. Relevancy rating of indicators

The judges are requested to indicate the relevancy of each indicators and sub indicators. The responses were obtained on four point continuum viz., 'Most relevant', 'Relevant', 'Somewhat relevant', 'Not relevant' with scores of 4,3,2 &1. Based on judges responses, the Relevancy Weightage (RW) of i^{th} indicator (RWi) was worked out by using the following formula.

Relevancy weightage (RW) =	(Most Relevant X 4) + (Relevant X 3) + (Somewhat Relevant X2) + (Not Relevant X1)
	Maximum Possible Score

Considering relevancy weightage, the indicators and sub indicators were screened for their relevancy. Accordingly, indicator having relevancy weightage of more than 0.75 were considered. Using this process, seven components having more than 0.75 relevancy weightage were selected.

3. RESULTS AND DISCUSSION

3.1.1. Quantification of indicators

Each indicator measured by means of scoring procedure developed for the study. To develop a composite agripreneurs skill index and to derive meaningfull conclusions, separate index was developed for each indicator. The scoring procedure has been followed by Janani (2015).The operationalization of each indicator are furnished below.

3.1.2. Operationalization and administration of indicators

1. Marketing Skill Index (MSI):

It refers to the ability to organize the marketing function with set of process for promoting, supporting and delivering value to customers. It was quantified by set of sub indicators. Marketing skill index worked out by using the following formulae

$$MI = \frac{SMS\ xi}{TMS\ yi}$$

Where,

MSI = Marketing Skill Index

SMS xi = Secured scored by an individual on marketing skill

TMS yi = Total possible score for an individual on marketing skill

2. Psychological Magnitude Index (PMI):

Psychological magnitude refers to systematic and persistent practice of mental skills for the purpose of enhancing performance, achieving greater and physical activity satisfaction. It focuses on efficacy of individuals in organization. The psychological magnitude worked out by using formula,

$$\text{PMI} = \frac{SPM\ xi}{TPM\ yi}$$

Where,

PMI = Psychological Magnitude Index

SPM xi = Secured scored by an individual on psychological magnitude

TPM yi = Total possible score for an individual on psychological magnitude

3. Managerial Skill Index (MSI):

It refers to the abilities and capabilities of an executive possess to perform the managerial work in organization. The managerial skill index worked out by using formula,

$$\text{MSI} = \frac{SMSxi}{TMS\ yi}$$

Where,

MSI = Managerial Skill Index

SMS xi = Secured score by an individual on managerial skill

TMS yi = Total possible score for an individual on managerial skill

4. Behavioral Skill Index (BSI):

It refers to the reflective ability of the individual in relation to the characteristics of the situation he / she may come up against. The behavioral skill index worked out by using formula,

$$\text{BSI} = \frac{SBS\ xi}{TBS\ yi}$$

Where,

BSI = Behavioral Skill Index

SBS xi = Secured score by an individual on behavioral skill

TBS yi = Total possible score for an individual on behavioral skill

5. Technical Skill Index (TSI):

It refers to ability to manage the enterprise in technical aspects and have knowledge on technical in each & every aspects of business. The technical skill index worked out by using formula,

$$\text{TSI} = \frac{STS\ xi}{TTS\ yi}$$

Where,

TSI = Technical Skill Index

STS xi = Secured score by an individual on technical skill

TTS yi = Total possible score for an individual on technical skill

6. Communication Competency Index (CCI):

It refers to individual ability to manage communication between employee and other stakeholders. The communication competency index worked out by using formula,

$$\text{CCI} = \frac{SCC\ xi}{TCC\ yi}$$

Where,

CCI = Communication Competency Index

SCC xi = Secured score by an individual on communication competency

TCC yi = Total possible score for an individual on communication competency

7. Cognitive Skill Index (CSI):

It refers to the ability of individual to process & articulate the acquired knowledge and then relate & apply it from previously gained information. The cognitive skill index worked out by using formula,

$$\text{CSI} = \frac{SCS\ xi}{TCS\ yi}$$

Where,

CSI = Cognitive Skill Index

SCS xi = secured score by an individual on cognitive skill

TCS yi = Total possible score for an individual on cognitive skill

Further the index has been administered and the scores obtained were analysed using cumulative frequency method to classify agripreneurs skill into five categories.

Table.3 Classification of agripreneurial skill into categories

S. No.	Category	Score
1.	Very strong	5
2.	Strong	4
3.	Moderate	3
4.	Weak	2
5.	Very weak	1

After data collection, the relevancy weightage score was calculated with seven major indicators and the scores are presented in Table 1

Table 1 List of selected agripreneurial skill indicators with their relevancy weightage

S. No	Indicators	Relevancy weightage
1	Marketing skill	0.88
2	Psychological magnitude	0.89
3	Managerial skill	0.98
4	Behavioural skill	0.79
5	Technical skill	0.83
6	Communication competency	0.93
7	Cognitive skill	0.89

From the Table 1, it is said that the seven indicators namely viz, marketing skill (0.88), psychological magnitude (0.89), behavioural skill (0.79), technical skill (0.83), communication competency (0.93) and cognitive skill (0.89) were the major skill of the agri entrepreneurs, should possess to run their business effectively and efficiently. These indicators had more than 0.75 relevancy weightage. From the study, it revealed that, Agripreneurial Skill Index had seven indicators with respective sub indicators which measures the ability or skill of the individual entrepreneurs.

Followed by identified major indicators of agripreneurs skill, sub indicators identified for each of the major indicator in table 2.

Table 2 list of indicators and sub indicators with their relative weightage

S. No	Dimensions of Agripreneurial skill	Relevancy weightage score
1	**Marketing Dimensions**	**0.88**
	1. Market survey	0.88
	2. Consumer preference	0.96
	3. Demand forecasting	0.93
	4. Competitive product pricing	0.82
	5. Competitive aggressiveness	0.66
	6. Sales orientation	0.81
2	**Psychological Dimensions**	**0.89**
	1. Autonomy	0.72
	2. Risk taking	0.92
	3. Pro activeness	0.90
	4. Self –efficacy	0.91
	5. Self confidence	0.93
	6. Achievement motivation	0.88
	7. Self –control	0.72
	8. Goal setting	0.81
	9. Aspiration	0.79
	10. Perseverance	0.91
	11. Strategic planning	0.86
3	**Managerial Dimensions**	**0.98**
	1. Planning	0.98
	2. Decision making	0.99
	3. Leadership	0.97
	4. Human resource management	0.90
	5. Team / group work	0.88
	6. Time management	0.94
	7. Delegation	0.80
	8. Finance/accounting	0.88
	9. Coordination skill	0.88
4	**Behavioural Dimensions**	**0.79**
	1. Change orientation	0.79
	2. Conflict management	0.93
	3. Negotiation	0.93
	4. Social responsibility	0.78
	5. Problem solving/ design skill	0.90
5	**Technical Dimensions**	**0.83**
	1. Stock purchase	0.83

	2. Product quality control	0.89
	3. Business skill	0.74
	4. Legal/administrative	0.79
	5. Technical business management	0.79
	6. Monitoring environment	0.73
	7. Business/ venture launch	0.68
6	**Communication competency**	**0.93**
	1. Collaboration and Networking skill	0.93
	2. Soft skill	0.85
	3. Interpersonal skill	0.93
	4. Listening skill	0.91
	5. Presentation skill	0.88
7	**Cognitive Dimensions**	**0.89**
	1. Innovativeness	0.89
	2. Dealing with external factors	0.81
	3. Conceptual skill	0.85
	4. Critical thinking	0.95

From the Table 2, it inferred that the sub indicators having more than 0.75 relevancy weightage score had taken for final measurement of index.

3.1.3. Standardization of index

In the next stage, reliability and validity of index was done for standardization of the index.

3.1.3.1. Reliability

The reliability of the scale was determined by 'Cronbach's alpha' method. The reliability coefficient is 0.65. When the purpose of the test is to compare the mean scores of two groups of narrow range a reliability coefficient of 0.50 or 0.60 would suffice. Hence, the constructed agripreneurial skill index is reliable as the reliable coefficient (rtt) was >0.60.

3.1.3.2. Content Validity

Content validation was carried out by subjecting the selected ten items to judge's opinion. The judges were requested to indicate their presumed relevance to which the sub indicators and items covered the different aspects of entrepreneurial skill. The responses were obtained on a four-point continuum of 'most adequately covered', 'more

adequately covered', 'less adequately covered' and 'least adequately covered'. Scores of 4, 3, 2 and 1 were given for the points on the continuum respectively.

Totally 30 judges responded by sending their judgments. The mean score 2.5 was fixed as the basis for deciding the content validity of the scale. If the overall mean score of the sub indicators and its items as rated by the judges was above 2.5 the scale will be declared as valid and if not otherwise. In the present case, the overall mean score worked out as 3.51 and therefore the constructed index said to be valid.

4. Conclusion

In order to develop and manage a successful business, entrepreneurs need a range of entrepreneurial skills (Phelan & Sharpley, 2012). Entrepreneurs' skill allowed entrepreneurs to perform the functions of enterprise that governs their success (Shefsky, 1996). Entrepreneurship skill is very important as mentioned by author, the developed index would help to measure skill possession of agripreneurs and categorize into five categories like very strong, strong, moderate, weak, and very weak. Each indicators had a sub set of indicators which directly measuring the respective indicators. The results obtained will be helpful in planning and implementing the capacity development programmes. The index findings would be plays a vital role to identify the skills already with agripreneurs. This index would be beneficial for the Institutions who arrange capacity development programs, NGO, Private companies, Entrepreneurship training institutes etc. The purpose of this paper was to conduct a pilot study and pre-test the validity and reliability of the items measuring the agripreneurial skills set constructs. Therefore it can be concluded that all the constructs of agripreneurial skills set are reliable, and valid.

This study will be useful for training organizations, researchers, Non-governmental organizations, Entrepreneurship Development Institutions, Agri Clinic and Agri Business Centres, Start-up training institutions and other stakeholders. The Agripreneurial Skill Index mentioned in the study helps to measures the capacity, skill, or ability of entrepreneurs. Also this would help the respective institutions to provide training accordingly. The test can be conducted before the start of their training

programme, and based on their test results, training programmes can be provided in order to avoid repetition of skills.

References

Chaudhery, Urvesh and Ram Raj. Role of entrepreneurship on economic development in India. International Multidisciplinary Conference in, Technology, Business, Management & Liberal Arts. 2020; 58-67 (ISBN 978-81-922178-9-5)

Chell, E. Review of skill and the entrepreneurial process. International Journal of Entrepreneurial Behaviour & Research. 2013;19(1):6–31.International Limited, Publishers (ISBN 10:81-224-1522-9).

Jaisawal, Aparna. and M.M.Patel. Entrepreneurial Behaviour of Rural Women. Indian Research Journal of Extension Education.2012;12(1):55-59

Janani, S.Developing an index to measure the entrepreneurial orientation of rural youth. International journal of farm sciences.2015;5(4):275-283

Jardim, J. Entrepreneurial Skills to Be Successful in the Global and Digital World: Proposal for a Frame of Reference for Entrepreneurial Education. 2021; Educ. Sci. 11, 356.

Jardim J, Pereira A, Vagos P, Direito I, Galinha S. The Soft Skills Inventory: Developmental procedures and psychometric analysis. *Psychol Rep.* 2020 Dec 20;0(0):1–29.

Jardim J. E*mpreende: Manual Global de Educação para o Empreendedorismo*. Lisboa, Portugal: Theya Editores; 2021.

Kavinila, M., P. P. Murugan, J. Pushpa, J. S. Amarnath and Prabakaran, K. Scaling with Paired Compression Method for Entrepreneurship Skills of Rural Youth in Agricultural Sector. 2019; Int.J.Curr.Microbiol.App.Sci.8(09)

Kavinila, M. Assessment of Entrepreneurship Skills For Rural Youth In Agricultural Sector. Ph.D (Agrl. Extension) Thesis. Tamil Nadu Agricultural University, Coimbatore, Tamil Nadu. 2020

Kothari, R. Research methodology: Methods and Techniques. New Delhi: New Age. 2018

Liñán, F. Skill and value perceptions: how do they affect entrepreneurial intentions? International Entrepreneurship and Management Journal. 2008; 4(3):257–272.

Mohanty, S.K. Fundamentals of Entrepreneurship. Prentice Hall of India Pvt. Ltd., New Delhi.2009

Morales, C., & Marquina, P. S. Entrepreneurial Skills, Significant Differences between Serbian and German Entrepreneurs. Journal of CENTRUM Cathedra: The Business and Economics Research Journal.2013; 6(1).

Phelan, C., & Sharpley, R. Exploring entrepreneurial skills and competencies in farm tourism. Local Economy.2012; 27(2):103–118.

Pubali Saikia. Women Entrepreneurs and Their Complications in the Journey of Entrepreneurship –A Study of Assam, Indian Research Journal of Extension Education.2017; 17(3): 69-73

Shabbier Salman Mohammad, Mohd Noor Mohd Shariff & Arfan shahzad. Determinants of Entrepreneurial Skills set in Pakistan: A Pilot Study. International Journal of Academic Research in Accounting, Finance and Management Sciences. 2016; 6(2):62-74