

FACTORS AFFECTING EFFICIENCY BUSINESS OF SMALL AND MEDIUM ENTERPRISES OF LONG AN PROVINCE, VIET NAM

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ABSTRACT: *This study examines factors affecting the efficiency business of small and medium enterprises in Long An province, Vietnam. Sample data are 4188 observations of 698 enterprises selected from 4830 active SMEs with data from 2011 to 2016. The results of the regression analysis showed that seven factors at the level of 0.05 significance. These are Turnover, Current ratio, Ratio of fixed assets to total assets, short-term Debt to total assets, Debt to equity ratio, Accounts receivable turnover, and Inventory turnover.*

KEYWORDS: Efficiency business, small and medium enterprises

INTRODUCTION

According to statistics in 2016, SMEs in Long An province have contributed more than 4,000 billion VND to the provincial state budget (only domestic revenue), creating jobs and stable income for employees, most are female employees. These businesses also supply goods and implement many social security policies. However, these enterprises face low business efficiency due to the low rate of trained workers, outdated technology, and low labor productivity. This study estimates the factors affecting SMEs' business efficiency in Long An province and from there, providing policy implications to improve SMEs' business efficiency in the province.

LITERATURE REVIEW AND RESEARCH MODEL

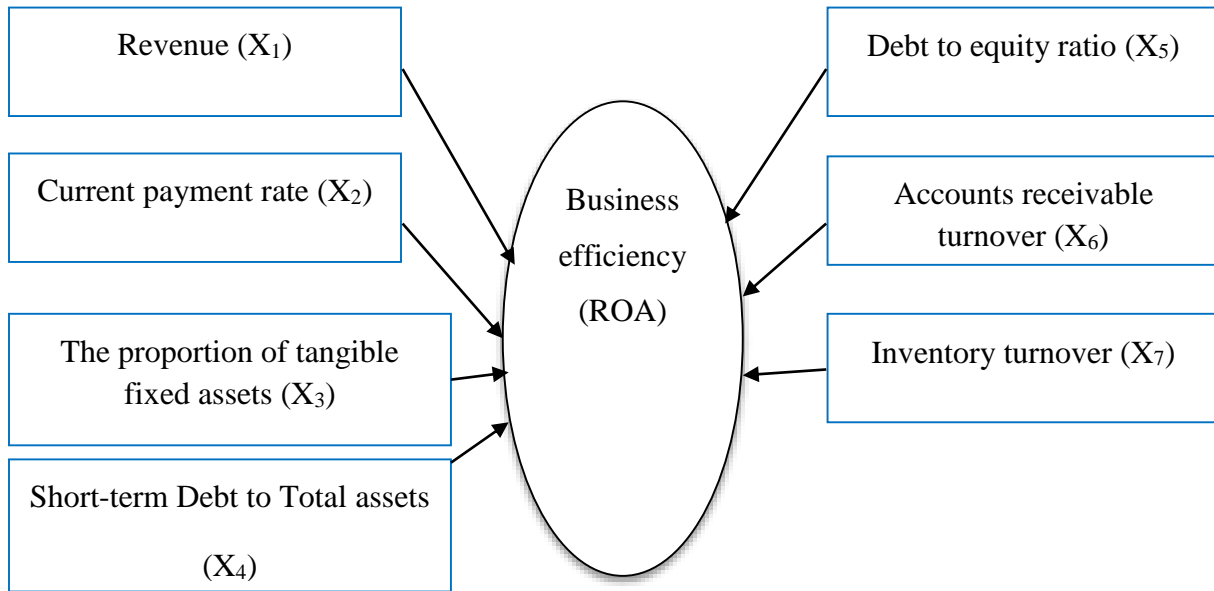
The theory for the research model is the concept of business efficiency, presented by the following scholars: Adam Smith, Ogiephric (18th century), K.Rusanop (1987), Paul A Samuellsen & W.Nordhaus (1989); Gujaratu Damondar (1998). From the business owner's perspective, business efficiency is shown by efficiency financial, reflecting the level of using resources to achieve the ultimate goal of profit. SMEs defined by size criteria indicated the number of employees participating in social insurance, total capital, and total revenue. The experimental basis for the proposed research model is the previous relevant studies, including international research papers and four domestic research papers. The practical basis is for the research paper, which is also the basis for applying research results that are SMEs in Long An province.

Table 1: Summary of researches related to business efficiency of SMEs

<i>No</i>	<i>Researcher</i>	<i>Study topic</i>	<i>Factors affecting business efficiency of enterprises</i>
1	Hyewon Youn & Zheng Gu (2010)	Factors influencing return on assets in Korean industry: An empirical investigation	<ul style="list-style-type: none"> - The ratio of income before interest - Taxes - Depreciation - Debt ratio
2	Tran Tien Dung (2018)	Factors affecting the business efficiency of real estate enterprises listed on the Ho Chi Minh City Stock Exchange	<ul style="list-style-type: none"> - Total liabilities over total assets - Short-term ratio - Business size - The proportion of tangible fixed assets - Enterprise life age - Corporate tax rate
3	Nguyen Minh Tan, VoThanh Danh và Tang Thị Ngan (2015)	Factors affecting SMEs' business efficiency in Bac Lieu province	<ul style="list-style-type: none"> - Access to supportive policy - Experience of business owners - Gender - Education level - Business size - Social relationship - Age of business - Type of business
4	Dang Ngoc Tu (2012)	Factors affecting SMEs' business efficiency on Vietnam's stock market	<ul style="list-style-type: none"> - Revenue - Current ratio - Total Debt to total equity - Receivables turnover - Inventory turnover - The age of the business
5	Nguyen Quoc Nghi & Mai Van Nam (2011)	Factors affecting SMEs' business efficiency in Can Tho city	<ul style="list-style-type: none"> - Access to support policies - The education level of the business owner - Business size - Social relationships - Revenue growth rate

(Source: Collected from studies)

Table 1 showed that there were five studies related to factors affecting the business efficiency of enterprises. Based on those mentioned above, the researchers develop a new model below (Figure 1)



(Source: The researchers' collecting and proposed)

Figure 1: Research model for Factors affecting SMEs' business efficiency in Long An province, Vietnam

Figure 1 showed that seven factors were affecting SMEs' business efficiency in Long An province. We can see the summary of hypothesis table 2 bellowed.

Table 2: Expectations sign and the basis of the hypotheses

Hypothesis	Expectations	Basis
H ₁ : Revenue (X ₁) positively correlated with rate of return on total assets (ROA)	+	<i>Afeef (2011), Dang Ngoc Tu (2012)</i>
H ₂ : The current payment rate (X ₂) positively correlated with rate of return on total assets (ROA)	+	<i>Afeef (2011), Tran Tien Dung (2018), Dang Ngoc Tu (2011)</i>
H ₃ : The Proportion of tangible fixed assets (X ₃) is inversely correlated with rate of return on total assets (ROA)	-	<i>Camelia Burja(2011), Tran Tien Dung (2018)</i>
H ₄ : The Short-term Debt to Total Assets (X ₄) is inversely correlated with rate of return on total assets (ROA)	-	<i>Camelia Burja(2011), Hyewwon Youn vaping Gu(2010)</i>
H ₅ : The Debt to equity ratio (X ₅) inversely correlated with rate of return on total assets (ROA)	-	<i>Afeef (2011), Dang Ngoc Tu (2012)</i>
H ₆ : The Accounts receivable turnover (X ₆) is positively correlated with rate of return on total assets (ROA)	+	<i>Afeef (2011), Dang Ngoc Tu (2012)</i>
H ₇ : The Inventory turnover (X ₇) positively correlated with rate of return on total assets (ROA)	+	<i>Tran Tien Dung (2018), Dang Ngoc Tu (2012)</i>

(Source: The researchers' collecting and proposed)

Table 3: Describe variables in the model

No	Variables	Measured	Explaining
1	Rate of return on total assets (ROA)	Profit after tax/Total assets	Efficient use of assets of the business
2	Revenue (X ₁)	Ln (Revenue)	The proceeds are from product sales, service provision, financial activities, and other business activities.
3	Current payment rate (X ₂)	Working Assets/Current Liabilities	Short-term debt payment capacity of the business
4	The proportion of tangible fixed assets (X ₃)	Total fixed assets/Total assets	The asset structure of the business
5	Short-term Debt to Total Assets (X ₄)	Short-term debt / Total assets	The short-term debt ratio sponsors the total assets of the business
6	Debt to equity ratio (X ₅)	Total Debt /Equity	Total Debt to equity of the business
7	Accounts receivable turnover (X ₆)	Net revenue/Receivables	Accounts receivable have to spin how many rounds in a given period to achieve sales
8	Inventory turnover (X ₇)	Cost of goods sold/Inventory	Number of inventory rotation

(Source: The researchers' collecting and proposed)

METHODS OF RESEARCH AND RESEARCH RESULTS

This research is done through two steps: qualitative research and quantitative research. Qualitative research aims to propose an appropriate quantitative model and provides implications for word management model results. The application model is a regression model.

$$Y = \beta_0 + \beta_1 X_{1i} + \dots + \beta_k X_{ki}$$

Note:

Y: dependent variable (The Rate of return on total assets)

X_i: independent variable i (Factors affecting SMEs' business efficiency)β₀: Intercept factor.β_k: Regression coefficient i (i = 1, k)

RESEARCH RESULTS**Table 4: Correlation matrix of factors affecting SMEs' business efficiency**

		X ₁	X ₂	X ₃	X ₄	X ₅	X ₆	X ₇	ROA
X ₁	Pearson Correlation	1							
	Sig. (2-tailed)								
X ₂	Pearson Correlation	-.150**	1						
	Sig. (2-tailed)	.000							
X ₃	Pearson Correlation	.045**	-.067**	1					
	Sig. (2-tailed)	.004	.000						
X ₄	Pearson Correlation	.249**	-.098**	.003	1				
	Sig. (2-tailed)	.000	.000	.870					
X ₅	Pearson Correlation	-.025	.000	.008	-.010	1			
	Sig. (2-tailed)	.109	.980	.618	.503				
X ₆	Pearson Correlation	.066**	.029	.000	-.025	.001	1		
	Sig. (2-tailed)	.000	.110	.984	.151	.949			
X ₇	Pearson Correlation	.042*	-.004	-.008	.010	.001	.020	1	
	Sig. (2-tailed)	.014	.813	.644	.541	.951	.298		
ROA	Pearson Correlation	.615**	.153	-.187	-.203	-.333	.178**	.292**	1
	Sig. (2-tailed)	.000	.001	.000	.000	.000	.000	.000	
**. Correlation is significant at the 0.01 level (2-tailed).									
*. Correlation is significant at the 0.05 level (2-tailed).									

(Source: The researchers' collecting and proposed)

Table 4 shows the correlation between the seven independent and dependent variables at significant 0.05. In it, the factor Ln (Revenue) has the highest correlation coefficient of 61.5%, and the lowest is The current payment rate coefficient of 15.3%. Besides, the correlation coefficient between the independent variables is small, there is no sign of multicollinearity.

Table 5: The summary output of factors affecting SMEs' business efficiency

Model	Unstandardized Coefficients	Standardized Coefficients	t	sig	VIF
(Constant)	2.689		2.243	.025	
X ₁	0.265	0.206	3.306	.001	1.030
X ₂	.022	.022	2.097	.009	1.015
X ₃	-.020	-.024	-2.290	.002	1.009
X ₄	-.053	-.052	-2.306	.002	1.030
X ₅	-.086	-.080	-2.064	.009	1.001
X ₆	.010	.008	9.493	.000	1.009
X ₇	.016	.010	8.925	.000	1.004
R ² Adjusted = 0,667					
Sig. F change = 0,000					

(Source: The researchers' processing SPSS 22.0)

Table 5 shows the explained by seven independent variables of the model at a significance level of 0.05. Sort 5 variables: Revenue (X_1), Current payment rate (X_2), the proportion of tangible fixed assets (X_3), Short-term Debt to Total assets (X_4), Debt to equity ratio (X_5), Accounts receivable turnover (X_6), Inventory turnover (X_7).

CONCLUSIONS AND MANAGERIAL IMPLICATIONS

Conclusions

Based on the findings of this study, the following conclusions drawn. Chi-Square testing of model suitability meets inspection standards, for conclusions:

1. *Adjusted R Square = 66,7%*: reflecting 66,7% of the change in the rate of return on total assets due to the difference of 7 factors.
2. *Besides, the results of other tests*: (1) Multicollinearity testing: VIF are all <10: there are no signs of multicollinearity. (2) The model does not violate the uniform variance hypothesis, the standard distribution hypothesis of residuals. (3) There are no signs of multicollinearity between independent variables in the model
3. *The link between research results and practice*: The magnitude and sign of coefficient beta, on the importance and manifestation of the beta coefficient: among the factors that positively affect the business efficiency, revenue has the most substantial impact. This result is consistent with corporate governance practices in SMEs in the province.
4. *Regarding the sign of coefficient beta*: consistent with the sign expectation of the hypotheses
5. *Compared to previous studies*: model results are similar to previous studies.

Managerial implications

Based on the findings and conclusions about the model, the following recommendations proposed: *Firstly, about Revenue*: SMEs in the province need to invest in production expansion, product improvement, and brand promotion to increase revenue. *Secondly, about Debt to equity ratio*: this factor has the second strong impact and is negatively correlated to SME's business performance; this recommends that SME managers determine the proper capital structure. *Thirdly, about financial indicators*: SMEs need to strengthen the inspection and control of business operations and financial management of enterprises.

Proposing the next research direction: (1) It is necessary to increase the sample size and extend the study time. (2) Expand the scope of research to other provinces so that the model tested more widely. (3) Add non-financial variables in the model.

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