USING THEORY OF CONSTRAINTS APPROACH TO PREDICT THE SUCCESS OR FAILURE OF SME'S IN MALAYSIA

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ABSTRACT

In every region, Small Medium Enterprise (SME) make a huge contribution to the gross domestic-product (GDP) and employment. However not all of the involvement of SMEs are successful. So the purpose of this research is to identify the criteria of Performance Measurement System (PMS) that can predict the failure and success in small medium-sized enterprises (SMEs) in Malaysia and develop a model to predict success and failure of SMEs in Malaysia using theory of constraints approach. Basically theory of constraint is a method to identify, analyze and also eliminate the constraints that been identified stop the firm from getting any new additional values process. Therefore, using logit regression and Statistical Package for the Social Sciences (SPSS) software will be use to analyze the data collection for this research

INTRODUCTION

- There are many challenges and risks that will be facing by them while operating and managing SME's or business.
- However, there are many factors that lead to the failure of the business.
- Different SMEs with different constraints but still have at least one constraints that will prevent from achieving the goals.

RESEACRCH OBJECTIVES

RO1: To identify the criteria on PMS that can predict success and failure of SMEs

RO2: To develop a model to predict success or failure of SME in Malaysia

RESEARCH QUESTIONS

RQ1: What are the criteria on PMS that can predict success and failure of SME's?
RQ2: How to develop a model to predict success of SME in Malaysia?

METHODS

1. Quantitative
2. Questionnaires
3. Logit Regression
4. SPSS
5. Feasibility Test

CONCEPTUAL FRAMEWORK

Independent Variables
- ❖ Identify the constraints
- ❖ Exploit the constraints
- ❖ Subordinate all above decisions
- ❖ Elevate the constraints

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Dependent Variables
Success or Failure of Small Medium Enterprise

RECOMMENDATION

This formula useful for :
1. Training center institute
2. Entrepreneur Centre
3. Banking institution

CONCLUSIONS

- The aim of this study was to identify performance measurement system and also to develop a model to predict the success and failure of SMEs in Malaysia.
- Finding from questionnaires were leading to be place in the formula on binary logic regression to develop a new model to predict the success and failure of SMEs.
- This research then discussed the limitations, suggestions to cover the limitations that emerged during the research process and provided a summary of the opportunities for future research.

RESULTS

Performance Measurement System – Theory of Constraints
1. Identify the system's constrain
2. Decide on how to exploit's the system's constrain
3. Subordinate all the above decisions
4. Elevate the system constrains
5. Back to the step one if previous steps constraints is broken and do not let the inertia become the next constraint

1. Reliability Analysis

Cronbach's Alpha	Number of items
0.834	**12**

Testing the reliability of the questions that used Likert's Scale shows that data from this research was **reliable** with Cronbach's alpha value at 0.834

2. Logit Regression using SPSS

Variable	B
IV^1	- 0.034
IV^2	-0.480
IV^3	0.502
IV^4	0.230

Summary result of Logit Regression from SPSS

$$\hat{p} = \frac{\exp(b_0 + b_1X_1 + b_2X_2 + \ldots + b_pX_p)}{1 + \exp(b_0 + b_1X_1 + b_2X_2 + \ldots + b_pX_p)}$$

Logit Regression Model (Nicolas & Tondini,2006)

Face Validity (readability) of the questionnaires have been tested through panel of experts.

3. Model to predict success or failure SME's in Malaysia

P (S/F) = $\frac{e\ (-0.034(\text{Identify the constraints}) + -0.480\ (\text{Exploit on how to improve the constraints}) + 0.502(\text{Subordinate all the above decisions}) + 0.230\ (\text{Elevate the constraints}))}{1 + e\ (-0.034(\text{Identify the constraints}) + -0.480(\text{Exploit on how to improve the constraints}) + 0.502(\text{Subordinate all the above decisions}) + 0.230\ (\text{Elevate the constraints}))}$

4. Feasibility Test on New Business

Equation on P (S/F) = $\frac{e\ (-0.034(X^1) + -0.480\ (X^2) + 0.502\ (X^3) + 0.230\ (X^4))}{1 + e\ (-0.034\ (X^1) + -0.480\ (X^2) + 0.502 * (X^3) + 0.230\ (X^4))}$

P (S/F) = $\frac{e\ (-0.034(2) + -0.480(2) + 0.502(2) + 0.230(1))}{1 + e\ (-0.034\ (2) + -0.480(2) + 0.502(2) + 0.230(1))}$

P (S/F) = $\frac{e\ 0.206}{1 + e}$

(0.206)

P (S/F) = 0.3589
≈
P (S/F) = 35.89 %