

FAKTOR-FAKTOR YANG MEMPENGARUHI KELANGSUNGAN HIDUP UKM DI MANADO

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Abstract: Types of businesses keep on evolving and improving; the emergence of Small and Medium Enterprises (SMEs) proves as one of the solution for many entities to start a business with many kind of advantages. However the current status quo shows that lots of Small and Medium Enterprises failed to survive the competition which leads to the business to shut down their current operation. This research aims to analyze the determinants that affect the survival of SMEs in Manado, in this case are Human Capital, Vocational Skills, Entrepreneurial Skills and Research and Development. This study uses quantitative method with questionnaires used to collect the data, this research use Multiple Linear Regression as the tool of analysis. The samples in this research are 75 SMEs owners that already run the business for at least 6 months. The findings revealed that Human Capital and Research and Development have positive relationship but no significant influence toward the Survival of SMEs, while Vocational Skills and Entrepreneurial Skills have positive relationship and significant influence toward the Survival of SMEs. From the results, it is recommended to create a business incubator and entrepreneurial seminar in order to give better chance for SMEs to survive.

Keywords: *human capital, vocational skills, entrepreneurial skills, research and development, survival of SMEs*

Abstrak: *Jenis-jenis bisnis terus berkembang dan kemunculan bisnis kecil dan menengah menjadi alternative bagi banyak pihak untuk memulai bisnis disertai berbagai macam keuntungan. Namun keadaan sekarang menunjukkan bahwa bisnis kecil dan menengah gagal untuk bersaing sehingga banyak bisnis yang harus tutup. Studi ini bertujuan untuk menganalisa faktor yang mempengaruhi kelangsungan hidup bisnis kecil dan menengah di Manado, dalam kasus ini adalah modal manusia, keterampilan kejuruan, kemampuan wirausaha, penelitian dan pengembangan. Studi ini menggunakan metode kuantitatif dengan penyebaran kuesioner untuk mengumpulkan data, studi ini menggunakan Analisis Regresi Linear Berganda sebagai alat analisa. Sampel dari penelitian ini adalah 75 pemilik UKM yang sudah menjalankan bisnis kurang lebih 6 bulan. Studi ini menemukan bahwa modal manusia dan penelitian dan pengembangan memiliki hubungan yang positif namun tidak signifikan terhadap kelangsungan hidup UKM, sedangkan keterampilan kejuruan dan keterampilan wirausaha memiliki hubungan positif dan signifikan terhadap kelangsungan hidup UKM. Dari hasil ini maka direkomendasikan untuk membentuk incubator bisnis dan seminar kewirausahaan agar kelangsungan hidup UKM bisa terjaga.*

Kata kunci: *modal manusia, keterampilan kejuruan, kemampuan wirausaha, penelitian dan pengembangan, kelangsungan hidup UKM*

INTRODUCTION

Research Background

Small Medium Enterprises prove to be a new business that not only acts as a mere trend but it keeps increasing year by year. The number of SMEs from year 2000-2017 keeps increasing year by year. The number of SMEs in 2000 is around 39 million and on 2017 approximately around 59 million, this fact show that SMEs now keep increasing and act as one of the most favorable type of business that people want to create. With the kind of development and needs that keep increasing, it can be assure that the number of SMEs will keep on increasing in years to come.

With the efficiency and advantages of SMEs trend, it surely makes a good path for people who want to open business and pursue this new type of businesses. However the fact of SMEs having these types of advantages, it opens up opportunities for all people thus creating intense competitions from one and another. Competition in economics in this case is sellers bid against other sellers in offering goods on the market, competing for the attention and exchange resources of buyers (Heyne, Boettke and Prychitko, 2014). Considering the high growth of SMEs, it can be conclude there will be casualties in form of defunct or business that forced to close because of other superior business that also take place.

Survival of SMEs is essential because it is the main objective for the businesses, to keep it sustainable and relevant as long as possible. Sustainability in business need to be achieve because of the competition that will be faced by the business; it is generally believed that many of these SMEs do not survive their first years in business (Liu and Pang, 2015). This is a common thing because opening a new business also means finding customers that willing to buy the product, considering the numbers of established SMEs and also other emergence of new business it means that the new business need to find a way to fit in the current competition. Sustainability need to be achieved not only by the new businesses but also by the other business that already established; if this cannot be fulfilled it can impacted the business as a whole and lead into bankruptcy.

The current situation of food and beverage industry in Manado to be precise can show how the business keep on evolving in a rapid pace; which eventually caused lots of other businesses to be closed because of the competitive nature of the industry. The conditions of the SMEs especially in food and beverage industry can be categorized in 3 categories which are leading, stagnant and struggling within the competition.

Research Objective

The research objectives are:

1. To identify if human capital, vocational skills, research and development, and entrepreneurial skills affect the survival of SMEs in Manado simultaneously.
2. To identify if the human capital affect the Survival of SMEs in Manado partially.
3. To identify if the vocational skills affect the Survival of SMEs in Manado partially.
4. To identify if the entrepreneurial skills affect the Survival of SMEs in Manado partially.
5. To identify if the research and development affecting the Survival of SMEs in Manado partially

THEORETICAL REVIEW

Entrepreneurship

Yetisen et al (2015) stated that entrepreneurship is “is the process of designing, launching and running a new business, which is often initially a small business. The people who create these businesses are called entrepreneurs”. Most of the entrepreneurs are people that start the business from scratch, depending on the resources that the entrepreneurs have in the beginning. Entrepreneurship also has been describes to be capacity and willingness to develop, organize and manage a business venture along with any of its risks in order to make a profit.

Small and Medium Enterprises

Small and Medium Enterprises are businesses whose personnel numbers fall below certain limits. The abbreviation "SME" is used by international organizations such as World Bank, the United Nation, and WTO as well. The number of SMEs at the end in terms of employee are much smaller compare to bigger companies; it's because the nature of SMEs which is still going to be below the production of bigger and established companies.

Human Capital

According to Goldin (2014), human capital is “the stock of knowledge, habits, social and personality attributes, including creativity, embodied in the ability to perform labor so as to produce economic value.” Human capital can be seen as the workforce way of doing things within their works and also the tendencies that they can do in several things within their working environment. Human capital theory is closely associated with the study of human resources management as found in the practice of business administration and macroeconomics.

Vocational Skills

Vocational Skills can be describe as the type of skills that can be gain outside of the formal educational institution, the example of cooking as vocational skills that can be gain through trainings and also mentoring from other. Vocational skills can be gain through vocational education, according to ASTE (2016) vocational education is education that prepares people to work in various jobs, such as a trade, a craft, or as a technician. Vocational education is sometimes referred to as career education or technical education. A vocational school is a type of educational institution specifically designed to provide vocational education.

Entrepreneurial Skills

Entrepreneurial skills are skills needed to have to succeed in business, most especially in teaching. Entrepreneurial skills are the basic skills necessary to able to start, develop, finance and succeed in enterprise. Entrepreneurial skills are important in order to set the base of the entrepreneur with the intention of making business; in order to distinct the type of business it will need entrepreneurial skills in order to make it work. There are 5 dimensions of entrepreneurial skills, namely, leadership skills, communication skills, human relation skills, technical skills and inborn aptitude.

Business Performance

Business performance can be crucial for the business because it can act as a way to measure how well the business is currently going, the indicator of business performance can be measure through business performance management. According to Geishecker and Buytendijk (2002), business performance management is a set of performance management and analytic processes that enables the management of an organization's performance to achieve one or more pre-selected goals.

Research and Development

Research and development (R&D, R+D, or R'n'D) refers to innovative activities undertaken by corporations or governments in developing new services or products, or improving existing services or products. Research and development constitutes the first stage of development of a potential new service or the production process. Through R&D, the business can strive into 2 things which are making brand new products/services that differ from the previous or making development with obsolete products/services in order to gain positive impact in economical and business' development aspect for instance.

Research and Development

Survivability is the capability of a system or organization to withstand a disaster or hostile environment, without significant impairment of its normal operations. The business survivability as a whole is about how the business manages to stay within the competition or survive the current competitions; the fact that every time businesses keep increasing make the chance of survival of business keep getting worse.

Previous Research

Worku (2013) in analysis of factors that affect the long-term survival of small businesses in Pretoria, South Africa found that lacking in term of entrepreneurial skills, supervisory and vocational skills have severe impact toward the survival of the business. “Long-term survival and viability of small businesses were adversely affected by lack of entrepreneurial skills, lack of supervisory support to newly established businesses, and inability to operators running newly established businesses to acquire relevant vocational skills.”

Ndungu (2017) in factors affecting the successful growth and survival of Small and Micro Enterprises (SMEs) in Zimmerman Ward, Nairobi County also finds that effective entrepreneurship and also experience from the owner of SMEs which related with human capital have a big role in the survival of the business. “Sole

proprietorship played the bulk of business ownership of the SMEs and also the managers/owners have experience which plays a major part of running and survival of the enterprise. From comparisons of means, it can be inferred from the data that the use of effective entrepreneurship was the strongest defense for survival of SMEs. There is an average use of HRM practices due to low number of employees of these businesses.”

Liu and Pang (2015) in determinants of survival and growth of listed SMEs in China found that SMEs will more likely to survive for a long period of time when the R&D activity is strong within the business. “SMEs in inner and remote areas are more likely to survive, while the firms in coastal areas are more likely to grow; R&D activities have been found to influence firm survival but not growth, indicating the overwhelming problem of intellectual property protections in China”

Conceptual Framework

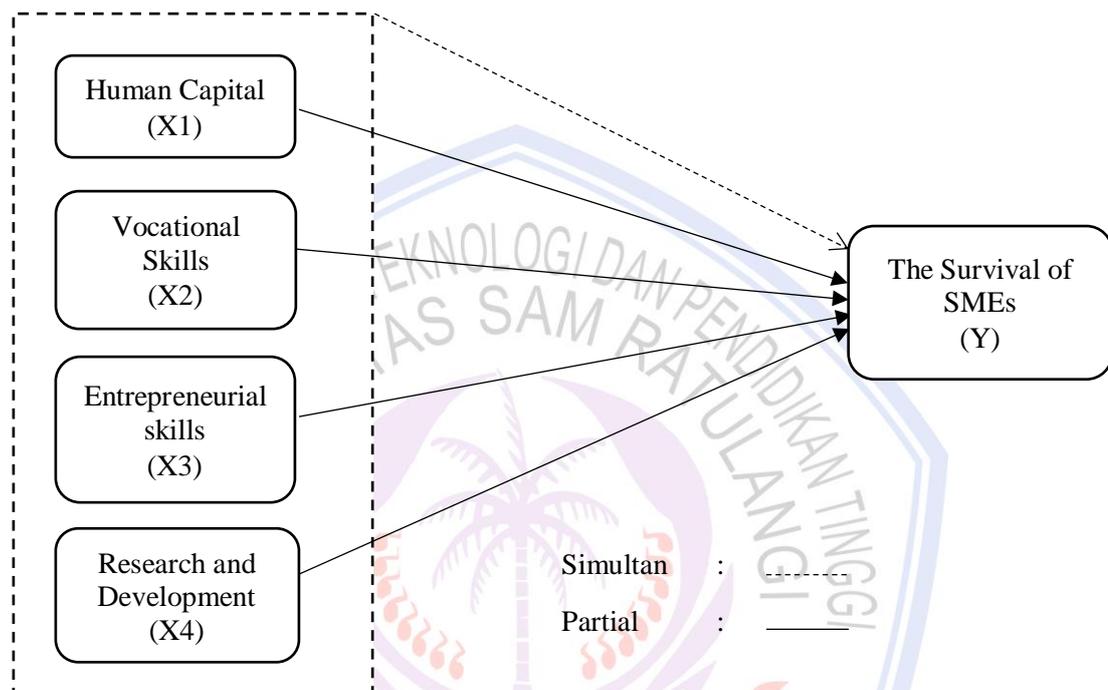


Figure 1. Conceptual Framework

Source: Data Processed, 2019

RESEARCH METHOD

Research Approach

This is a quantitative research that emphasizes objective measurements and the statistical, mathematical, or numerical analysis of data collected through polls, questionnaires, and surveys, or by manipulating pre-existing statistical data using computational techniques. Survey method used as the source of primary data by distributing questionnaire to find out the direct influence of independent variables (X) human capital, entrepreneurial skills, vocational skills, research and development on dependent variable (Y) survival of SMEs

Population, Sample, and Sampling Technique

The population of this research is SMEs listed in Manado region right now especially in food and beverage sub-sector which is 11341 SMEs. Sample is a part of the population, within research sample is divided within the current population in order to find the right entity for the research. The sample size of the research will be 75 respondents in this case SMEs owner that already have an experience of 6 months in the current business, as it will be necessary and valid because of the fact that the business manage to survive the first 6 months within the competition of SMEs environment. Sample method that can be used for this research is purposive sampling

method. Purposive sampling can be define as identifying and selecting individuals or groups of individuals that are especially knowledgeable about or experienced with a phenomenon of interest.

Data Collection Method

To collect the research data, primary data collection was used through questionnaires. A questionnaire is a research instrument consisting of a series of questions (or other type of prompts) for the purpose of gathering information from respondents.

Operational Definition of Research Variables

Table 1. Variable Definition

Variable	Definition	Indicators
Human Capital (X ₁)	Human capital, the main characteristic of owner and the influence of it within the business	- Knowledge - Habits - Social - Personality attributes
Vocational Skills (X ₂)	Vocational skills, basic set of skill that needed during the time of establishment until to date	- Practical Skills - Problem Solving
Entrepreneurial Skills (X ₃)	Entrepreneurial skills, skills related with entrepreneurship which in line with the nature of SMEs	- Leadership skills - Communication skills - Human relation skills - Technical skills - Inborn Aptitude
Research and Development (X ₄)	Research and development, the main concern about the products and the development of it within the business	- Production Process - Product Improvement
Survival of SMEs (Y)	The business survivability as a whole is about how the business manages to stay within the competition or the capability to withstand hostile business environment, without significant impairment of its normal operations.	- Firm performance - Financial performance

Source: Author's Note, 2019

Validity and Reliability

Validity test use to measure the obtaining data are in line with the research concept. In other words, the instrument items used to obtain the data is correct and related with the concept of the research that will be conducted. Reliability test use to measure the consistency of instrument items. Reliability test defined as an index that showed how far instrument items can be trusted or dependable.

Multiple Linear Regression

Multiple linear regression (MLR), also known simply as multiple regression, is a statistical technique that uses several explanatory variables to predict the outcome of a response variable. The goal of multiple linear regression (MLR) is to model the linear relationship between the explanatory (independent) variables and response (dependent) variable.

The formula of linear regression (multiple linear regressions) in general as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Description:

Y = Dependent Variable (Survival of SMEs)

X₁ = Human Capital

X₂ = Vocational Skills

X₃ = Entrepreneurial Skills

X₄ = Research and Development

A = Constant

$\beta_1, \beta_2, \beta_3, \beta_4, \& \beta_5$ = the regression coefficient of each variable

ε = Error

RESULT AND DISCUSSION**Result****Validity and Reliability**

The validity test of human capital (X1), vocational skills (X2), entrepreneurial skills (X3), research and development (X4), and survival of SMEs (Y) are greater than r_{table} 0,3 which means all the indicators are valid. The variable is reliable because the value of Cronbach's Alpha is 0,775 bigger than 0,3.

Result of Multiple Linear Regression Analysis**Table 2. Multiple Linear Regression**

Model	Coefficients ^a				
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	2.946	1.278		2.305	.024
Human Capital	.019	.067	.029	.286	.776
Vocational Skills	.355	.114	.353	3.116	.003
Entrepreneurial Skills	.197	.060	.429	3.308	.001
Research and Development	.133	.112	.130	1.187	.239

a. Dependent Variable: Survival of SMEs

Source: Data Processed (2019)

Multiple regression analysis is used to determine the effect of the independent variables on dependent variable. The multiple linear regression equation can be interpreted as follows:

1. Constant value of 2.946 means that in a condition of ceteris paribus, if all independent variables equal to zero, then Survival of SMEs (Y) as dependent variable will be 2.946.
2. X1's coefficient value of 0.019 means that if there is one unit increase in Human Capital (X1) then the Survival of SMEs (Y) will improve and increase by 0.019.
3. X2's coefficient value of 0.355 means that if there is one unit increase in Vocational Skills (X2) then the Survival of SMEs (Y) will improve and increase by 0.355.
4. X3's coefficient value of 0.197 means that if there is one unit increase in Entrepreneurial Skills (X3) then the Survival of SMEs (Y) will improve and increase by 0.197.
5. X4's coefficient value of 0.133 means that if there is one unit increase in Research and Development (X4) then the Survival of SMEs (Y) will improve and increase by 0.133.

Testing the Goodness of fit: Coefficient of Multiple Correlation (R) and Coefficient of Determination (R²)**Table 3. Result of R and R²**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.640 ^a	.410	.376	.815

a. Predictors: (Constant), Research and Development, Vocational Skills, Human Capital, Entrepreneurial Skills

Source: Data Processed, 2019

The value of R is 0.640 indicating a strong relationship between independent and dependent variable. The value of R² is 0.410 or 41%. It means that Human Capital, Vocational Skills, Entrepreneurial Skills and Research and Development are able to influence Survival of SMEs as much as 41% while the rest 59% are other factors not included in this research.

Multicollinearity

Table 4. Multicollinearity Statistics

Model		Coefficients ^a					Collinearity Statistics		
		Unstandardized Coefficients		Standardized Coefficients		T	Sig.	Tolerance	VIF
		B	Std. Error	Beta					
1	(Constant)	2.946	1.278			2.305	.024		
	Human Capital	.019	.067	.029	.286	.776	.815	1.227	
	Vocational Skills	.355	.114	.353	3.116	.003	.655	1.526	
	Entrepreneurial Skills	.197	.060	.429	3.308	.001	.501	1.994	
	Research and Development	.133	.112	.130	1.187	.239	.698	1.433	

a. Dependent Variable: Survival of SMEs

Source: Processed Data 2019

Based on the result in table 4, the VIF value of Human Capital is 1.227, Vocational Skills is 1.526, Entrepreneurial Skills is 1.994 and Research and Development is 1.433 meaning that the VIF value of each variable is less than 10. Since VIF value of each independent variable is less than 10, this research is free from multicollinearity.

Heteroscedasticity

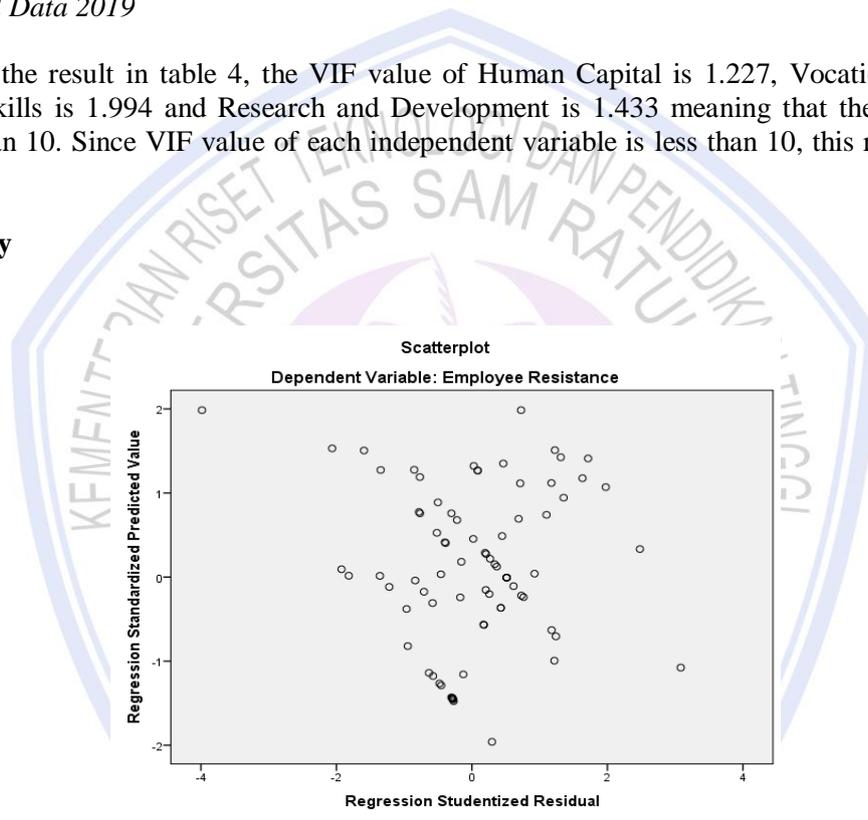


Figure 2
Heteroscedasticity Test
(Source: Data Processed, 2019)

Figure 2 shows that the dots are spreading above and below the number zero (0) in the Y axis. This proves that there is no heteroscedasticity in this regression.

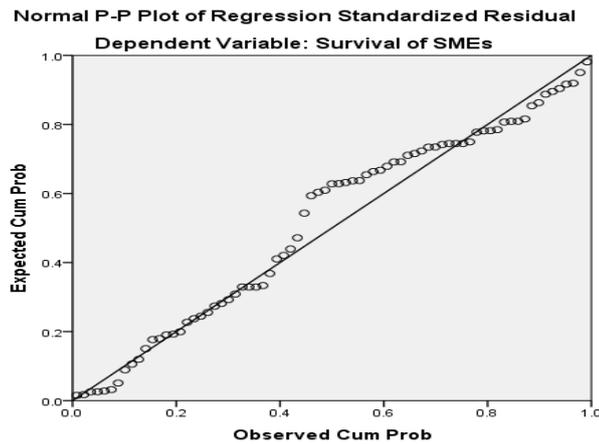
Normality

Figure 3
Normality Test

(Source: Data Processed, 2019)

Figure 3 shows that the dots are spreading near to the diagonal line and follow the direction of the diagonal line. Therefore, the normality test is accepted which means the data of this research is normally distributed.

Hypothesis Testing**F-Test****Table 5. Simultaneous Test (F-test Output)**

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	32.227	4	8.057	12.144	.000 ^b
	Residual	46.440	70	.663		
	Total	78.667	74			

a. Dependent Variable: Survival of SMEs

b. Predictors: (Constant), Research and Development, Vocational Skills, Human Capital, Entrepreneurial Skills

Source: Data Processed, 2019

Table 5 shows the value is 12.144. By determining the degree of freedom 1 (numerator) is 4 and degree of freedom 2 (denominator) is 71 with level of significance is 0.05 ($\alpha = 0.05$) and the level of confidence is 95% then F_{table} is 2.53. The result is F_{count} (12.144) > F_{table} (2.53). Therefore, since F_{count} is greater than F_{table} , Hypothesis 1 is accepted which means the independent variables simultaneously influence the dependent variable significantly.

t-test**Table 6. Partial Test (t-test Output)**

Variable	t_{count}	t_{table}	Description
Human Capital(x1)	0.286	1.669	Rejected
Vocational Skills (x2)	3.116	1.669	Accepted
Entrepreneurial skills(x3)	3.308	1.669	Accepted
Research and Development(x4)	1.187	1.669	Rejected

(Source: Data Processed, 2019)

The interpretations are:

1. The value of t-count of X1 is 0.286 with the level significant of 0.776. Since the value of $t_{count} = 0.286 < t_{table} = 1.669$ meaning that H2 is rejected.

2. The value of t-count of X2 is 3.116 with the level significant of 0.003. Since the value of $t_{\text{count}} = 3.116 > t_{\text{table}} = 1.669$ meaning that H3 is accepted.
3. The value of t-count of X3 is 3.308 with the level significant of 0.001. Since the value of $t_{\text{count}} = 3.308 > t_{\text{table}} = 1.669$ meaning that H4 is rejected.
4. The value of t-count of X4 is 1.187 with the level significant of 0.239. Since the value of $t_{\text{count}} = 1.187 < t_{\text{table}} = 1.669$ meaning that H5 is rejected.

Discussion

The independent variables are human capital, vocational skills, entrepreneurial skills, and research and development that affect the survival of SMEs as the dependent variable. Human capital and research and development have positive but not significant influence toward the Survival of SMEs. Human capital's degree of importance is much lower compare to other factors; therefore the effect is not significant. In research and development have a role in the survival of SMEs; however it is not that significant because of the type of industry. Research and development can implement its full effect within the biotechnology industry rather than food and beverage industry. Vocational skills and entrepreneurial skills have positive and significant effect toward the survival of SMEs about. Vocational skills have a big impact because it directly influence the production process within the SMEs; the better the practical skills will caused a better set of products that can be produce. In Entrepreneurial skills it has a significant impact because of the state of SMEs itself which run under the umbrella of entrepreneurship.

CONCLUSION AND RECOMMENDATION

Conclusion

1. The independent variables which are Human Capital, Vocational Skills, Entrepreneurial Skills and Research and Development simultaneously affect the Survival of SMEs in Manado.
2. Human Capital as one of independent variables partially have negative relationship and no significant effect on Survival of SMEs as dependent variable positively.
3. Vocational Skills as one of independent variables partially have positive relationship and significant effect on Survival of SMEs as dependent variable.
4. Entrepreneurial Skills as one of independent variable have positive relationship and significant effect on Survival of SMEs as dependent variable partially.
5. Research and Development as one of independent variables partially have negative relationship and no significant effects on Survival of SMEs as dependent variable.

Recommendation

SMEs especially Food and Beverage industry focus on the output of the product, which act as the main attraction to the customers. Check and balance system give a clear picture about how the business want to go in the future; if there are flaws within the business for example within the production process then it need to be fix right away. Business incubator can act as the best way for the new and the current business because it act as the "training facilities" for these businesses to improve; in term of survival the business incubator can add more specific type of skills for the ongoing business because the SMEs will be face with a real life situation of product transaction. Entrepreneurial Training or seminar can be the media for the owners to gain more input on how the business work right now; the seminar that lead by successful entrepreneurs can be a motivation for the owners of business not to only survive but also expand the current business into a new level. Considering the fact that food trends keep on evolving; the owners of SMEs can do research on the current food trends that can be implement with the current products. Adding more menus or improving the current products can be beneficial for the business to survive.

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