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## **FACTORS INFLUENCING TO THE APPLICATION OF BALANCED SCORECARD AMONG LISTED COMPANIES IN HO CHI MINH CITY**

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### **ABSTRACT**

*The application of management accounting in general and balanced scorecard specifically in managing companies is very critical in order to enhance management capability and assess companies' operational outcomes. This research is conducted to determine and measure factors influencing to the application of BSC among listed companies in Ho Chi Minh City. The research did analyze 147 samples of listed companies in Ho Chi Minh City, and the timeline was 3 months since 8/2017 until end of 11/2017. Research methodologies include both qualitative and quantitative. Analytical techniques include descriptive statistical, reliability test, EFA analysis, and regression analysis. There are 6 components actively influencing to the application of BSC at listed companies, and they are: company scale, management perception, business strategy, company culture, BSC operational expense, and accountants' capabilities. The result from this research demonstrates the role of BSC in measuring and assessing corporates' operational outcomes. Additionally, the research also provides solutions to managements in relation to measuring and assessing corporates' operational outcomes in order to enhance management efficiency.*

**Key words:** *Balanced Scorecard, Operational Outcome Assessment, and Strategically Implementation Tool*

### **INTRODUCTION**

Nowadays economy characterizes globalization in terms of economies and market, risks, competitiveness, incremental in terms of goods and services, technology developments and their influences in shortening products' shelf life. These factors lead to significant change in corporates (Quesado et al., 2016). In order to cope with changes, it is required that corporates need to ensure all the processes with regard to building, planning, implementing, and monitoring strategies become more flexible to retain sustainability and enhance competitiveness.

BSC is an effective and necessary tool to measure corporates' operational outcomes. Through the measurement of operational outcomes, BSC will help managements to make decision more accurate and quicker. There are several internal and external factors influencing the implementation of a successful BSC system. These factors will increase the efficiency in terms of applying the BSC in corporates or vice versa.

In Vietnam, there are several researches about BSC, but they are more specifically into applying BSC in a specific company, either corporate, or school, or bank, but the application still faces many difficulties and obstacles. BSC application is different depending on characteristics of each unit. Therefore, BSC research within corporate is essential in enhancing companies' management capabilities nowadays.



## **THEORETICAL FOUNDATION, MODEL, and RESEARCH METHODOLOGY**

### **Theoretical foundation and suggested model**

BSC is a system to transform vision and strategy into specific goals and measurements through establishing a system effectively measuring operational results based on 4 perspectives: finance, customers, internal business processes, learning and development to enhance organization capabilities and the linkage among functions and employees within organization (Kaplan & Norton, 1996).

Financial perspective of BSC consists of goals and measurements demonstrating the success of a for-profit organization (Kaplan et al., 2012). BSC still maintains financial perspective because financial measurements are very valuable in measuring what had happened in the past (Kaplan & Norton, 1996).

Customer perspective demonstrates how a company entices, retains, and enhances the relationship with target customers by creating differentiation compared with competitors. Additionally, it also reflects business strategy. Customer perspective must consist of targets and specific measurements in relation to strategies' advantages and scope. The success of this perspective will lead to the improvement of financial perspective targets in terms of revenue and profit growth (Kaplan et al., 2012).

Business internal process determines operational management, customers' management, improvement, production processes – delivering, after-sales processes. Among these factors, organization needs to achieve revenue growth, customers, and targeted profit (Kaplan et al., 2012).

Learning and development determines targets for everyone in the organization and the linkage within organization. These will eventually lead to the improvement of targets in other perspectives. Moreover, learning and development also help organizational to improve resources in relation to intangible assets, which are human resources, IT, culture, and connection within organization (Kaplan et al., 2012).

### **Factors influencing to the application of BSC:**

**Company scale:** According to Hoque & James (2000), revenue, total assets, and number of employees determine companies' scale. When revenue, total assets, and number of employees grow bigger, companies' scale will also grow bigger. Company scale is important factor that can affect to the design and usage of management systems. When companies' scale grows, accounting and auditing processes will also be more focusing and tightening. When companies develop, communication and monitoring issues increase. Therefore, companies have more possibilities applying management systems and measuring complicated operational results. BSC is a system fulfilling big corporates' requirements (Koske & Muturi, 2015). **From here, it comes to first hypothesis: The bigger the company scale is, the higher possibility the BSC will be applied in assessing operational results.**

**Management perception about BSC:** Management perception about BSC is about managements' understanding of benefits, usage, and operation of BSC within the company. As of now, Vietnam is a developing country and gradually changing to market economy recently, so companies only focus about completing the traditional financial statements. However, they do not put enough attention on analyzing techniques between traditional financial statements and non-financial statements like BSC. From management perspective, when they understand the benefits of BSC in assessing



operational outcomes, it is more likely that they will apply BSC due to BSC's benefits (Tanyi, 2011). **From here, it comes to second hypothesis: the better management understands about BSC, the higher possibility the BSC will be applied in assessing operational results.**

**Business Strategy:** business strategy helps company to determine operational direction. BSC is a tool to transform vision and strategy of an organization into specific targets and measurements. Therefore, implementing BSC will link to company business strategy. When company changes business strategy, this will lead to changing BSC implementation (Nguyen Thi Hong Hanh, 2013). **Therefore, it comes to third hypothesis: the more flexible the company business strategy is, the higher possibility the BSC will be applied in assessing operational results.**

**Company Culture:** company culture will create a framework for company demonstrating in ritual, behavior, etc. Culture is the support from management to the employees or the alignment about the company development, mutual support among employees and functions. A good culture will help company to entice talents and retain loyalty among employees. Employees will clearly understand about their roles in the company and will work toward total company goals (Nguyen Thi Hong Hanh, 2013). Therefore, when a company plans to implement BSC, a good culture will help employee to quickly adapt to new change and create good linkage among employees. **This comes to forth hypothesis: the stronger the company culture is, the higher possibility the BSC will be applied in assessing operational results.**

**BSC Operational Expense:** expense is an important factor when implementing any new systems (Koske & Muturi, 2015). Implementing BSC requires a lot of upfront investments such as installation expense, training fee, equipment expense, capital expenditure because implementing BSC needs to be at total company level from top level down to lower level. Assessing benefits/spending and risks when implementing BSC is relatively essential. Spending is one of the factors influencing the implementation of BSC in assessing operational outcomes (Koske & Muturi, 2015). **Therefore, it comes to fifth hypothesis: the lower the BSC operational expense is, the higher possibility the BSC will be applied in assessing operational results.**

**Accountants' Capabilities:** in companies, having accountants with adequate capabilities is a key factor that influences to the implementation of BSC. Though BSC was used popularly in the world for very long time, it is not popular in Vietnam. With that said, not all accountants are familiar with BSC and can be able to operate BSC. Accountants with good capabilities, knowledgeable about management accounting techniques including BSC will affect to the implementation of BSC within the company (Ismail & King, 2007). **Now, it comes to the sixth hypothesis: the higher the company accountants' capabilities is, the higher possibility the BSC will be applied in assessing operational results.**

#### **Methodology and Research Data**

Research used research methodologies including regression, qualitative, and quantitative. The research also applied descriptive statistics, EFA model, and regression.



Measurement of independent and dependent variables is designed basing on previous researches, following Likert 5.

Research sample: target samples of this research are accountants, managements of listed companies in Ho Chi Minh City. In addition to determine target samples, research also took samples based on convenient methodology within 3-month timeline starting from 8/2017 until end of 11/2017. Number of distributed survey was 180, and number of received survey was 159. After filtering, there were 147 surveys used for the research purpose, appropriate sample size following the Tabachnick and Fidell model.

## RESEARCH OUTCOMES

### Statistics of Research Samples and Descriptive Statistics of Each Observing Variable

With regard to age of targeted samples, among 147 samples, there are 21 people between 20 to 29 contributing to 14.28% of total sample; 58 people between 30 to 39 contributing to 39.46% of total sample; 56 people between 40 to 49 contributing to 38.1% of total sample; 12 people above 50 contributing 8.16% of total sample. With regard to education level, among 147 samples, there are 14 people at vocational level, contributing 9.52% of total sample; 99 people have college to university level, contributing 67.35% of total sample; 34 people with post-graduate level, contributing 23.13%. With regard to position, among 147 samples, there are 34 employees, contributing 23.13% of total sample; 52 are manager level, contributing 35.37% of total sample; 37 are director level, contributing 25.17% of total sample; 24 people have different positions such as consultants, contributing 16.33%. With regard to working experience, among 147 samples, there are 2 people with less than 2-year working experience, contributing 4.76% of total sample; 43 people with 2 to 5-year experience, contributing 29.25% of total sample; 68 people with from 5 to 10-year experience, contributing 46.26% of total sample; 29 people with more than 10-year experience, contributing 19.73% of total sample. The result of descriptive statistics of each observing variable is showed in table 1.

**Table 1: Statistical Result of Observing Variables**

Variable Code	Variable "Company Scale"	Number of Sample	Minimum	Maximum	Average
QM1	Higher revenue will increase the chance of implementing BSC in assessing operational outcomes	147	1	5	3.26
QM2	Higher total assets will increase the chance of implementing BSC in assessing operational outcomes	147	1	5	3.37
QM3	Higher number of employees will increase the chance of implementing BSC in assessing operational outcomes	147	1	5	3.13



Variable Code	Variable "Management Perception about BSC"	Number of Sample	Minimum	Maximum	Average
NT1	The higher the management values BSC benefits, the higher chance BSC will be applied in assessing operational outcomes	147	1	5	3.45
NT2	The higher the management understands BSC benefits, the higher chance BSC will be applied in assessing operational outcomes	147	1	5	3.57
NT3	The higher the management demand for BSC is, the higher chance BSC will be applied in assessing operational outcomes	147	1	5	3.69
NT4	The higher possibility the management accepts high BSC operating fee, the higher chance BSC will be applied in assessing operational outcomes	147	1	5	3.17

  

Variable Code	Variable "Business Strategy"	Number of Sample	Minimum	Maximum	Average
CL1	Company applies leading strategy about expense will increase chance of applying BSC in assessing operational outcomes	147	1	5	3.52
CL2	Company applies product differentiation strategy will increase chance of applying BSC in assessing operational outcomes	147	1	5	3.49
CL3	Company applies new product focus strategy will increase chance of applying BSC in assessing operational outcomes	147	1	5	3.28
CL4	Company applies revenue growth focus	147	1	5	3.49



will increase chance of  
applying BSC in assessing  
operational outcomes

<b>Variable Code</b>	<b>Variable “Company Culture”</b>	<b>Number of Sample</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Average</b>
<b>VH1</b>	Company with support from management to employees will increase chance of applying BSC in assessing operational outcomes	147	1	5	3.08
<b>VH2</b>	Company with mutual support between employees among functions will increase chance of applying BSC in assessing operational outcomes	147	1	5	3.12
<b>VH3</b>	Company with alignment about development will increase chance of applying BSC in assessing operational outcomes.	147	1	5	3.97

  

<b>Variable Code</b>	<b>Variable “BSC Operational Expenditure”</b>	<b>Number of Sample</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Average</b>
<b>CP1</b>	Company analyzes between cost and benefit of implementing BSC in assessing operational outcomes	147	1	5	3.30
<b>CP2</b>	Lower training fee will increase the chance of implementing BSC in assessing operational outcomes	147	1	5	3.33
<b>CP3</b>	Lower technology investment cost will increase the chance of implementing BSC in assessing operational outcomes	147	1	5	3.14
<b>CP4</b>	Lower consulting cost from experts/organizations about organizing BSC will	147	1	5	3.33



increase the chance of implementing BSC in assessing operational outcomes

Variable Code	Variable “Working effectiveness of accountants”	Number of Sample	Minimum	Maximum	Average
TD1	The higher capabilities the accountants are, the higher possibility BSC will be applied in assessing operational outcomes	147	1	5	3.15
TD2	Having accountants with knowledge about management accounting in general and BSC specifically will increase chance of applying BSC in assessing operational outcomes	147	1	5	3.23
TD3	Accountants actively participate in training courses for capabilities enhancement will increase chance of applying BSC in assessing operational outcomes	147	1	5	3.18
TD4	Accountants with professional accounting certificates will increase chance of applying BSC in assessing operational outcomes	147	1	5	3.21
TD5	Accountants with consulting capabilities for companies with regard to accounting will increase chance of applying BSC in assessing operational outcomes	147	1	5	2.97
Variable Code	Variable “BSC Application”	Number of Sample	Minimum	Maximum	Average
VD1	BSC effectively supports company in assessing financial efficiency	147	1	5	3.18
VD2	BSC supports company in completing and	147	1	5	3.01



	improving internal processes				
<b>VD3</b>	BSC supports company in enhancing human resources' capabilities through learning and development	147	1	5	3.33
<b>VD4</b>	BSC effectively supports company about customer perspective	147	1	5	3.48

In general, most of observing variables are ranked at low-moderate level, and this demonstrates that target samples recognized the importance of applying BSC at corporate level.

### Cronbach's Alpha Reliability Measurement & EFA Analysis

Cronbach's Alpha coefficients of observing variables all achieved Cronbach's Alpha and correlation coefficients. Company scale has relatively high Cronbach's Alpha, and it is 0.87. Management perception also achieved relatively high Cronbach's alpha at 0.838. Similarly, business strategy achieved Cronbach's alpha at 0.839. Company culture achieved acceptable Cronbach's alpha at 0.933. In addition to management perception and business strategy, BSC operating expense also achieved high Cronbach's alpha at 0.727. Accountants' capabilities achieved 0.895. BSC application achieved 0.668. Correlation coefficients of these coefficients are all above 0.6.

Therefore, all observing variables were brought into EFA. The result from EFA is as per expectation, and there are 6 components drawn from the third analysis. They are company scale, management perception about BSC, business strategy, company culture, BSC operating expense, and accountants' capabilities. All EFA conditions are met, KMO coefficient = 0.716 > 0.5; Sig. = 0.000 < 0.05; R square > 0.5; and cumulative of variance achieved is relatively high 71.899%, meaning that this analysis has 6 variables being able to explain the variation of the research data is 71.899%, and this variation is quite appropriate and in-line with cross data (annual investigation).

Regression formula is as per below:

$$Y = \beta_0 + X_1\beta_1 + X_2\beta_2 + X_3\beta_3 + X_4\beta_4 + X_5\beta_5 + X_6\beta_6 + e$$

in which epsilon = noise figure

**Table 2: Test the appropriateness of Model**

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std. Error of Estimate
<b>1</b>	0.708 <sup>a</sup>	0.501	<b>0.480</b>	0.139

The result shows that the model has reasonable appropriateness (R<sup>2</sup> = 0.501). Adjusted R<sup>2</sup> coefficient in the model is 0.48 meaning the regression model was appropriately built with data set at 48%. This also means that there are 48% variation in applying BSC in assessing operational outcomes of listed companies in Ho Chi Minh city being explained by 6 independent variables in the model.

The regression results are in table 3:





**Table 3: Regression Results**

Variable	Unstandardized		Standardize	T	Sig.
	Coefficients		d		
	B	Std. Error	B		
Coefficient	1.442	0.243		5.924	
Company Scale	0.114	0.021	0.328	5.452	0.000
Management Perception of BSC	0.097	0.019	0.321	5.204	0.000
Business Strategy	0.075	0.019	0.238	3.840	0.000
Company Culture	0.080	0.016	0.309	5.132	0.000
BSC Operational Expense	0.089	0.033	0.164	2.686	0.000
Accountants' Capabilities	0.174	0.027	0.386	6.356	

Looking at table 3, the coefficients Sig of all 6 independent variables are all less than 5%, and coefficient VIF is very low (<2). This proves the multicollinearity phenomenon not happening with independent variables.

**Company scale has active influence to the BSC application:** looking at the regression result table, with Sig. = 0.000 (<0.05), has relationship between company scale with BSC application. First hypothesis is accepted, meaning company scale has active influence to the BSC application. The result is in-line with previous researches locally and internationally such as Hoque & James (2000), Quesado et al. (2016), Koske & Muturi (2015), Tran Ngoc Hung (2016). When companies have huge scale like listed companies, they generally have high and potential economy plus complicated and demanding management. Therefore, they will need solutions to enhance the efficiency of their operations. With that said, a system like BSC will fulfill the demand in terms of managing and assessing operational outcomes of big scale companies. As a result of these reasons, company scale and BSC application assessing operational outcomes have very close relationship.

**Management perception about BSC has positive relationship with BSC application:** looking at the regression result table, with Sig. = 0.000 (<0.05), has relationship with BSC application. Second hypothesis is accepted, and this result is also in-line with previous researches of Tanyi (2011) and Tran Ngoc Hung (2016). Listed companies tend to have complex structure, and this creates difficulty in assessing operational outcomes. Thus, the need for applying BSC system is necessary. Higher understanding and valuing BSC system will make the BSC application in assessing operational outcomes more applicable.

**Business strategy has positive relationship with BSC application:** from regression result, with Sig. = 0.000 (<0.05), has positive relationship with BSC application. Third hypothesis is accepted. This factor will only influence to the BSC application when companies follow strategies such as cost-focus, product differentiation, revenue-growth



focus, or new product concentration. The result is in-line with researches of Tran Ngoc Hung (2016) and Nguyen Thi Hong Hanh (2013). Clearly, when business strategy changes, the BSC system needs to be flexibly changed to cope with the demand of assessing operational outcomes since every strategy has different characteristics.

**Company culture has positive relationship with BSC application:** with Sig. = 0.000 (<0.05), has positive relationship with BSC application following the principle that company has the supports from managements, employees, or has the alignment for total company developments. This result is in-line with researches of Tran Ngoc Hung (2016) and Nguyen Thi Hong Hanh (2013). When applying new system specifically BSC, it is required to have the alignment and consensus from employees in order to create motivation to overcome difficulties. Moreover, with the supports from top managements will make employees feel confident when using a complicated and new system like BSC.

**BSC operational expense has active influence to the application of BSC:** with Sig. = 0.000 (<0.05), has positive relationship with BSC application. Fifth hypothesis is accepted. Company needs to do cost-benefit analysis when implementing BSC, or switching cost, technology investment, consulting fee. As long as company makes these fees as lowest as possible, this will result in higher chance of company being able to apply BSC in assessing operational outcomes. Again, this result is in-line with researches of Koske & Muturi (2015), Tran Ngoc Hung (2016), Dao Khanh Tri (2015). Applying BSC requires relatively high operating expense to operate. Therefore, lowering the cost as much as possible will help the BSC application more applicable.

**Accountants' capabilities has active influence to the application of BSC:** with Sig. = 0.000 (<0.05), has positive relationship with BSC application. Sixth hypothesis is accepted. When accountants have high capabilities, knowledge about BSC, often participate in courses for capabilities enhancement, has professional accounting certificates, are capable of consulting companies about accounting matters, will make the application of BSC system in assessing operational outcomes applicable. This is in-line with research from Dao Khanh Tri (2015). Accountants with high capabilities will know and understand models for operational outcomes' assessment like BSC, and this will result in easier BSC application.

## **CONCLUSIONS AND SUGGESTIONS:**

### **Conclusions**

The purpose of this research is to understand and determine factors influencing to the application of BSC, measuring the influence of each factor to the application of BSC in listed companies in Ho Chi Minh City. Collecting samples followed the convenient methodology, while number of qualified surveys brought into the analysis was 147.

With regard to research methodology, research contributed to the establishment of measurement for factors influencing to the application of BSC in listed companies in Ho Chi Minh City.

With regard to research outcomes, it is proven that all factors have positive influence to the application of BSC in listed companies in Ho Chi Minh City. The result is in-line with



previous researches. From the outcome of this research, it will help to provide suggestions about managing and assessing companies' operational outcomes, specifically in improving factors like scale, management perception, and BSC operational expenditure. Employees' capabilities and company culture in enhancing the application of BSC at listed companies are very critical.

### **Suggestions**

Listed companies in Ho Chi Minh City are companies with relatively big scale, relatively complicated organizational structure and accounting system. With that said, it is required to have a system like BSC to help with assessing the operating outcomes most effectively. Listed companies need to structure their functions clearly with separated and clear roles and responsibilities. This will help to easily assess operating outcomes of each function and also get alignments from employees. More importantly, this will create motivation for employees to work better.

Enhancing management realization of BSC is necessary because when management understands BSC benefits, management will be more likely to support and accept BSC application, even when it is required to spend a hefty sum of spending for operating the system.

Listed companies in Ho Chi Minh City need to reasonably invest in building and operating BSC system. Companies need to do cost-benefit analysis to avoid wasting resources. BSC operating expenditure consists of human resources, initial investments for technology and equipment, and consulting fee.

Listed companies tend to have flexible business strategy to maintain competitive advantage. Therefore, BSC system also needs to be flexibly changed in order to help managements to have useful information to make decision in changing and dynamic business environment.

Corporates need to build a good culture, supporting employees from managements or having alignment about total company developments, and having mutual support from employees among functions. These will help to increase chance of BSC application in assessing operating goals. When applying BSC in assessing operating goals, it is essential to have support from either managements or employees because this will help to make everyone in the company feel more confident to apply new system without being stressful and hesitation.



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