

Available online at www.sciencedirect.com**ScienceDirect**

Procedia - Social and Behavioral Sciences 115 (2014) 415 – 423

Procedia
Social and Behavioral Sciences

The 5th Indonesia International Conference on Innovation, Entrepreneurship,
and Small Business (IICIES 2013)

Identification of Factors Influencing the Performance of Small Medium Enterprises (SMEs)

Grisna Anggadwita^{a*}, Qaanita Yuuha Mustafid^b

^{ab}*School of Business and Management – Institute of Technology, Bandung (SBM-ITB), Jl. Ganesha 10, Bandung, 40132, Indonesia*

Abstract

Small and medium enterprises (SMEs) have an important role in economic development in Indonesia. The increasing number of SMEs caused competition becomes increasingly fierce. This made SMEs experiencing more severe challenge to be able to maintain their existence and expand its business. Performance measurement for SMEs is still not well established such as the performance measurement in the big company. This paper aims to propose a conceptual framework for measuring the performance that can be used by SMEs. Several factors are proposed including entrepreneurial aspects, competence of human resource, innovativeness, and sustainability. The method used in this study are quantitative method with conduct a survey in Small and Medium Enterprises (SMEs) in Bandung. The result from this study is a conceptual framework for measuring the performance of SMEs, in which each factor has a significant correlation to the performance measurement of SMEs. This research is expected to contribute as the literature used by academics and SMEs to effectively measure SMEs performance, especially in a competitive environment.

© 2013 The Authors. Published by Elsevier Ltd.

Selection and peer-review under responsibility of The 5th Indonesia International Conference on Innovation, Entrepreneurship, and Small Business.

Keywords: Small Medium Enterprises (SMEs); Performance Measurement; Conceptual Framework

* Corresponding author. Tel.: +0-000-000-0000 ; fax: +0-000-000-0000 .
E-mail address: grisna@sbm-itb.ac.id

1. Introduction

1.1. Research Background

Small and medium enterprises (SMEs) have an important role as the backbone of the economy in almost all countries. In Indonesia, SMEs contributed significantly to the GDP, which amounted to 60% and the number of workers absorbed by the sector stood at 97% of the total workforce (BPS, 2011). SMEs is a business sector that is able to adapt and face of market changes. When Indonesia suffered from economic crisis in 1997, the SMEs was able to survive and continue to exist in the middle of cease-economic conditions. This is because the SMEs sector which is relatively neutral and independent of government interference. According to Tambunan (2006) SMEs are an important driver for economic development and empowerment of local communities. In developing countries such as Indonesia, SMEs face numerous challenges in their growth prospects, such as the lack of financial capital, human resource potential, modern technology, and etc. (Subrahmanya, 2005).

Some previous researchers study the various factors that have an influence on firm performance (Chandler and Hanks, 1994; Covin, 1991; Covin and Covin, 1990; Qian and Li, 2003; Zahra and George, 1999). SMEs need an indicator to measure its performance to maintain their existence and expand its business. Performance measurement for SMEs is still not well established such as the performance measurement in the big company. It required the identification of the factors affecting performance measurement in the SMEs as a basis evaluation for SMEs to improve and enhance its performance. The purpose of this paper is to propose a conceptual framework for measuring performance that can be used by SMEs. Several factors affect the performance of SMEs proposed including entrepreneurial aspect, competence of human resource, innovativeness, and sustainability. The result is expected to contribute to the SMEs in order to maintain and improve its performance. In addition, research is also expected to contribute to the academic to provide an understanding of the factors that affect the performance of SMEs.

2. Literature Review

2.1. Small Medium Enterprises (SMEs)

SMEs have varying definitions. SMEs have historically been a major player in the Indonesian economy, especially as the largest provider of employment, and primary or secondary source of income for many Household (Tambunan, 2006). SME sector includes a variety of fields, including agriculture, trade, mining, processing, service, and others. In Indonesia, the SME sector is often associated with social and economic problems, such as high levels of poverty, unequal income level of residents, and the number of unemployed.

Various definitions of small and medium enterprises in Indonesia including the Ministry of Cooperatives and Small and Medium Enterprises (Menekop and SMEs), the Central Statistics Agency (BPS), and UU No. 20 years 2008. According to the Ministry of Cooperatives and Small and Medium Enterprises (Menekop and SMEs), that is a Small Business, including Micro Enterprises, is a business entity that has a net worth of more than 200 million, excluding land and business building, and has annual sales of 1 billion. Meanwhile, Medium Enterprises is a business entity that has a net worth greater than 200 million - 10 billion excluding land and buildings. Central Statistics Agency (BPS) provides a definition of SMEs is based on the quantity of labor. Small business is an entity that has a number of workers 5 to 19 people, while medium-sized is an entity that has a number of workers more than 20 to 99 people (BPS). And according to UU No. 20 years 2008, SMEs are enterprises productive owned by individuals and / or individuals business entity: a). Small businesses : net worth of more than 50 million - 500 million excluding land and building or place of business has annual sales of more than 300 million - 2.5 billion. b). Medium enterprises : net worth of more than 500 million - 10 billion excluding land and building or place of business has annual sales of more than 2.5 billion - 50 billion.

The World Bank (1984), the United Nations Industrial Development Organization (1985) and the Asian Development Bank (1990), which categorize SMEs as follows: (1) small-sized firms employing less than 50

workers; (2) medium-sized employing between 50 and 199 workers; and (3) larger sized firms employing more than 200 employees (Rapih, 2011). In principle, the definition and criteria of SMEs in foreign countries are based on the following aspects : the number of workers, income, and the amount of assets. Ahmad (2007) implied that there was a need to more closely examine the internal factors that can lead to the company success, without ignoring the environmental factors that can also affect the performance of the company. Therefore, establishing a set of performance measurement framework to be critical to the success of SMEs.

2.2. Performance Measurements of SMEs

Organizational performance is a measure of a company's success in achieving its goals. Organizational performance can be measured based on variables of quantitative and qualitative. Quantitative performance measures are commonly used by large corporations such as financial outcomes (ROE, ROA, ROI), production (the amount of goods sold, operating expenses ratio), marketing (number of customers), and efficiency (Tattichi et al, 2008). Qualitative performance measures such as discipline level, achievement of goals, perceptions of leadership on organizational performance, individual behavior in the organization, and effectiveness. The use of qualitative performance assessment clearly has some advantages compared to the performance indicators calculated from financial statements. For example, in a cross-sectional study, the profitability of companies in different industries are not comparable due to differences in the level of capital intensity (Kauranen, 1993).

Performance of the company is defined as a firm's ability to create action and acceptable results (Pfeffer & Salancik, 1978). Therefore we need a concept and operational systems as well as variables that can be measured to be the corporate performance measurement standards. Alasadi and Abdelrahim (2007) stated that the performance of the SMEs can be seen from the satisfaction of the owner / manager (the dependent variable) on: profit, turnover, and business development. Although extensive research has been done to investigate the needs and characteristics of the performance measurement system in a large organization, there is a dearth of published research relating to SMEs (Hudson et al., 2001). Although, from the literature, there is evidence that SMEs have a performance measurement system model, Manville (2006) stated that, to date, there are still significant obstacles in the implementation of this system in the context of SMEs.

According Indarti and Langenberg (2004) regarding the factors that influence the development of SMEs in Indonesia mostly SMEs in Indonesia operates through a traditional path in terms of production and marketing. So in this study more viewed to internal organizational factors such as entrepreneurial aspect, competence of human resources, innovativeness, and sustainability. Where an explanation of each variable will be described further.

2.3. Factors for Measuring Performance

2.3.1. Entrepreneurial Aspect

Entrepreneurial aspect is important because one of the critical success factors in the performance of a business organization is human behavior that will run a variety of other management aspects in that business. The research results Taormina and Lao (2007) stated that the success of a business is determined by the characteristics of the individual. Individual characteristics can be change or stable over time. Entrialgo, et al (2000) suggest that individual personality significantly influence the success of SMEs business organizations. Green, et al (1996) stated that individual characteristics such as motivation, optimism, self-efficacy, and self-management can determine the success of an entrepreneur in business management.

2.3.2. Competence of Human Resource

Competence is closely related to performance, both individual performance and the performance of organizations (companies). Competence of human resources is needed to face new challenges in the face of increasingly fierce market competition. Competence is defined as the ability to perform tasks that include workplace skills (skills) that are supported by knowledge (knowledge) and skills (abilities) in accordance with

conditions imposed. According to Armstrong (1994), individual performance is based on understanding of knowledge, skills, and behavioral skills necessary to do a good job. The survey conducted by Baldwin et al., (1995) to SMEs is growing shows that labor skills (skill labor) is an important contributor to the growth of the company.

2.4. *Innovativeness*

Thompson (1965) defines innovation as "generator, acceptance and implementation of new ideas, processes, products or services." Innovation is a key element in maintaining and improving organizational performance (Rolstadas, 1998). In this study of SMEs only covers two aspects: product creativity and technology used. Aspects of the product indicates that SMEs generate a creative product as result of their innovation, and technology used to assist the company in obtaining distinctive competencies (distinctive competence) that allows companies to produce better products than its competitors (Tidd, et el., 1997), whereas modern technology that will bring improved product quality, new product development, productivity, and efficiency (Chowdhury, 1990).

2.5. *Sustainability*

Sustainability is very important factor in measuring the performance of an SME, as it demonstrates the viability of SMEs in maintaining and developing their business. Sustainability factors include the growth and profit. Notwithstanding, there is no unified theoretical models on firm growth, due to divergence in theoretical and empirical perspectives and Interpretations, as well as the innate complexity of the phenomenon of growth itself. The situation is further compounded by the heterogeneous nature of growth, that is to say, firms can expand along different dimensions and show many different growth patterns over time (Delmar et al., 2003). Profitability Represents the ultimate goal for any organization and is the capacity to make-profit (Rolstadas, 1998). In addition to financial measures, Panayides (2006) has also used subjective measures for profitability measurement.

3. **Framework for Measuring Performance of SMEs**

3.1. *Conceptual Model*

Based on the literature review, theoretical framework built on resource-based theory in which the performance of an organization depends on the resources available internally within the organization. Therefore, researchers propose a model of the performance of SMEs (dependent variable) with the factors that affect the performance of SMEs (independent variable).

The model is formulated as in Figure 1 where there are four independent variables that affect the performance of SMEs including entrepreneurial aspect (motivation, optimism, self-efficacy, and self-management), competence of human resources (skills, knowledge, and capability), innovativeness (product creativity and technology), and sustainability (growth and profitability).

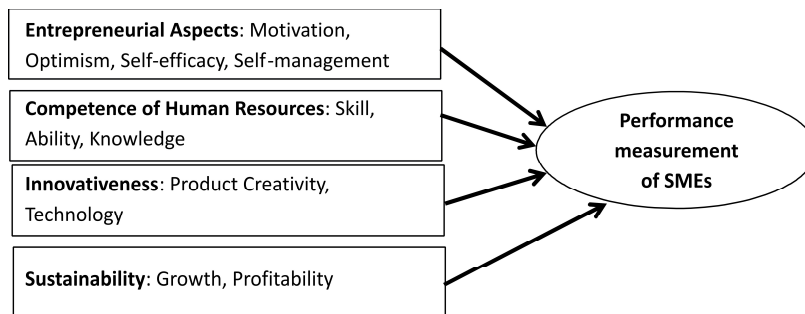


Fig. 1. Theoretical Framework

3.2. Hypothesis

This study purposed to examine the relationship between the performances of SMEs with the factors that influence it. After conducting a literature review, the researcher will propose some hypothesis based on existing constructs. There are four hypotheses to be proposed in this study which describes the relationship between the performance of SMEs and the factors that influence it. Here is a hypothesis proposed:

- H1. Entrepreneurial aspect have positive significantly impact to the performance of SMEs.
- H2. Innovativeness have positive significantly impact to the performance of SMEs.
- H3. Competence of human resource have positive significantly impact to the performance of SMEs.
- H4. Sustainability have positive significantly impact to the performance of SMEs.

4. Methodology

In this study use quantitative methods that emphasize on testing the theory by measuring the research variables with numbers and perform data analysis with statistical procedures. This research will test a conceptual model that describes the relationship between the performance of SMEs and the factors that affect the performance of SMEs.

The method used in gaining data in this study is a questionnaire with a 5 point Likert scale. This research is explanatory research because this study focused on identifying the factors that affect the performance of SMEs. Samples were selected to obtain primary data in this study is an entrepreneur (owner or manager) SMEs are located in Bandung Indonesia. Sampling technique used purposive sampling to the type of judgment sampling. The method used in this study is a survey method with a correlation technique. The variables of study include four independent variables, namely entrepreneurial aspect (X1), competence of human resource (X2), innovativeness (X3), and sustainability (X4), and the dependent variable is the performance of SMEs (Y).

The method used in gaining data in this study is a questionnaire with a 5 point Likert scale. This research is explanatory research because this study focused on identifying the factors that affect the performance of SMEs. Samples were selected to obtain primary data in this study is an entrepreneur (owner or manager) SMEs are located in Bandung Indonesia. Sampling technique used purposive sampling to the type of judgment sampling. The method used in this study is a survey method with a correlation technique. The variables of study include four independent variables, namely entrepreneurial aspect (X1), competence of human resource (X2), innovativeness (X3), and sustainability (X4), and the dependent variable is the performance of SMEs (Y).

This study uses 30 questions which 6 questions to determine the performance of the SMEs, 10 questions about the entrepreneurial aspect, 5 questions about the competence of human resources, 6 questions regarding innovativeness, and 3 inquiries regarding sustainability. For all question items used a five-point scale.

4.1. Validity

Validity test is done by measuring the correlation between variables with a total score variable. How to measure the construct validity is looking for correlations between each of the questions with a total score using the formula of product moment correlation technique, as follows:

$$r = \frac{n \sum XY - \sum X \sum Y}{\sqrt{(n \sum X^2 - (\sum X)^2)(n \sum Y^2 - (\sum Y)^2)}} \quad (1)$$

Note :

- r = Coefficient Correlation
- n = Number of sampel
- X = Score question
- Y = Total score

Question is valid if the item has a value of r count larger than the standard 0.3. Validity of the test results can be seen in the following table:

Table 1. Questionnaire Validity

Variable	Number of Item	Item	Note
Performance	6	1 – 6	Valid
Entrepreneurial Aspect	10	7 – 16	No. 14 not valid
Competence of Human Resource	6	17 - 22	Valid
Innovativeness	5	23 – 27	No. 24 not valid
Sustainability	3	28 - 30	Valid

The results showed that only 2 items questions about the entrepreneurial aspect and innovativeness not valid while the rest of testing the validity of the items count has a value of r greater than 0.3.

4.2. Reliability

Reliability of the instrument is necessary to obtain the data in accordance with objective measurements. To achieve this, the reliability test using Cronbach alpha method was measured by Cronbach alpha scale 0.6.

Table 2. Reliability Test

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
X_Perf	91,4571	90,844	,856	,618
X_ETM	74,4000	61,247	,546	,780
X_Innov	95,2571	108,726	,524	,718
X_Comp	92,1714	82,970	,596	,674
X_Sust	102,3714	121,711	,636	,744

Based on tables of testing reliability is known that all the variables have Cronbach Alpha greater than 0.6, it can be concluded that all variables in this study are reliable.

5. Result and Discussion

5.1. Respondent Data

Questionnaire was distributed to the owners and managers of SMEs in Bandung. The business was running on merchandising sector. From the 100 questionnaires distributed, the number of questionnaire returned and qualify to be processed was 35. Of the all respondent 65,71% their educational background was senior high school, 28,57% was junior high school and 5,71% was bachelor degree. The number of SMEs employees was 51,43% less than 10 employee and 2,86% more than 60 employee . The SMEs respondent majority has turnover less than 100 million (51,43%). Just 2,86% have turnover more than 1 billion.

5.2. Data Analysis

5.2.1. Multiple Regression Analysis

The coefficient of determination (R^2) is used to measure how far the regression model's ability to explain the variation of the independent variables. The coefficient of determination is between zero and one (Ghozali, 2006).

Table 3. The coefficient of determination

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,864 ^a	,747	,713	1,31397	1,990

a. Predictors: (Constant), X_Sust, X_ETM, X_Innov, X_Comp

b. Dependent Variable: X_Perf

The data showed that the high of adjusted R square is 0.713. It shows that the independent variable in this study were able to explain 71.3% variation in the performance of SMEs. While the remaining 28.1% is explained by variables or other aspects outside the model.

The result of multiple regression analysis obtained regression coefficient t value and significance level as shown in Table 4.

Table 4. Multiple regression analysis result

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3,778	2,840		1,330	,194
1 X_ETM	,244	,046	,539	5,254	,000
X_Innov	,072	,129	,063	,561	,579
X_Comp	,275	,083	,416	3,324	,002
X_Sust	,147	,301	,060	,488	,629

a. Dependent Variable: X_Perf

Based on the level of significance obtained from Table 4 above it can be seen that the significance < 0.05 is variable entrepreneurial aspect and competence of human resource. The significant variable is performed regression back between the variables the entrepreneurial aspect and competence of human resource on the performance of SMEs.

Table 5. Results of Multiple Regression Model For entrepreneurial aspect and competence of human resource on the SME Performance

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	5,501	1,794		3,066	,004
1 X_ETM	,255	,044	,562	5,824	,000
X_Comp	,317	,064	,479	4,964	,000

a. Dependent Variable: X_Perf

The results of data using SPSS program after regression performed only on the variables that affect the performance of SMEs can be obtained a regression equation as follows:

$$Y = 0.562X_1 + 0.479X_2$$

Description:

Y: SME Performance

X1: Entrepreneurial aspect

X2: Competence of human resource

5.2.2. F-Test

F test is done to test the effect of independent variables on the dependent variable simultaneously. According Kuncoro (2001) F statistics test basically shows whether all the independent variables included in the model have jointly influence on the dependent variable.

Table 6. The result of F-Test

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	152,890	4	38,223	22,138	,000 ^b
1 Residual	51,796	30	1,727		
Total	204,686	34			

a. Dependent Variable: X_Perf
 b. Predictors: (Constant), X_Sust, X_ETM, X_Innov, X_Comp

Based on the results of the ANOVA test or F-test in Table 6 obtained F count was 22.138 with a significance level of 0.000. Because the significance level of 0.000 < 0.05, it can be stated that the entrepreneurial aspect variable (X1) and the competence of human resource (X2) simultaneously affect SME performance variable (Y).

5.2.3. T-Test

To determine the significance of the effect of independent variables such as entrepreneurial aspect, competence of human resources, innovativeness, and sustainability partially on the performance of SMEs as dependent variable is the t-test. The result of t-test on the table 4. The data is used to determine of multiple regression equation.

5.3. Results

- T value for the entrepreneurial aspect variable has a significance level of 0.000 thus the value of less than 0.05. Thus, hypothesis 1 is accepted that aspect entrepreneurial have significantly positive impact to the performance of SMEs.
- T value for the variable of innovativeness has a significance level of 0.579 so that the value is more than 0.05. Thus, hypothesis 2 is rejected that the innovativeness has a significant positive impact on the performance of SMEs.
- T value for the variable of competence of human resource has a significance level of 0.002 thus the value of less than 0.05. Thus hypothesis 3 is accepted that competence of human resource has significantly positive impact to the performance of SMEs.
- T value for the variable of sustainability has a significance level of 0.629 so that the value is more than 0.05. Thus, hypothesis 4 is rejected that the sustainability has a significant positive impact on the performance of SMEs.

6. Conclusion and Implication

Based on statistic analysis, only two independent variables affect the performance of SMEs in the Bandung city. Entrepreneurial aspect influenced SMEs performance higher than competence of human resource. Meanwhile Innovativeness and sustainability does not affect the performance of SMEs. The respondent stated that they don't

design the product itself. Information technology was not needed because they still do the business traditionally. They think face to face negotiation is better. Their intention to develop the business is also low. They already feel satisfied if the business was not loss. Entrepreneurial aspect has the higher influenced because the success of business was determined by the owner characteristic.

This study was limited only examine the internal factors of the SMEs. For further research can use different methods to explore the external variables SMEs. Another suggestion for future research is to expand the research object of a larger social system to obtain a more varied sample.

References

- Armstrong, M. (2000). *Performance Management: Key Strategies and Practical Guidelines*. 2nd edn, Kogan Page Limited, London.
- Central Statistics Agency (BPS). (2011). Indonesia
- Ghozali, Imam. (2006). *Aplikasi Analisis Multivariate dengan Program SPSS*. Semarang: Badan Penerbit UNDIP.
- Hudson, M, Smart, A & Bourne, M (2001). *Theory and practice in SME performance measurement in SMEs*. Production, Planning & Control, vol 12, no 8, pp. 804-813.
- Indiarti, Nurul., dan Langenberg, Maria. (2004). *Factors Affecting Business Success among SMEs: Empirical Evidences from Indonesia*.
- Jamil, C. And Mohammed, R. (2011). *Performance Measurement System (PMS) in Small Medium Enterprises (SMEs): A Practical Modified Framework*. World Journal of Socials Vo. 1. No. 3. Pp 200-212.
- Kuncoro, Mudrajad. (2001). *Metode kuantitatif Teori dan Aplikasi untuk Bisnis dan Ekonomi*. Edisi Pertama, Yogyakarta: Unit Penerbit dan Percetakan AMP YKPN.
- Manville, G. (2006). *Implementing a balanced scorecard framework in a not for profit SME*. Journal of Productivity and Performance Management, vol.56, no.2, pp. 162-169.
- Panayides, P. (2006). *Enhancing innovation capability through relationship management and implications for performance*. European Journal of Innovation Management, Vol. 9 No. 4, pp. 466-83.
- Pfeffer, J. & G. Salancik. (1978). *The external control of organizations: a resource dependence perspective*. New York: Harper & Row.
- Samir, A. And Larso, D. (2011). *Identifikasi Faktor-faktor yang Mempengaruhi Kinerja UKM Catering di Kota Bandung*. Journal of Management Technology. Vol. 10, No. 2.
- Subrahmanya, M.H.B. (2005). *SMEs in India: will they be able to join 'Global Chains'*. The Chartered Accountant, September, pp. 421-7.
- Tambunan, T. T. H. (2006). *Development of SMEs in Indonesia from the Asia-Pacific perspective*. Jakarta: LPFE-University of Trisakti.
- Taticchi, P, Cagnazzo, L & Botarelli, M. (2008). *Performance measurement and Management for SMEs: a literature review and a reference framework for PMM design*. POMS 19th Annual Conference La Jolla, California, U.S.A, 9-12 May.
- Thompson, V. A. (1965). *Bureaucracy and Innovation*. *Administrative Science Quarterly*. 10, pp. 1-20.