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Developing an index to measure the entrepreneurial orientation of rural youth

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ABSTRACT

An index may be defined as a technique of totalling or reducing a single composite series datum on a number of distinct but related variables expressed in different units of measurement. In other words the term index is defined as the numerical scale used to compare variables with one another. A study was designed to develop an index to measure the entrepreneurial orientation of rural youth of Krishnagiri district, Tamil Nadu. The study was conducted among 210 rural youths with farming background. Relevancy weightage score method was used to develop the index. The finalized index comprised of fifteen indicators. The entrepreneurial orientation index thus developed was standardized for administration.

Keywords: Index; entrepreneurial orientation; rural youth

INTRODUCTION

An index may be defined as a technique of totalling or reducing a single composite series datum on a number of distinct but related variables expressed in different units of measurement (Hooda 2001). Youth entrepreneurship has gained more importance in recent years in many countries with increased interest in entrepreneurship as a way of boosting economic competitiveness and promoting regional development. Rural youth entrepreneurship is the crux of an economic activity and it is the prime actor in stimulating the factors of production leading to an overall economic development of the rural areas. Thus youth entrepreneurship is defined as the willingness by youth to start and manage a business enterprise through initiative, innovation, creativity and risk taking either in self-employment or employment in small start-up firms (Kuratko and Hodgetts 2001). In order to find out the indicators which are directly involved in entrepreneurial orientation of rural youth a study was conducted among 210 rural youths with farming background.

The entrepreneurial orientation index was developed by using relevancy weightage method. Moreover Krishnagiri district has excellent scope for agribusiness and high export potential for fresh and processed products and flower crops like rose, gerbera, carnation etc. The district is more suitable for cultivation of horticultural crops particularly vegetables, fruits, spices and flowers. These crops grow well by way of its moderate climate, high altitude and fertility of the soil.

Entrepreneurial orientation index

Entrepreneurial orientation refers to the processes, practices and decision making activities used by entrepreneurs that lead to the initiation of an entrepreneurial firm (Lumpkin and Dess 1996). In this study entrepreneurial orientation has been operationalised as extent to which the existence of selected indicators were perceived by the respondents at given point of time. The indicators were identified by reviewing the literature and as quoted by various authors.

Identification and scrutiny of indicators

Identification of indicators influencing the entrepreneurial orientation was carried out through detailed analysis of literature. Further scrutiny was done by discussion with experts from the relevant fields viz Department of Agricultural Extension and Rural Sociology and Directorate of Agri-business Development in TNAU, Coimbatore as well as entrepreneurs in different fields. Based on the preliminary discussion twenty six indicators were selected considering the situation existed in the region.

Relevancy rating of the indicators

The list of indicators was sent to 65 judges who comprised extension specialists of State Agricultural Universities of Tamil Nadu, Kerala, Andhra Pradesh, Karnataka and Gandhigram Rural University. Of the 65 judges 30 judges responded by sending their judgements. The experts were requested to specify whether each of the identified indicators were relevant and suitable for inclusion to measure entrepreneurial orientation of the rural youth or not. Their responses were obtained on a three point continuum viz 'most relevant', 'relevant' and 'least relevant' frequencies and scored as 3, 2 and 1 respectively.

The responses received from the judges were analysed and the relevancy weightage (RW) of i^{th} indicator (RWi) was worked out by using the following formula:

$$\text{Relevancy weightage (RW)} = \frac{\text{Most relevant} * 3 + \text{Relevant} * 2 + \text{Not relevant} * 1}{\text{Maximum possible score}}$$

Considering the average of relevancy weightage scores (0.98) the components were screened for their relevancy. Accordingly components having relevancy weightage of more than 0.98 were considered. Using this process fifteen indicators having more than 0.98 relevancy weightage were selected for the study. The overall indicators sent for judges opinion with their relevancy weightage are presented in Table 1.

After calculating the relevancy weightage the indicators in which the relevancy weightage was more than 0.98 were finally selected and are presented in Table 2.

Statements were identified for each major indicator followed by identification of major indicators of entrepreneurial orientation

Selection of statements

Under each major indicator the statements were framed based on perusal of literature and discussion with experts. The statements were edited based on 14 criteria suggested by Edward (1969). These statements were then subjected to scrutiny by an expert panel of judges to determine the relevancy. For this purpose the statements were given to a panel of 30 judges who were requested to indicate the appropriateness (relevancy) of each statement for inclusion in the scale. The responses were obtained on three point continuum viz 'most relevant', 'relevant' and 'not relevant' with scores of 3, 2 and 1 respectively. Based on judges responses the relevancy weightage was worked out for the statements by using the formula stated above. The statements having relevancy weightage more than 0.98 were selected.

Procedure for development of entrepreneurial orientation index

The finalised schedule with fifteen major indicators and their respective statements were administered to the respondents. In case of the quantitative indicators the respondents were asked to put forth their choice. The scores were provided based on measurement and the scoring procedure already developed for the study. Thilagam (2012) has also used a part of these indicators.

In case of the qualitative indicators the respondents were asked to give their responses based on a three point continuum scale viz 'agree' (A), 'undecided' (UD) and 'disagree' (D) for which the scores given were 3, 2 and 1 respectively.

Quantification of indicators

Each indicator was measured by means of scoring procedure developed for the study. To evolve a composite entrepreneurial orientation index and to derive meaningful conclusions separate index was developed for each indicator. The procedure of Thilagam (2012) has been followed with necessary modifications. The

Table 1. List of selected entrepreneurial orientation indicators with their relevancy weightage

Indicator	Relevancy weightage	Indicator	Relevancy weightage
Innovation proneness	1.04	Knowledge on improved technology	0.97
Decision making behaviour	1.06		
Risk taking behaviour	1.08	Social networking	0.92
Management orientation	1.00	Networking	1.01
Intellectual ability	0.95	Planning ability	1.06
Competitive spirit	0.94	Proactiveness	0.99
Entrepreneurial knowledge	1.03	Autonomy	0.85
Leadership ability	0.99	Conflict management	0.94
Locus of control	0.77	Negotiation skill	0.95
Self confidence	1.06	Level of aspiration	1.00
Self esteem	0.94	Market orientation	1.01
Stress management	1.01	Attitude towards self-employment	1.09
Relationship management	0.88		
Time management	1.09	Coordinating ability	0.94

Table 2. List of finalized entrepreneurial orientation indicators with their relevancy weightage

Indicator	Relevancy weightage	Indicator	Relevancy weightage
Innovation proneness	1.04	Time management	1.09
Decision making behaviour	1.06	Networking	1.01
Risk taking behaviour	1.08	Planning ability	1.06
Management orientation	1.00	Proactiveness	0.99
Entrepreneurial knowledge	1.03	Level of aspiration	1.00
Leadership ability	0.99	Market orientation	1.01
Self confidence	1.06	Attitude towards self-employment	1.09
Stress management	1.01		

details of quantification of each indicator are furnished below:

Innovation proneness index: Innovation proneness index has been operationalised as the degree of a rural youth entrepreneur's interest and desire to seek changes in their entrepreneurial venture and to introduce such changes in his own operations as and when found practicable and feasible. The

innovation proneness index was worked out by using the following formula:

IPI= SIP xi / TIP yi

where IPI= Innovation proneness index, SIP xi= Score secured by a rural youth entrepreneur on innovation proneness, TIP yi= Total possible score for a rural youth entrepreneur on innovation proneness.

Thus calculated IPI score was used for further analysis.

Decision making behaviour index: Decision making behaviour index has been operationalised as the degree to which a rural youth entrepreneur justifies his selection of most efficient means from among the available alternatives on the basis of scientific criteria for achieving the maximum benefit from his own venture. The decision making behaviour index was worked out by using the following f ormula:

DMBI= SDMB xi / TDMB yi

where DMBI= Decision making behaviour index, SDMB xi= Score secured by a rural youth entrepreneur on decision making behaviour, TDMB yi= Total possible score for a rural youth entrepreneur on decision making behaviour.

Thus calculated DMBI score was used for further analysis.

Risk taking ability index: Risk taking ability index has been operationalised as the degree to which a rural youth entrepreneur is orientated towards risks and uncertainty and has courage to face the problem in his own entrepreneurial venture. The risk taking ability index was worked out by using the following formula:

RTAI= SRTA xi / TRTA yi

where RTAI= Risk taking ability index, SRTA xi= Score secured by a rural youth entrepreneur on risk taking ability, TRTA yi= Total possible score for a rural youth entrepreneur on risk taking ability

Thus calculated RTAI score was used for further analysis.

Management orientation index: Management orientation index has been operationalised as the ability of a rural youth entrepreneur to manage his own venture comprising of planning, production and marketing functions very effectively and efficiently. The management orientation index was worked out by using the following formula:

MaOI = SMaO xi / TMaO yi

where MaOI= Management orientation index, SMaO xi= Score secured by a rural youth entrepreneur on management orientation, TMaO yi= Total possible score for a rural youth entrepreneur on management orientation.

Thus calculated MaOI score was used for further analysis.

Entrepreneurial knowledge index: Entrepreneurial knowledge index has been operationalised as the level of knowledge possessed by the rural youth entrepreneur about their entrepreneurial venture. The entrepreneurial knowledge index was worked out by using the following formula:

EKI= SEK xi / TEK yi

where EKI= Entrepreneurial knowledge index, SEK xi= Score secured by a rural youth entrepreneur on entrepreneurial knowledge, TEK yi= Total possible score for a rural youth entrepreneur on entrepreneurial knowledge.

Thus calculated EKI score was used for further analysis.

Leadership ability index: Leadership ability index has been operationalised as the nature and quality of leadership existing in the business. The leadership behaviour index was worked out by using the following formula:

LBI = SLB xi / TLB yi

where LBI= Leadership behaviour index, SLB xi= Score secured by a rural youth entrepreneur on leadership behaviour, TLB yi= Total possible score for a rural youth entrepreneur on leadership behaviour.

Thus calculated LBI score was used for further analysis.

Self confidence index: Self confidence index has been operationalised as the extent of feelings of a rural youth entrepreneur about the ability, initiative and zeal to achieve his/her goal in his entrepreneurial venture. The self confidence index was worked out by using the following formula.

SCI= SSC xi / TSC yi

where SCI= Self confidence index, SSC xi= Score secured by a rural youth entrepreneur on self confidence, TSC yi= Total possible score for a rural youth entrepreneur on self confidence.

Thus calculated SCI score was used for further analysis.

Stress management index: Stress management index has been operationalised as the technique of controlling a rural youth entrepreneur's levels of stress, for the purpose of improving everyday functioning. The stress management index was worked out by using the following formula:

SMI= SSM xi / TSM yi

where SMI= Stress management index, SSM xi= Score secured by a rural youth entrepreneur on stress management, TSM yi= Total possible score for a rural youth entrepreneur on stress management.

Thus calculated SMI score was used for further analysis.

Time management index: Time management index has been operationalised as the act or process of planning and exercising conscious control over the amount of time spent on specific activities especially to increase effectiveness, efficiency and productivity of an entrepreneurial venture. The time management index was worked out by using the following formula:

TMI= STM xi / TTM yi

where TMI= Time management index, STM xi= Score secured by a rural youth entrepreneur on time management, TTM yi= Total possible score for a rural youth entrepreneur on time management.

Thus calculated TMI score was used for further analysis.

Networking index: *N*etworking index has been operationalised as the practice of linking two or more rural youth entrepreneurs together for the purpose of sharing their experience, success stories etc in their ventures. The networking index was worked out by using the following formula:

NtwI= SNtw xi / TNtw yi

where NtwI= Networking index, SNtw xi= Score secured by a rural youth entrepreneur on networking TNtw yi= Total possible score for a rural youth entrepreneur on networking,

Thus calculated NtwI score was used for further analysis.

Planning ability index: Planning ability index has been operationalised as the degree to which a rural youth entrepreneur is capable of starting the activities that he or she intends to do by certain ways in his own enterprise. The planning ability index was worked out by using the following formula:

PAI= SPA xi / TPA yi

where PAI= Planning ability index, SPA xi= Score secured by a rural youth entrepreneur on planning ability, TPA yi= Total possible score for a rural youth entrepreneur on planning ability.

Thus calculated PAI score was used for further analysis.

Proactiveness index: Proactiveness index has been operationalised as an opportunity-seeking and forward-looking perspective. The proactiveness index was worked out by using the following formula:

PAI= SPA xi / TPA yi

where PAI= Proactiveness index, SPA xi= Score secured by a rural youth

entrepreneur on proactiveness, TPA yi= Total possible score for a rural youth entrepreneur on proactiveness.

Thus calculated PAI score was used for further analysis.

Level of aspiration index: Level of aspiration index has been operationalised as the extreme in which the rural youth entrepreneur aspires in succeeding in his venture. The level of aspiration index was worked out by using the following formula:

LoASI= SLoAS xi / TLoAS yi

where LoASI= Level of aspiration index, SLoAS xi= Score secured by a rural youth entrepreneur on level of aspiration, TLoAS yi= Total possible score for a rural youth entrepreneur on level of aspiration.

Thus calculated LoASI score was used for further analysis.

Market orientation index: Market orientation index has been operationalised as the ability of a rural youth entrepreneur to discover and meet the needs and desires of his customers. The market orientation index was worked out by using the following formula:

MOI= SMO xi / TMO yi

where MOI= Market orientation index, SMO xi= Score secured by a rural youth entrepreneur on market orientation, TMO yi= Total possible score for a rural youth entrepreneur on market orientation.

Thus calculated MOI score was used for further analysis.

Attitude towards self-employment index: Attitude towards self employment index has been operationalised as the degree of positive or negative feeling of rural youth entrepreneur towards self employment. The attitude towards self employment index was worked out by using the following formula:

ATSEI= SATSE xi / TATSE yi

where ATSEI= Attitude towards self employment index, SATSE xi= Score secured by a rural youth entrepreneur on attitude towards self employment, TATSE yi= Total possible score for a rural youth entrepreneur on attitude towards self employment.

Thus calculated ATSEI score was used for further analysis.

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