# Identifying Factors to Indicate the Business Performance of Small Scale Industries: Evidence from Sri Lanka

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## Abstract

This paper was to identify underlying factors in a collected data set that represent to indicate to the performance of small scale industries from Sri Lanka. The analysis based on the owner/ managers who responded to a questionnaire survey conducted on sample of small scale industries in Vavuniya district of the Sri Lanka. Initially, exploratory factor analysis has generated five factor solutions. In order to confirm reliability of factor, Cronbach?s alpha was used and finally, five factors were extracted with high reliability and named: Customer Satisfaction with Managing Change, Growth at Business and Income Level, Growth in Profitability, Growth in Turnover, Growth in Number of Employees. However, it is recommended to test the overall validity (content/face/discriminant) of the factor structure and to carry on confirmatory factor analysis to confirm the obtained factor structure with the large set of data.

***Index terms***— performance indicators, factor analysis, small scale industries.

## 1 Introduction

ri Lanka is an island country located in the Indian Ocean closer to the southern part of India. It has about 70% of its population living in the rural areas whose main income source is agriculture. With a human development index of 93 out of 177 countries and a literacy rate of 90%, Sri Lanka is conducive to startup micro and small enterprises (MSEs) for socioeconomic development. The agriculture sector contributes to 12% of GDP of the country (Central Bank of Sri Lanka, 2008), although 24.6% Research and development expenditure is spent on agriculture research and development **??**NSF, 2009). Sri Lanka's gross domestic product (GDP), in real terms, grew by an impressive 8.3 per cent in 2011, the highest growth witnessed during the past six decades. This is an unprecedented achievement as it was the first time that Sri Lanka realized economic growth of 8 per cent or above in two consecutive years in post-independence history. This high growth was underpinned by the conducive macroeconomic environment, strong domestic demand, improved investor confidence, continued expansion of infrastructure facilities and improved doing business environment amidst the fragile global economic From the production side, the remarkable growth in Industry and Services sectors contributed significantly to the growth while the Agriculture sector suffered a setback.

Small and Medium Enterprises (SMEs) play a crucial role in contributing to overall industrial production, employment generation and poverty reduction in developing countries (Arinaitwe, 2006).

The small and medium enterprise (SME) sector is well recognized for its contribution to employment, innovation and economic dynamism and is considered as an engine of growth and an essential part of a healthy economy. It provides the industrial leaders of the future, improves the competitive edge of the economy by maximizing the range of choice available through market provision and challenges the dominance of existing large industrial units, thereby forcing them to innovate. Small firms have been the chief source of creating new jobs in many countries. It would not be an exaggeration to mention that the overall health of the economy depends, to a large extent, on the health of the SME sector in a country.

According to the Central Bank of Sri Lanka (1998), the Cottage and Small Scale Industries (CSSI) sector plays an important role in economic development through creation of employment opportunities, the mobilization of domestic savings, poverty alleviation, income distribution, regional development, training of workers and entrepreneurs, creating an economic environment in which large firms flourish and contribute to export earnings. Having understood the positive impact of SMEs development and economic growth, successive Governments in Sri Lanka have taken various steps to develop this vital sector (Gamage, 2000). Research has shown that in Sri Lanka 68% of the small business fail within the first 2-5 years of operation. In the United States of America the rate of failure is as high as 80%. In the European Economic Community Countries out of every 1000 small businesses only will service for more than 10 years from the start (Mendis et al, 1999). Why do such a large number of small firms fail each year? It is important to identify what are the factors indicating the perfpormance as well as success? How can we measure the performance as well as success? Therefore, the purpose of this study is to examine, through an empirical investigation, factors that would indicate to the performance of small industries. The data for the study were collected through the written questionnaire following direct personal interviewing technique conducted on a sample of small scale industries in Sri Lanka.

# 2 II.

# 3 Questionnaire Survey

For the questionnaire survey, a sample of 68 small scale industries was decided from the industries which were registered before 2003 in Industries Department, District Secretariat Office, Vavuniya. According to the Survey data of Industries Department, District Secretariat Office, Vavuniya, there are 127small scale industries were functioning as at 31.12.2007. From the 127 industries 68 industries were selected as sample.

In addition to getting information about profiles of enterprise 20 questions asked to get information related to performance indicators. Initially, thirty questionnaires were distributed with a view to pilot testing, confidentiality of information assured to the respondents. Subjective measures were used to measure the organizational performance in this study. Measurement of organizational performance using economic data is often difficult with privately held firms, largely because the owners are the sole controllers of the information and are sensitive about releasing it (Dess & Robinson, 1984). As well, the profitability of a small business is not considered a reliable measure of performance, as the way in which profit is distributed will tend to vary with the taxation obligations of the ownermanager, with the asset structure of the business (Gibson, 2002), and with the owners' intention for the business (Davidsson, 1995; **??**rueger, Reilly and Carsrud,2000; **??**ennedy and Drennan,2002).

Using a modified instrument developed by the Gupta and Govintharajan, Dess and Robinson (1984) reported strong and significant relationships between the subjective comparative assessments of the 5 year performance of 18 businesses by their top management against their similar businesses in their industries.

Therfore subjective measures were used to measure the organizational performance in this study. Subjective measures which are perceptions collected from organizational members and stakeholders (Campbell, 1977). Further many studies have shown that subjective measures reliably reflect objective performance (Covin and Covin, 1990;Dess, Lumpkin and Covin, 1997;Wiklund, 1999; **??**ahra, 1993: Bae and **??**awler, 2000;Luo and Park, 2001;Peng and Luo, 2000) . Satisfaction is fundamental measure of the perception of successful performance (cited in Fox, 2005).

Using a 5-point Likert scale, respondents were asked to indicate the extent to which they fully satisfactory or unsatisfactory with each item. The responses range from 1 (unsatisfactory) to 5 fully satisfactory.

In the selected sample 56 participants (53.54%) were responded, 5 entrepreneurs were not responded to the survey. 7 industries had been dropped out from their function in the selected sample. According to the Survey data of Industries Department, District Secretariat, Vavuniya 127small scale industries were functioning as at 31.12.2007. But after the survey of researcher identified there are 120 small scale industries are functioning in Vavuniya district and 7 had been closed from their function during the last two years period. The following table presents population and sample details including drop out industries and number of non respondents from respective industries of the survey. The following table presents population and sample details including drop out industries and number of non respondents from respective industries of the survey. The sample was consisted of 51 male (91.1%) and 05 female (8.9%) entrepreneurs.

# 4 III. Results of the Statistical Analysis

At the first stage, permission was taken from entrepreneurs to collect the data. Initially, thirty questionnaires were distributed with a view to pilot testing, confidentiality of information assured to the respondents.

The approach to measuring Characteristics of Entrepreneurs and Industries Performance was the use of an instrument for capturing entrepreneurs' perceptions. To establish reliability and validity of the questionnaire, pilot test was conducted with a convenience sample of entrepreneurs of small scale industries in Vavuniya district. The Cronbach's alpha was used as part of the analysis because it has been a common method for assessing the measure of reliability of entrepreneurship in organizations (Knight, 1997). Therefore reliability test was conducted to check random errors.

The reliability coefficient of all dimensions of industrial performance were 0.843 which indicated the high reliability (Gliner and Morgan, 2003). Therefore, questionnaire was taken as an acceptable instrument to be administered.

As indicated above in this study, Questionnaire was tested by using factor analysis on SPSS 13.0. Regarding validity, Kasier -Meyer -Olkin (KMO) measure of Sampling Adequacy is a measure of whether or not the distribution of value is adequate for conducting Factor Analysis. As per KMO measure, a measure of >0.9 is marvelous, >0.8 is meritorious, >0.7 is middling, >0.6 is mediocre, >0.5 is miserable and <0.5 is unacceptable. A significance value <0.05 indicates that the data DO NOT produce an identity matrix and are thus appropriately multivariate normal and acceptable for Factor Analysis (George and Mallery, 2003).

Exploratory factor analysis is the statistical techniques used to investigate the underlying patterns or associations/ relationships for a large number of variables and to determine or not the information can be summarized in a smaller set of factors or components (Hair et al., 2006). Pallant (2010), Hair et al (2006) and Field (2010)'s guidance were followed to take up exploratory factor analysis.

A principal components analysis for items of industrial performance was performed. However, before using the factor analysis, a number of initial tests were conducted to determine the suitability of our data for such an analysis. Here Bartlett's test of sphericity and the Kaiser-Meyer-Olkin measure of sampling adequacy (George and Mallery, 2003) were used. Both of these tests can be used to determine the factorability of the matrix as a whole. If Bartlett's test of sphericity is large and significant, and if the Kaiser-Meyer-Olkin measure is greater than .5, then factorability is assumed. For this scale a measure of sampling adequacy value of .748 and a large value of Bartlett's test of sphericity (108.878 and df = 21) at a high level of significance ($p < .000$) indicated that a principal component analysis would be useful. The five factor solution suggested by the eigenvalues greater than one criterion explained 68.80% of the variance in the data to again confirm that the factor analysis is valid. All items loaded highly, with communalities of .484 or higher.

After being varimax rotated to obtain a simple structure the five-factor solution gave a clear factor structure. Table 1 shows the results of the principal components analysis. Factor loadings were greater than .50 were considered significant (Hair et al., 1995) and thus the larger the absolute size of the factor loading, the more important the loading in interpreting the factor matrix. When the original 20 items were analyzed by the principal component factor analysis with varimax rotation a five factor emerged. Here, two items were dropped from the analysis because of their low loadings without significant and difficulty of interpretation which loadings were .457 in factor 1 and .437 in factor 5. Factor 2: This factor was represented by three items, was labeled growth in profitability accounted for the amount of variance 12.51%.This factor comprised items representing Growth on net profit over the past five years, improvement in ROI from the business for past five years , and improvement in ROA from the business for past five years.

Factor 3. This factor was represented by four items, was named growth in business and income level accounted for the amount of variance 12.36%. This factor included the items were satisfaction in business growth including achievement of business goal, improvement in life standard after the business, growth in personal income from the beginning of business, improvement in income level when comparing before and after the business. Factor 4: This factor was represented by two items, was named growth in no. of employees and retaining key employees accounted for the amount of variance 12.33%. Consisted items were increasing in no. of employees from the beginning of business, ability of industries to keep the organization's best and most talented people. Factor 5: This factor was represented by two items, was named growth in turnover/ sales accounted for the amount of variance 10%. Factor items were growth in turnover/sales from the business over the past five years, growth in turnover compared to the competitors over the past five years. The internal consistency of the items used to measure each factor was calculated using Cronbach's alpha, which is the procedure of choice for investigating the internal consistency of items using Likert-type scale (Walsh and Betz, 1995). Cronbach's alpha for each factor: factor 1, factor 2, factor 3, and factor 4 and factor 5 were 0.870, 0.832, 0.714, 0.762 and 0.817 respectively which suggests that of the items measured the first two and last factor had a high internal consistency (Cronbach's alpha greater than 0.80) and third and fourth factor had moderate internal consistency. Therefore the results of reliability analysis confirmed that consistency is at an acceptable level for each factor.

# 5 IV. Relative Importance of Factors

Ranking of the above five factors in order of their importance, along with mean and standard deviation, is shown in Table 2. The importance of these factors, as perceived by the participants, has been ranked on the basis of their mean values. V.

# 6 Discussion

The results of the factor analysis show a set of five separately identifiable factors that have positive and significant impact on the performance of small scale industries in Vavuniya district. Although customer satisfactions with managing change (Factor 1), growth in business & income level (Factor 3) emerged as the first and second most highly loaded factors for the performance of their industries. Similarly, growth in profitability (Factor 2) , growth in turnover (Factor 5), growth in no. of employees (Factor 4) have been perceived as third, fourth and

fifth important factors. The following discussion focuses on each of these five factors reported in the existing literature as subjective measure of the organizational performance.

Factors influencing business/ venture performance have been extensively analyzed since the beginning the 1980s (Gartner 1985 **??**Antoncic and Histrich, 2001), absolute growth items are the average annual growth in number of employees in the last three years and the average annual growth in sales, in the last three years, while relative growth item is growth in market share **??**Chandler and Hanks,1993) in the last three years, absolute profitability items are average annual return on sales (ROS), average return on assets (ROA), and average annual return on equity (ROE), in the last three years, while relative profitability items are a subjective measure of firm performance relative to competitors **??**Chandler and Hanks,1993) and its extension (Antoncic and **??**istrich,2001,2004), the company's profitability in comparison to all competitors as well as to competitors that are at about same age and stage of development, control variables included firm age, size, and industry.

Firm performance is a complex and multidimensional construct (Chandler and Hanks, 1993). Therefore, the use of multiple indicators to gauge new venture performance has been recommended by several researchers **??**Zahra, Newbaum and EI-Hsgrassey, 2002). Sales growth rate was measured in the same manner as in several previous studies **??** **??**Wiklund and Shepherd, 2003); gathering and using knowledge (Lumpkin and Lichtenstein, 2005); and managing change (Hage, 1999). An organizational performance construct was operationalized by Jawaorski and Kohli (1993) with two judgmental questions. In their study, respondents were asked for their opinion of the previous year's overall performance of their organization and their overall performance relative to leading competitors. In this study also is going to follow above method to evaluate the organizational performance.

The goal approach directs the ownersmanagers to focus their attentions on the financial measures. These measures include profits, revenues, returns on investment (ROI) (Smith, Bracker, and Miner 1987), returns on sales (Kean et al. 1998), and returns on equity (Richard 2000; **??**arney 1997) rather than the non-financial measures. Financial measures are objective, simple and easy to understand and compute, but in most cases, they suffer from being historical and are not readily available in the public domain. Inaccessibility, confidentiality **??**Covin and Slevin, 1989), completeness (Sapienza and Grimm 1997), accuracy (Brush and Wanderwerf 1992) and timeliness (Sapienza, Smith, and Gannon 1988) of data make comparisons among the sectors challenging and futile. Further, profits are subject to manipulations and interpretations. A possible way forward is to apply the non-financial measures, though subjective in nature, as supplements to the financial measures **??**Kunkel and Hofer 1993; **??**ovin and Slevin 1989; **??**egley and Boyd 1987;Sandberg and Hofer 1987). The combinations of these two measures help the owners-managers to gain a wider perspective on measuring and comparing their performance, in particular the extent of effectiveness and efficiency in utilizing the resources, competitiveness and readiness to face the external pressure including globalizations.

# 7 VI.

# 8 Conclusions

Through an empirical investigation, this study has identified five principal factors that are perceived to be major contributions to indicate the organizational performance. These factors in their order of importance are Customer satisfaction with managing change, Growth in business and income level, Growth in profitability, Growth in turnover, and Growth in number of employees.

However, it should be noted that the above conclusion should be treated with caution, as the results of this exploratory study stem from the perceptions of entrepreneurs who represent only a small sample of small scale industries in Vavuniya, Sri Lanka. In addition, the results of this study were subject to the limitations that all performance indicators which are indicate the small scale industries performance did not extracted from this study. Despite these imperfections, the study provides some useful insights to entrepreneurs and policy makers in involving the business activities on some factors that may be considered as important contributions to the performance of their small scale industries. [1] [2]

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**1**

| Industries | Population (No. of Industries) | Selected Sample | No. of Respondents | No. of not Respondents | Identified no. of closed industries | presently functioning industries | Sampling Rate (%) |
|---|---|---|---|---|---|---|---|
| Manufacture of Bakery Products | 33 | 14 | 11 | 02 | 01 | 32 | 42.40% |
| Rice and Grinding Mill | 44 | 20 | 15 | 03 | 02 | 42 | 45.45% |
| Manufacture of Agricultural Machinery Products, Lathe and Welding work | 07 | 05 | 04 | | 01 | 06 | 71.42% |
| Manufacture of Food Products and Confectionery items | 11 | 07 | 07 | | | 11 | 63.64% |
| Manufacture of Soft Drinks Products | 03 | 03 | 03 | | | 03 | 100% |
| Production of Iron & Wooden Furniture/ Carpentry works | 07 | 04 | 04 | | | 07 | 57.14% |
| Manufacture of Stone Quarrying, Clay and Sand pits | 01 | 01 | 01 | | | 01 | 100% |
| Manufacture of Jewelers related | 11 | 06 | 03 | | 03 | 08 | 33.33% |

Figure 1: Table 1 :

| | Industries | | | | | |
|---|---|---|---|---|---|---|
| | F | Factor 1 | Factor 2 | Factor | | |
| Satisfaction in Business Growth including Achievement of Business Goal | | | 0.670 | | | |
| Improvement in Life Standard after the business | | | 0.833 | | | |
| Growth in Personal Income from the beginning of business | | | 0.599 | | | |
| Improvement in Income Level when comparing before and after the business | | | 0.511 | | | |
| Improvement in saving capacity and accumulation of resources from the business | | | | | 0 | 0.437 |
| Growth on net profit earnings from the business over the past five years | | | 0.554 | | | |
| Improvement in Return on Investment (ROI) from the business | | | 0.864 | | | |
| Improvement in Return on Assets (ROA) from the business | | | 0.898 | | | |
| Growth in turnover/sales from the business over the past five years | | | | | | 0.754 |
| Growth in turnover compared to the competitors over the past five years | | | | | | 0.613 |
| Increasing in no. of employees from the beginning of business | | | | | 0.816 | |
| Ability of industries to keep the organization's best and most talented people | | | | | 0.745 | |
| Level of customer satisfaction related to business activities | | 0.791 | | | | |
| Conducting survey to measure satisfaction of the customers and carry out the necessary changes | | 0.767 | | | | |
| The market coverage of business enterprises | | 0.549 | | | | |
| Increasing the no. of customers from the beginning of business | | 0.700 | | | | |
| Overcoming the actions of the competitors ov er the past 5 years | | 0 | | | | |
| | | 0.457 | | | | |
| Achievement at business growth by facing the environmental challenge & strong competition | | 0.690 | | | | |
| Organization enhance organizational performance by being attentive to external changes | | 0.736 | | | | |
| Delivering new products and services based on market change | | 0.752 | | | | |
| Eigen Value | | 6.084 | 3.127 | 7.935 | 5.398 | 8.216 |
| Proportion of Variance Explained | | 21.60% | 12.51% | 12.36% | 12.30% | 10.00% |
| Cumulative Variance Explained | | 21.60% | 34.14% | 46.45% | 58.86% | 68.80% |
| Alpha | | 0.87 | 0.832 | 0.714 | 0.762 | 0.817 |

Factor 1: This factor was represented by seven items, was named customer satisfaction with managing change accounted for the amount of variance 21.60%. This factor included the items were level of customer satisfaction, survey to measure the customer satisfaction and carry out the necessary changes, market coverage of business enterprise , growth in no. of customers, business growth by facing the environmental challenge & strong competition, Organization enhance organizational performance by being attentive to external changes, Delivering new products and services based on market change.

**2**

| Factors indicating the industrial performance | No. of variables | Mean | Std. Deviation | Rank |
|---|---|---|---|---|
| Factor 1: Customer satisfaction with managing change | 7 | 26.44 | 3.74 | 1 1 |
| Factor 3: Growth in business & income level | 4 | 16.13 | 1.48 | 2 2 |
| Factor 2: Growth in profitability | 3 | 10.84 | 1.47 | 3 3 |
| Factor 5: Growth in turnover | 2 | 7.61 | 0.89 | 4 4 |
| Factor 4: Growth in no. of employees | 2 | 6.73 | 1.43 | 5 5 |

Figure 3: Table 2 :

[Startups] , Startups . *Small Business Economics* 23 p. .

[ Entrepreneurship Theory and Practice] , *Entrepreneurship Theory and Practice* 30 p. .

[Mendis et al. ()] , N Mendis , S Seneviratne , L Nanayakkara . 1999. II. Publication of Open University of Sri Lanka

[Brush and Wanderwerf ()] 'A Comparison of Methods and Sources of Obtaining Estimates of New Venture Performance'. C G Brush , P Wanderwerf . *Journal of Business Venturing* 1992. 7 p. .

[Gartner ()] 'A Conceptual Framework for Describing the Phenomena of New Venture Creation'. W B Gartner . *Academy of Management Review* 1985. 10 p. .

[Covin and Slevin ()] *A conceptual model of entrepreneurship as firm behavior*, J G Covin , D P Slevin . 1991.

[Bouchikhi ()] 'A Constructivist Framework for Understanding Entrepreneurship Performance'. H Bouchikhi . *Organization Studies* 1993. 14 (4) p. .

[Gaskill et al. ()] 'A Factor Analytic Study of the Perceived Causes of Business Failure'. L R Gaskill , H Van Auken , R A Manning . *Journal of Small Business Management* 1993. 34 (4) p. .

[Florin et al. ()] 'A social capital model of high-growth ventures'. J Florin , M Lubatkin , W Schulze . *Academy of Management Journal* 2003. 46 (3) p. .

[Ruf et al. ()] 'An empirical investigation of the relationship between change in corporate social performance and financial performance: A stakeholder theory perspective'. B M Ruf , K Muralidhar , R M Brown , J J Janney , Paul , K . *Journal of Business Ethics* 2001. 32 (2) p. .

[Gibson ()] 'Clusters of Financial Structure in Australian Small firms'. B Gibson . *Small Enterprise Research* 2002. 10 (1) p. . (The Journal of SEAANZ)

[Krueger et al. ()] 'Competing Models of Entrepreneurial Intentions'. N F J Krueger , M D Reilly , A L Carsrud . *Journal of Business Venturing* 2000. 15 p. .

[Covin and Colvin ()] 'Competitive aggressiveness, environmental context, and small firm performance'. J G Covin , T Colvin . *Entrepreneurship: Theory and Practice*, 1990. 14 p. .

[Zahra et al. ()] 'Competitive analysis and new venture performance: Understanding the impact of strategic uncertainty and venture origin'. S A Zahra , D O Newbaum , G M El-Hagrassey . *Entrepreneurship Theory and Practice*, 2002. 27 p. .

[Davidsson ()] 'Continued Entrepreneurship: Ability, Need and Opportunity as Determinants of Small Firm Growth'. P Davidsson . *Journal of Business Venturing* 1991. 6 p. .

[Smith et al. ()] 'Correlates of firms and entrepreneur success in technologically innovative companies'. N R Smith , J S Bracker , J B Miner . *Frontiers of Entrepreneur ship Research* N. C. Churchill (ed.) 1987. Babson College Press. p. .

[Knight ()] 'Cross cultural reliability and validity of a scale to measure firm entrepreneurial orientation'. G A Knight . *Journal of Business Venturing* 1997. 12 (3) p. .

[Johannisson ()] 'Designing Supportive Contexts for Emerging Enterprises'. B Johannisson . *Small Business Dynamics: International, National and Regional Perspectives*, C Karlsson, B Johannisson, D Storey (ed.) (London) 1993. (Rout ledge)

[Davidsson ()] *Determinants of Entrepreneurial Intensions*, P Davidsson . 1995. Piacenza, Italy. RENT IX Workshop

[Field ()] *Discovering Statistics Using SPSS. 3 rd edn*, A Field . 2010. England: Sage Publications.

[Gamage ()] *Effectiveness of Entrepreneurship Development Programs in the Creation and Growth of SMEs in Sri Lanka*, A S Gamage . 2000. Colombo. Research paper (unpublished) University of Sri Jeyawardenapura (MSc)

[Rauch et al. ()] 'Effects of human capital and long-term human resources development on employment growth of small-scale businesses: A causal analysis'. A Rauch , M Frese , A Utsch . *Entrepreneurship Theory and Practice* 2005. 29 p. .

[Kennedy and Drennan ()] 'Entrepreneurial Intentions of Women'. J Kennedy , J Drennan . *Small Enterprise Research* 2002. 10 (1) p. . (The Journal of SEAANZ)

[Wiklund and Shepherd ()] 'Entrepreneurial orientation and small business performance: A configurational approach'. J Wiklund , D Shepherd . *Journal of Business Venturing* 2005. 20 p. .

[Dess et al. ()] 'Entrepreneurial strategy making and firm performance: Test of contingency and configurational models'. G G Dess , G T Lumpkin , J G Covin . *Strategic Management Journal* 1997. 18 (9) p. .

[Entrepreneurship: Theory and Practice] *Entrepreneurship: Theory and Practice*, 16 p. .

[Zahra ()] 'Environment, Corporate Entrepreneurship and Financial Performance: A Taxonomic Approach'. S A Zahra . *Journal of Business Venturing* 1993. 8 p. .

[Schwarz et al. ()] 'Erfolgsdeterminanten junger Unternehmen in Österreich: eine empirische Untersuchung zum Beschäftigungswachstum'. E J Schwarz , T Ehrmann , R J Breitenecker . *Zeitschrift für Betriebswirtschaft* 2005. 75 p. .

[Arinaitwe ()] 'Factors Constraining the Growth and Survival of Small Scale Businesses. A Developing Countries Analysis'. S K Arinaitwe . *Journal of American Academy of Business* 2006. 8 (2) p. .

[Wijewardena and Cooray ()] 'Factors Contributing to the Growth of Small Manufacturing Firms: Perceptions of Japanese Owner/ Managers'. H Wijewardena , S Cooray . *Journal of Enterprising Culture* 1996. 4 (4) p. .

[Ghosh et al. ()] 'Factors Contributing to the Success of Local SMEs: An insight from Singapore'. B C Ghosh , S K Teo , A M Low . *Journal of Small Business and Entrepreneurship* 1993. 10 (3) p. .

[Miller et al. ()] 'Financial Performance Patterns of New Corporate Ventures: An Alternative to Traditional Measures'. A Miller , B Willson , M Adams . *Journal of Business Venturing* 1988. 3 (4) p. .

[Sapienza and Grimm ()] 'Founder Characteristics, Start-Up Process and Strategy/Structure Variables as Predictors of Short line Railroad Performance'. H J Sapienza , C M Grimm . *Entrepreneurship Theory and Practice*, 1997. 22 p. .

[Loscocco and Leicht ()] 'Gender, Work-Family Linkages, and Economic Success Among Small Business Owners'. K A Loscocco , K T Leicht . *Journal of Marriage and the Family* 1993. 55 p. .

[Hair et al. ()] J F Hair , Jr , R E Anderson , R L Tatham , W C Black . *Multivariate Data Analysis*, (New York) 1995. Macmillan Publishing Company. (3rd ed)

[Sandberg and Hofer ()] 'Improving new venture performance: The role of strategy, industry structure, and the entrepreneur''. W R Sandberg , C W Hofer . *Journal of Business Venturing* 1987. 2 p. .

[Peters and Waterman ()] *In search of excellence*, T J Peters , R H Waterman . 1982. New York: Harper.

[Graves and Waddock ()] 'Institutional owners and corporate social performance'. S B Graves , S A Waddock . *Academy of Management Journal* 1994. 37 (4) p. .

[Antoncic and Hisrich ()] 'Intrapreneurship: Construct refinement and cross cultural validation'. , Antoncic , B Hisrich , RD . *Journal of Business Venturing* 2001. 16 (5) p. .

[Peng and Luo ()] 'Managerial Ties and Firm Performance in a Transition Economy: The Nature of Micro-macro Link'. M M Peng , Y Luo . *Academy of Management Journal* 2000. 43 p. .

[Jaworski and Kohli ()] 'Market orientation: Antecedents and consequences''. B J Jaworski , A K Kohli . *Journal of Marketing* 1993. 57 p. .

[Dess ()] 'Measuring organizational Performance in the absence of objective measures: The case of the privately-held firm and conglomerate business unit'. G G Dess , Robinson , R . *Strategic Management Journal* 1984. 5 p. .

[Mcgrath et al. ()] *Measuring outcomes of corporate venturing: An alternative perspective*, R Mcgrath , S Venaktraman , I Macmillan . 1992. Las Vegas, NV: Academy of Management Best Practice Proceedings. p. .

[Chandler and Hanks ()] 'Measuring the performance of emerging businesses: A validation study'. G N Chandler , S H Hanks . *Journal of Business Venturing* 1993. 8 (5) p. .

[Hair et al. ()] *Multivariate Data Analysis. 6 th edn*, J F HairJr , W C Black , B J Babin , R E Anderson , R L Tatham . 2006. New Jersey: Pearson Prentice Hall.

[Bruederl and Preisendorfer ()] 'Network Support and the Success of Newly Founded Businesses'. J Bruederl , P Preisendorfer . *Small Business Economics* 1998. 10 (3) p. .

[Amason et al. ()] 'Newness and novelty: Relating top management team composition to new venture performance'. A C Amason , R C Shrader , G H Tompson . *Journal of Business Venturing* 2006. 21 p. .

[Campbell (ed.) ()] *On the nature of organizational effectiveness*, J P Campbell . P.S. Goodman and J.M. Pennings (ed.) 1977. San Francisco: Jossey-Bass. p. .

[Bae and Weber ()] 'Organizational and HRM Strategies in Korea: Impact on Firm Performance in an Emerging Economy'. J Bae , J Weber . *Academy of Management Journal* 2000. 43 p. .

[Hage ()] 'Organizational innovation and organizational change'. J T Hage . *Annual Review of Sociology* 1999. 25 p. .

[Orser et al. ()] 'Performance, Firm Size and Management Problem Solving'. B J Orser , S Hogarth-Scott , A L Riding . *Journal of Small Business Management* 2000. 38 (4) p. .

[Bagley and Boyd ()] 'Psychological Characteristics Associated with Performance in Entrepreneurial Firms and Smaller Businesses'. , Bagley , T M Boyd , DP . *Journal of Business Venturing* 1987. 2 (10) p. .

[Richard ()] 'Racial Diversity, Business Strategy and Firm Performance: A Resource Based View'. O C Richard . *Academy of Management Journal* 2000. 43 (2) p. .

[Keane et al. ()] 'Simulating the consequences of altered fire regimes on a complex landscape in Glacier National Park, USA'. R E Keane , K C Ryan , M A Finney . *Tall Timbers Fire Ecology Conference* 1998. 20 p. .

[George and Mallery ()] *SPSS for windows step by step: simple guide and reference 11.0 update, 4 th edn*, D George , P Mallery . 2003. NY: Allyn and Bacon.

[Pallant ()] *SPSS: Survival Manual, 4 th edn*, J Pallant . 2010. England: Open University press.

[Sri Lanka Science and Technology Statistical Handbook National Science Foundation ()] 'Sri Lanka Science and Technology Statistical Handbook'. *National Science Foundation* 2009. 2006. p. 11. (NSF)

[Luo and Park ()] 'Strategic Alignment and Performance of Market-seeking MNCs in China'. Y Luo , S H Park . *Strategic Management Journal* 2001. 22 p. .

[Covin et al. ()] *Strategic process effects on the entrepreneurial orientation-sales growth rate relationship*, J G Covin , K M Green , D P Slevin . 2006.

[Walsh and Betz ()] *Tests and assessment. 3 rd edn*, B W Walsh , N E Betz . 1995. Englewood Cliffs, NJ: Prentice Hall.

[Robinson and Sexton ()] 'The Effect of Education and Experience on Self-Employment Success'. P B Robinson , E A Sexton . *Journal of Business Venturing* 1994. 9 (2) p. .

[Walter et al. ()] 'The impact of network capabilities and entrepreneurial orientation on university spin-off performance'. A Walter , M Auer , T Ritter . *Journal of Business Venturing* 2006. 21 p. .

[O'farell (ed.) ()] *The Nature of New Firms in Ireland: Empirical Evidence and Policy Implications*, P O'farell . D. Keele, and E. Wever (ed.) 1986. London: Croom Helm. p. . (New Firms and Regional Development in Europe)

[Lumpkin and Lichtenstein ()] 'The role of organizational learning in the opportunityrecognition process'. G T Lumpkin , B B Lichtenstein . *Entrepreneurship Theory and Practice* 2005. 29 (4) p. .

[Wiklund ()] 'The sustainability of the entrepreneurial orientation-performance relation ship'. J Wiklund . *Entrepreneurship Theory and Practice* 1999. 24 p. .

[Bosma et al. ()] *The Value of Human and Social Capital Investments for the Business Performance of*, N Bosma , M C Praag , R Thurik , G Wit . 2004.

[Sapienza et al. ()] 'Using Subjective Evaluations of Organizational Performance in Small Business Research'. H J Sapienza , K G Smith , M J Gannon . *American Journal of Small Business* 1988. 12 (3) p. .

[Kunkel and Hofer ()] *Why Study the Determinants of New Venture Performance: A literature Review and Rationale*, S Kunkel , C W Hofer . 1991. (Paper presented at the Academy of Management 51st Annual Meeting)