# Management factors affecting the use of dumb scorecard by: Research on Vietnamese retail enterprises

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## Abstract

The article analyzes the impact of management factors affecting the use of dumb scorecard by : Studying Vietnamese retail enterprises, providing more empirical evidence on management factors affecting the application of the balanced scorecard. The research method uses a questionnaire survey of managers, chief accountants, and accountants in retail businesses. Research results show that the management control system is using, the manager's ability to receive new knowledge, the way to evaluate the subordinates of the manager, and the perception of the usefulness of the balanced scorecard. Managers' perception of ease of use of the balanced scorecard has a positive effect on the use of the balanced scorecard in Vietnamese retail businesses. Based on the research results, the author has proposed recommendations to improve the ability to apply the balanced scorecard in Vietnamese retail businesses.

**Keywords**: management factors, balanced scorecard, Vietnamese retail enterprises.

## 1. Introduction

The Balanced Scorecard (BSC) is a method of translating an organization's vision and strategy into specific goals and metrics through the establishment of a performance evaluation system. operating in four dimensions: financial, customer, internal processes, and learning and growth. According to statistics of the American BSC Association, currently 70% of the world's 1000 largest enterprises (as voted by Fortune magazine) have applied BSC to strategic management (Kaplan, 2004). rated as one of the 75 most effective inventions on corporate governance (Niven, 2009).

Online retailing is opening up new opportunities for businesses in the industry. Grasping the trend, retail businesses are gradually upgrading their systems, approaching the most convenient delivery and payment methods, better meeting people's needs in online shopping. Supermarket systems proactively connect with manufacturers and suppliers to ensure the source of goods, offer many response scenarios to avoid supply chain disruptions when the Covid-19 epidemic develops complicatedly

The purpose of this study is to analyze the impact of management factors on the application of the balanced scorecard in Vietnamese retail enterprises, thereby making some recommendations to improve the application of the balanced scorecard. balanced scorecard in retail enterprises in Vietnam.

## 2. Literature Review

The balanced scorecard is an effective strategic control and measurement tool for achieving desired strategic objectives (Murby and Gould, 2005). The factors influence the balanced scorecard adoption can be the organizational or individual levels. The purpose of the balanced scorecard is to communicate a company's strategy to employees and support its implementation (Kaplan et al., 2007; Terziev and Georgiev, 2017). So, organizational factors such as capital ownership form, degree of vertical differentiation, decentralization, standardization, organizational culture, qualifications of managers and employees, etc., can affect the balanced scorecard usage. However, the level of scorecard usage is not equally balanced among managers (Hartwick and Barki, 1994). Managers may be more concerned with whether the company's decisions are aligned with the organizational strategy (Wiersma, 2009). The manager is an important factor in adopting successful improvements in the organization including the balanced scorecard adoption (Shutibhinyo, 2013). Therefore, this study focuses on the management factors affecting the application of the balanced scorecard.

• The existing management control system

Different control mechanisms which co-exist within an organization tend to influence managers' balanced scorecard usage (Merchant, 1998). Organizations all use control systems such as outcome control (Sandelin, 2008), behavioral control, and personal/cultural control, so employees are affected by this control system (Merchant, 1998; Wiersma, 2009). Each control tool has certain limitations and can be interchanged (Kaplan et al., 2001). Managers can use personal control systems, and cultural control systems instead of results control systems. As a result, the use of the balanced scorecard may be affected.

• Manager's ability to access new knowledge

An principal condition for implementing a system is the individual ability and motivation to accept a system. For employees to appreciate the value of a system, an organization must ensure they are ready to use the system and facilitate the proper use of the balanced scorecard (Islam et al., 2014). Potential users need to understand the underlying technology and issues related to systems and applications (Nambisan and Yu-Ming, 1999; Goyal, 2012). Thus, managers' ability to absorb new knowledge influences their decisions about the balanced scorecard adoption (Rogers and Shoemaker, 1971; Islam et al., 2014). Managers who are more creative and open to new ideas are more likely to use information using the balanced scorecard (Baird et al., 2004; Wiersman, 2009).

• Subordinate evaluation of managers

The way managers evaluate subordinates can also motivate them to use the balanced scorecard (Otley and Fakiolas, 2000). How they evaluate the manner they use the management control system. As a result, managers with a rigid evaluation style may have trouble using the balanced scorecard. In addition, the balanced scorecard includes a large number of performance measures, but the evaluator often has the discretion to assign weights to the performance measures subjectively (Ittner et al., 2003; Kaplan and Norton, 1996).

• Perceived usefulness and ease of use of Balanced Scorecard

Davis's TAM model (1989) suggested that perceived usefulness and ease of use have a decisive influence on the adoption of new technology. In addition, greater ease of use reinforces a positive perception of usefulness (Venkatesh and Davis, 2000). Lipe and Salterio (2002) describe the balanced scorecard as a structural mechanism that simplifies and guides information processing. The structure of a balanced scorecard enables the usage of a divide-and-conquer approach to simplify evaluation task performance against a large number of performance measures (Shanteau, 1988). That will be guided by the balanced scorecard structure (Lipe and Salterio, 2002). Roberts et al. (2004) demonstrated that perceived subjectivity may lead to the rejection of the balanced scorecard. The empirical study of Islam et al. (2014) shows that these two factors have a significant impact on managers' balanced scorecard usage. When managers find that the balanced scorecard is useful in performance assessment, and useful in controlling, managing, and implementing

strategy, they will use it (Shutibhinyo, 2014). Senior managers have very little time to learn how to use it, so when they perceive the usefulness and ease of the balanced scorecard, they will use it more.

## 3. Research methods and models

3.1. Research method

Research method used includes survey through questionnaires, survey subjects include business managers, chief accountants, accountants. Applying the balanced scorecard, The control system managers are using, The manager's ability to receive new knowledge, The way to evaluate the subordinates of the manager, Perceiving the usefulness of the balanced scorecard Levels by managers, Managers' perceived ease of use of the balanced scorecard is measured on a five-point Likert scale Very good, good, average, not very good, poor. The 5-level Likert scale is familiarly used in many studies, so the author also quantifies each factor according to five levels. After the survey results are available, the data is processed by statistical methods to determine the weight and frequency of the selected factors, the qualitative survey results about the factors affecting the independence of the control, and the results of the qualitative survey. As an accountant, processing data on SPSS statistics 25 software, analyzing the reliability of factors as well as factor measurement criteria, and applying statistical methods to synthesize and compare to estimate The impact of factors on the independence of the auditor.

The scope of research is Vietnamese retail enterprises. Research data were collected in the form of face-to-face interviews and email interviews. The survey results obtained 306 questionnaires. After eliminating the invalid questionnaires due to many blank cells, the author chose to use 276 questionnaires.

3.2. Research model and research hypothesis

From the research overview, the proposed research model is as follows:

$$BSA = \beta 1 + \beta 2 \times MSC + \beta 3 \times ANK + \beta 4 \times ESB ++ \beta 5 \times PUB + \beta 6 \times PEB + E$$

Assessing the impact of management factors on the application of the balanced scorecard: Researching Vietnamese retail enterprises, the study uses 5 detailed hypotheses as follows:

Hypothesis 1: The control system that managers are using has a positive impact on the application of the balanced scorecard in Vietnamese retail enterprises

Hypothesis 2: The ability of managers to absorb new knowledge has a positive effect. has a positive impact on the application of the balanced scorecard in Vietnamese retail businesses

Hypothesis 3: The way managers evaluate subordinates has a positive impact on the application of the balanced scorecard in retail businesses. Retail Vietnam

Hypothesis 4: Perceived usefulness of the balanced scorecard by managers has a positive impact on the application of the balanced scorecard in Vietnamese retail businesses

Hypothesis 5 : Managers' perception of ease of use of the balanced scorecard has a positive impact on the application of the balanced scorecard in Vietnamese retail businesses

## 4. Research results

4.1. Testing the scale

The results of evaluating the reliability of the scale by Cronbach's Alpha show that the scales have a reliability greater than 0.6 and the correlation coefficient of the total variable is greater than 0.3. All scales satisfy the conditions for EFA exploratory factor analysis. The reliability of the scales is summed up in the table below.

Table 1: Scale test results

| No. | Variable names | Symbol | Number of observed variables | Cronbach's Alpha | Smallest Total variable correlation coefficient |
|---|---|---|---|---|---|
| 1 | Apply balanced scorecard | BSA | 3 | 0.759 | 0.575 |
| 2 | Control system is working using | MSC | 5 | 0.804 | 0.502 |
| 3 | Manager 's ability to absorb new knowledge | ANK | 3 | 0.705 | 0.405 |
| 4 | Manager's way of evaluating subordinates | ESB | 4 | 0.690 | 0.423 |
| 5 | Realizing the usefulness of the balanced scorecard bymanager | PUB | 4 | 0.792 | 0.527 |
| 6 | Manager's perceived ease of use of the balanced | PEB | 3 | 0.698 | 0.484 |

4.2. EFA exploratory factor analysis

Factor analysis was performed with Principle Component extraction, Varimax rotation for the dependent observed variable. The results show that the coefficient KMO = 0.898 (condition > 0.5); Significance level and Barlett test = 0.000 (meet condition < 0.05) show that EFA analysis is appropriate. The total variance extracted is 60.612% > 50%; and factor loading factors are all greater than 0.5, so they are satisfactory. The official scale after EFA processing includes 5 independent variables with 19 observed variables as proposed.

Table 2. Results of EFA analysis

| Rotation matrix table | | | | | |
|---|---|---|---|---|---|
| | Factor | | | | |
| | 1 | 2 | 3 | 4 | 5 |
| MSC2 | 0.753 | | | | |
| MSC4 | 0.740 | | | | |
| MSC3 | 0.702 | | | | |
| MSC5 | 0.629 | | | | |
| MSC1 | 0.509 | | | | |
| PUB2 | | 0.759 | | | |
| PUB3 | | 0.682 | | | |
| PUB4 | | 0.668 | | | |
| PUB1 | | 0.660 | | | |
| ESB2 | | | 0.740 | | |
| ESB1 | | | 0.725 | | |

| | | | | | |
|---|---|---|---|---|---|
| ESB3 | | | 0.684 | | |
| ESB4 | | | 0.569 | | |
| PEB2 | | | | 0.787 | |
| PEB1 | | | | 0.723 | |
| PEB3 | | | | 0.518 | |
| ANK3 | | | | | 0.806 |
| ANK1 | | | | | 0.600 |
| ANK2 | | | | | 0.574 |

4.3. Regression analysis

Table 3. Statistical results of factors

| | Model summary | | | | |
|---|---|---|---|---|---|
| Model | R | R squared | R squared | Estimated error of standard deviation | Durbin coefficient - Watso |
| 1 | 0.747[a] | 0.558 | 0.550 | 0.52114 | 1.923 |
| a. Predictors: (Constant), PEB, ESB, MSC, ANK, PUB | | | | | |
| b. Dependent Variable: BSA | | | | | |

R squared is 0.558 greater than 0.5: the model is significant, 5 variables included in the model explain 55.8% of the change of the dependent variable, the rest is due to out-of-model variables and errors. random.

Durbin - Watson coefficient < 2: there is no first order series autocorrelation in the model.

In order to check whether this regression model is suitable for the collected data set and has application significance, the author continues to test the model's fit through ANOVA test as follows

Test 4: Suitability test (ANOVA model)

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 92.482 | 5 | 18.496 | 68.104 | 0.000[b] |
| | Residual | 73,329 | 270 | 0.272 | | |
| | Total | 165.812 | 275 | | | |

The model's F-statistic has a Sig value. = 0.000 < 0.05 shows that the model fits the data set and can be generalized. VIF coefficients are all less than 2, so there is no multicollinearity

between components that do not appear in the research model.

Regression results show the extent of influence of management factors on the

application of the balanced scorecard: Research on Vietnamese retail enterprises is shown in the table below:

Table 5. Results multiple regression

| | Model | Unnormalized coefficient | | Standardized Coefficients | t | Sig. | Multicollinear Statistics | |
|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | -0.369 | 0.242 | | -1.525 | 0.128 | | |
| | MSC | 0.187 | 0.062 | 3.014 | 0.165 | 0.003 | 0.547 | 1.830 |
| | ANK | 0.168 | 0.056 | 0.162 | 3.019 | 0.003 | 0.570 | 1.754 |
| | ESB | 0.195 | 0.058 | 0.159 | 3.388 | 0.001 | 0.744 | 1.343 |
| | PUB | 0.304 | 0.057 | 0.291 | 5.311 | 0.000 | 0.546 | 1.831 |
| | PEB | 0.245 | 0.064 | 0.195 | 3.837 | 0.000 | 0.636 | 1.573 |

The sig test value for each independent variable < 0.05: all variables are significant in the model.

Beta coefficients are all positive: all variables have the same effect on the dependent variable

The regression model is written as follows:

BSA = -0.369 + 0.165MSC + 0.162ANK + 0.159ESB + 0.291PUB + 0.195PEB + E

VIF coefficients are all < 2: no multicollinearity occurs.

Figure 1. Frequency histogram
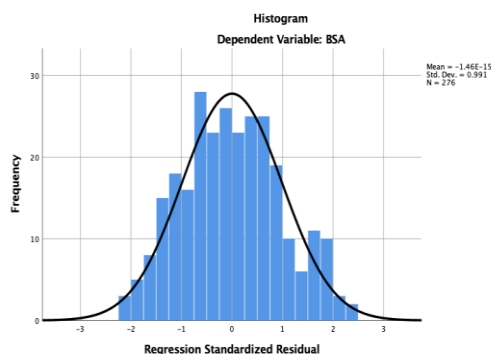


## 5. Discussion and recommendations

Based on the results of quantitative research on management factors affecting the use of dumb scorecards by: Studying Vietnamese retail enterprises, some conclusions can be drawn.following conclusions:

The multiple linear regression equation extracted by the standardized Beta coefficient shows that the standardized Beta coefficients of the factors are: The management control system in use (0.165), The ability to continue to perceived new knowledge by managers (0.162), How to evaluate subordinates by managers (0.159), Perceived usefulness of the balanced scorecard by managers (0.291), Perceived ease of use of manager's balanced scorecard (0.195). In which, the management's perception of the usefulness of the balanced scorecard is the factor that has the greatest impact on the use of the balanced scorecard in Vietnamese retail businesses.

From the research results Management factors affecting the use of dumb scorecard by: Researching Vietnamese retail enterprises, the author makes some recommendations to improve the ability to use scorecard. The balance sheet in Vietnamese retail businesses is as follows:

Managers' perception of the usefulness of the balanced scorecard is the factor that has the strongest impact on the use of the balanced scorecard in Vietnamese retail businesses. . The benefits that the Balanced Scorecard brings to businesses include: The Balanced Scorecard is

used to evaluate the performance of businesses, to help businesses control, manage, and implement strategies. thereby improving the operational efficiency of the business. Vietnamese retail business managers need to believe in the value and necessity of performance management and evaluation to successfully use the balanced scorecard. In addition, in order to improve the ability to apply the balanced scorecard, managers need to improve the control system that managers are using, the ability to receive new knowledge of managers, and the method of assessment. Managers' subordinates, Perceived ease of use of the balanced scorecard.

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