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**RANKING ENTREPRENEURIAL CHARACTERISTICS IN
SOUTH EASTERN REGION OF SRI LANKA (SERSL):
FACTOR SCORE METHOD**

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Abstract

Different authors have identified different entrepreneurial characteristics. These lists of entrepreneurial characteristics vary from entrepreneur to entrepreneurs and country to country and industry to industry. Few studies have been done to test the relationship between entrepreneurial characteristics and other variables. Presently, entrepreneurship is booming everywhere not only in Sri Lanka but also abroad. Therefore, entrepreneurial characteristics should be identified for promoting entrepreneurial effort. Objectives of this research are to identify the different entrepreneurial characteristics suitable for entrepreneurs and to group different entrepreneurial characteristics together. Researcher selected 120 entrepreneurs from different sectors. Data were collected using a questionnaire. Response rate was 60%. Factor analysis was conducted using the SPSS. Results showed reliability statistics for 27 entrepreneurial characteristics at 0.977, which indicates high reliability. However, of these 27 entrepreneurial characteristics, 26 have the communality values ranging from between 0.759 to 0.968. Value of KMO for 26 entrepreneurial characteristics at 0.917, indicates that the sample taken to process factor analysis was statistically significant. Three entrepreneurial character components explain around 38%, 36% & 15% of the total variation respectively. All these three character components explain 89% of the total variation. According to factor scores, entrepreneurial character component 2, 1 and 3 have been ranked into first, second and third respectively. It is concluded that out of 27 entrepreneurial characteristics, 26 are applicable for entrepreneurs in SER. These entrepreneurial characteristics can be cascaded into three character components.

Keywords: *Entrepreneurial Characteristics, Factor Score Method, South Eastern Region, Sri Lanka.*

JEL CODE: C38, F64, L26

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1. Introduction

Herron and Robinson (1993) stated that the most important determinant of new venture performance is venture capitalists, “angel” investors, experienced and successful entrepreneurs. It has been mostly agreed that prominent academic scholars were responsible for accelerating the development of entrepreneurship theory. Different authors have identified different entrepreneurial characteristics. For instance, Hornaday (1982); Gurol and Atsan (2006) found different characteristics for entrepreneurs. These lists of entrepreneurial characteristics vary from entrepreneur to entrepreneur and country to country and industry to industry. Few studies have been done to test the relationship between these variables. For example, Koh (1996) investigated to find out whether entrepreneurial inclination is significantly associated with the psychological characteristics such as need for achievement, locus of control, propensity to take risk, tolerance of ambiguity, self-confidence and innovativeness. Boeker (1988) empirically examined the influence of entrepreneur characteristics and of environmental conditions. These researchers have found different causal relationships. Presently, entrepreneurship is booming everywhere not only in Sri Lanka but also abroad. Therefore, entrepreneurial characteristics should be identified for promoting entrepreneurial effort for the benefit of those who are presently involved in entrepreneurship and for those who would engage in entrepreneurship in future. The South Eastern Region is the eastern part of Sri Lanka where there are a vast number of entrepreneurs. Entrepreneurship is successful in the business of hardware, petrol sheds, textiles, motor vehicles, repair of motor vehicles, rice milling, air- ticketing, hotel service, vehicle service, communication, rice selling and sweet selling. Hence this study was conducted in the SER Sri Lanka.

2. Statement of the Problem

According to the empirical evidence of Hornaday (1982), successful entrepreneurs have a number of characteristics. He has listed self-confidence, diligence, risk-taking, creativity and flexibility within his first top five entrepreneurial characteristics. The selected entrepreneurs of hardwares were asked about these characteristics and they replied that diligence, risk-taking, creativity, flexibility and initiative as their first top five entrepreneurial characteristics. Facing challenge, positively responding to challenge, dynamism, leadership and ability to get along with people as his second top five list of entrepreneurial characteristics. Again, ten selected entrepreneurs of petrol sheds reported that independence, foresight, perceptiveness, versatility and knowledge about product as their second five lists of entrepreneurial characteristics. Stephenson (2013) indicated 25 common characteristics of successful entrepreneurs. Out of these, a shameless self-promoter (self-confidence), taking the business seriously (diligence) and managing money wisely (risk-taking) fall within first top five entrepreneurial characteristics. Building a top-notch business team (dynamism) and to be known as an expert (leadership) fall within the second top five entrepreneurial characteristics. Empirical findings give a list of entrepreneurial characteristics that are displayed by entrepreneurs. Gurol and Atsan (2006) studied entrepreneurial characteristics amongst university students. This study tried to explore the entrepreneurship profile of Turkish university students. They evaluated their entrepreneurship orientation by comparing them with non-entrepreneurially inclined students. The study found that except for tolerance for ambiguity and self-confidence, all entrepreneurial traits are found to be higher in entrepreneurially inclined students, as compared to entrepreneurially non-inclined students. That is, these students were

found to have higher risk taking propensity, internal locus of control, higher need for achievement and higher innovativeness.

3. Objectives of this Study

Empirical evidences and discussion with entrepreneurs disclosed the following two research questions - what are the different entrepreneurial characteristics suitable for entrepreneurs? and which entrepreneurial characteristics can be grouped together?. In order to answer these two research questions, the following two research objectives were set. To identify the different entrepreneurial characteristics suitable for entrepreneurs and to classify different entrepreneurial characteristics into groups.

4. Motivation for this Study

The Researcher was motivated to do this study for various reasons. First, this study focused on determining and grouping factors for entrepreneurial characteristics. Previous studies have been conducted to find out the relationship. They tested the relationship between two variables. Entrepreneurial characteristics have been studied along with another dimension for testing the relationship. For example, Herron and Robinson (1993) developed an initial structural, causal model of the relationships between entrepreneurial characteristics and performance. While there is no clear set of characteristics, researches have been carried out to know the relationship between the variables. Hence this study tries to identify a clear set of characteristics for entrepreneurs. Secondly, this study was conducted in the South Eastern Region of Sri Lanka using a survey study. Earlier researches were conducted in different countries using different methodologies. For example, Koh (1996) investigated whether entrepreneurial inclination is significantly associated with psychological characteristics such as need for achievement, locus of control, propensity to take

risk, tolerance of ambiguity, self-confidence and innovativeness in Hong Kong using a self-administered, fixed-alternative questionnaire. Boeker (1988) empirically examined the influence of entrepreneur characteristics and environmental conditions at time of founding, on strategies initially adopted by semiconductor firms. Data in the form of structured interviews (with supplemental information) were gathered from 51 merchant semiconductor firms in the Santa Clara-San Jose area in U.S.A. This study fills the literature gap in entrepreneurship. A limited number of studies have been conducted in the South Eastern Region of Sri Lanka. For instance, Ismail (2012) studied the entrepreneurial challenge in Ampara Coastal Belt of Sri Lanka. Ismail and Gunapalan (2012) identified micro, small and medium entrepreneurial marketers in South Eastern Region. This study was based on a qualitative analysis. Ismail (2012) studied the demographic profile of micro, small and medium entrepreneurs in South Eastern Region. This study fills the literature and methodological gaps. Further, this study provides insight into entrepreneurship so that entrepreneurial characteristics can be developed to raise good entrepreneurs. This study identifies the differences between characteristics of entrepreneurially inclined people and entrepreneurially non-inclined people in the SER.

5. Methodology

5. 1 Sample Selection

Population size of entrepreneurs was not clear and therefore, the Researcher could not select a sample size in this study using probability sampling method. This study employed a non- probability sampling method for the sample selection. Considering this situation, the Researcher selected 120 entrepreneurs from owners of hardware, petrol sheds, textiles, motor bike outlets, motor repair

centres, rice millers, air- ticketing agencies, hotels, service centres, communication centres, rice shops and sweet centers for this study using a convenient sampling technique.

5. 2 Data Collection, Period and Tools for Analysis

Data were collected using a questionnaire. Questionnaires were scaled on a five point-Likert scale. Data were collected during 2013, using undergraduates of Faculty of Management and Commerce, South Eastern University of Sri Lanka. 200 questionnaires were delivered for data collection. 120 questionnaires were in usable status. Response rate was 60%. Factor analysis was conducted using SPSS.

6. Analysis and Discussion of Results

6.1 Reliability

Cronbach alpha is the most widely used method for checking the reliability of scale. It may be mentioned that its value varies from 0 to 1 but satisfactory value is required to be more than 0.6 for the scale to be reliable (Ismail and Velnampy, 2013a & b); Malhorta, 2002; Cronbach, 1951). In this study, reliability statistics for 27 entrepreneurial characteristics was 0.977. Higher reliability indicates that these characteristics are mostly suitable for analysis. Reliability is shown in Table-2 with reference to reliability, sampling adequacy and total variance

6.2 Communalities and Testing the Sufficiency of Sample Size

The Researcher tested the collected data for appropriateness for factor analysis. Appropriateness of factor analysis is dependent upon the sample size. In this connection, MacCallum, Windaman, Zhang and Hong (1999) have advocated that if all communalities are above 0.6, relatively small samples (less than 100) may be perfectly appropriate. Ismail and Velnampy (2013a) studied the determinants of

Corporate Performance (CP) in public health service organizations (PHSO) in Eastern Province of Sri Lanka using Balanced Score Card (BSC). Ismail and Velnampy (2013b) studied the determinants of Employee Satisfaction (ES) in public health service organizations (PHSO) in Eastern Province of Sri Lanka. In these studies, authors considered a sample of 100 employees. Of these 27 entrepreneurial characteristics, 26 recorded communality values that ranged from 0.759 to 0.968. Energetic entrepreneurial character recorded a communality value of 0.167. Relevant details are shown in Table of reliability, sampling adequacy and total variance.

6.3 Keyzer-Meyer-Oklin (KMO) and Bartlet's Test of Sphericity

Measure of Keyzer-Meyer-Oklin (KMO) is another method to determine the appropriateness of data for factor analysis. KMO Statistics varies between 0 and 1. Keyzer (1974) recommended that values greater than 0.5 are acceptable; between 0.5 to 0.7 are moderate; between 0.7 to 0.8 are good and between 0.8 to 0.9 are superior (Field, 2000). Bartlet's test of sphericity is the final statistical test applied in this study for verifying its appropriateness (Bartlet, 1950). In this study, the value of KMO for 26 entrepreneurial characteristics was 0.917. This value indicated sample taken to process factor analysis was statistically significant. In addition to KMO, Chi- square value for these entrepreneurial characteristics was 7051.333. This value confirmed that it was statistically significant since significance value was less than significance level. Significance value was 0.000 at 5% level of significance. This value indicated that data were statistically significant for factor analysis. Statistics are shown in Table of reliability, sampling adequacy and total variance

6.4 Factor Analysis

After examining the reliability of the scale and the appropriateness of data, Researchers carried out factor analysis to identify the different entrepreneurial characteristics that would be suitable for entrepreneurs and to classify different entrepreneurial characteristics in the South Eastern Region of Sri Lanka. For achieving these objectives, Researchers employed Principal Component Analysis (PCA) that was followed by the Varimax Rotation. Varimax Rotation is mostly used in factor analysis (Hema and Anura, 1993). In this study, entrepreneurial character component 1, 2 and 3 could explain around 38%, 36% & 15% of the total variation respectively. In total, these three character components could explain 89% of the total variation. Statistics are shown in Table 2 of reliability, sampling adequacy and total variance. Further, these three character components recorded factor scores of 0.09509831, 0.10411191 and 0.045441 respectively. Character scores and ranking are shown in Table 3 of character scores and ranking.

7. Findings and Conclusion

Results showed that reliability statistics for 27 entrepreneurial characteristics at 0.977 indicates high reliability. Of these 27 entrepreneurial characteristics, 26 recorded communality values that ranged from 0.759 to 0.968. Energetic entrepreneurial character recorded a communality value of 0.167. In this study, the value of KMO for 26 entrepreneurial characteristics at 0.917, indicates sample taken to process factor analysis to be statistically significant. In addition to KMO, Chi-square value for these entrepreneurial characteristics was 7051.333. This value also confirmed that it was statistically significant at 5% level of significance. This value indicated that data were statistically significant for the factor analysis.

According to factor scores, entrepreneurial character component 2, 1 and 3 could be ranked into first, second and third respectively. It is concluded that out of 27 entrepreneurial characteristics, 26 were applicable to entrepreneurs in SER. These entrepreneurial characteristics could be cascaded into three character components.

8. Limitations and Scope for Further Research

Methodologically, sample size was not taken into account using sample size formulae. There are many varieties of entrepreneurs who were engaged in entrepreneurship in SER of Sri Lanka. All categories could not be accommodated in this study. Future studies can be conducted by removing this weakness.

9. Suggestions

All entrepreneurial characteristics are suitable in SERSL but their preference differs in SERSL. Therefore, policies should be customised at Ministry level to promote entrepreneurs in SERSL that are important for the development of this region.

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Table-1: Summary of Entrepreneurial Characteristics

Source	Findings and entrepreneurial characteristics
Hornaday (1982)	Study found that self- confidence, diligence, risk-taking, creativity, flexibility, facing challenges, positively responding to challenges, dynamism, leadership, ability to get along with people, responsiveness to suggestions, responsiveness to criticism, knowledge about market, perseverance, determination, resourcefulness, achievement, initiative, independence, foresight, profit orientation, perceptiveness, optimism, versatility, knowledge about product and knowledge about technology.
Boeker (1988)	Study found that four entrepreneurial characteristics are previous experience, previous employment, education, and age.
Koh (1996)	Entrepreneurial inclination is significantly associated with the psychological characteristics such as need for achievement, locus of control, propensity to take risk, tolerance of ambiguity, self-confidence and innovativeness
Herron and Robinson (1993)	Studies failed to prove to link entrepreneurial characteristics with performance.
Ismail (2012)	Study found demographic profile of micro, small and medium entrepreneurs in South Eastern Region.
Ismail and Gunapalan (2012)	Study identified micro, small and medium entrepreneurial marketers in South Eastern Region.
Stephenson (2013)	Study found 25 common characteristics of successful entrepreneurs such as do the business that one enjoys, take the business seriously, plan everything in business, manage money that is put in business wisely, ask for the sale, remember business is all about the customer, become a shameless self-promoter, project a positive business image, get to know customers, level the playing field with technology, build a top-notch business team, become known as an expert, create a competitive advantage, invest in profitable business, be accessible at any time for business, build a rock-solid reputation, sell benefits, get involved, grab attention in small-business, master the art of negotiations, design one's workspace for success, get and stay organized, take time off, limit the number of hats one wears and follow-up constantly.

Source: Survey Data

Table-2: Reliability, Sampling Adequacy and Total Variance

				Component	Total	% of Variance	Cumulative %
Cronbach alpha	0.977	Keyzer-Meyer-Oklin (KMO)	0.917	1	9.884	38.015	38.015
Communality range	Between 0.759 to 0.968	Bartlet's test of sphericity-ChiSquare	7051.333	2	9.297	35.758	73.773
		Sig.	0.000	3	3.987	15.336	89.109

Source: Survey Data

Table-3: Character Scores and Ranking

Factor	Factor component	Variables	No. of variable	Factor score	Factor ranking
Entrepreneurship	Entrepreneur Character Component 1	1. Self- confidence 2. Dynamism 3. Leadership 4. Ability to get along with people 5. Responsiveness to suggestions 6. Responsiveness to criticism 7. Knowledge about market 8. Perseverance 9. Determination 10. Resourcefulness 11. Achievement 12. Profit- orientation 13. Optimism	13	0.09509831	2
	Entrepreneur Character Component 2	1. Diligence 2. Risk- taking 3. Creativity 4. Flexibility 5. Initiative 6. Independence 7. Foresight 8. Perceptiveness 9. Versatility 10. Knowledge about product 11. Knowledge about technology	11	0.10411191	1
	Entrepreneur Character Component 3	1. Facing challenges 2. Positively responding to challenges	02	0.045441	3

Source: Survey Data