

Factors affecting to the application of balanced scorecard in Vietnamese hospitality firms

Thi Kim Yen Pham^a and Duc Cuong Pham^{b*}

^aFaculty of Economics, Vinh University, Vietnam

^bSchool of Accounting and Auditing, National Economics University, Vietnam

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ABSTRACT

Applying Roger's Theory of Diffusion Innovation (1962) and Davis's Model of Technology Acceptance (1986) [Davis, F.D. (1986). A technology acceptance model for empirically testing new end user information systems: theory and results. *Doctoral dissertation*. Cambridge, MA: Massachusetts Institute of Technology.], this study examines the factors that influence the decision-making of the enterprises in application of balanced scorecard (BSC) in Vietnamese hospitality firms. An analysis of 315 hotel managers indicates that managers' perceptions of usefulness and ability to acquire new knowledge significantly influence the decision to use the balanced scorecard in Vietnamese hospitality firms. The paper contributes lessons to literature and some valuable experiences of the BSC application to reality for not only firms in Vietnam but also the other business units in other countries.

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1. Introduction

The Balanced Scorecard (BSC) has been extensively used in countries around the world, including Vietnam, because it effectively combines financial and non-financial measures for management control and performance evaluation (Kaplan & Norton, 1992; Hoque & James, 2000; Evans, 2005). The BSC allows managers to look at four different important perspectives: finance, customers, internal business processes, learning and growth (Kaplan & Norton, 1996). It also provides managers with a more balanced view of the overall performance of the organization, helps leaders manage and evaluate performance, and implement the strategy in a truly complete and comprehensive manner. It also links short-term activities with the organization's long-term strategies and vision. Especially the BSC has been used widely in the service sector. Harris and Mongiello (2001) and Doran et al. (2002) examined a number of key indicators that hotel managers found helpful in managing recognition of BSC values. Many other studies on hospitality firms in various countries have been accomplished and report many lessons, for instance Evan (2005) for the UK; Chen et. al (2011) for China; Bergin-Seers and Jago (2007) for Australia, etc. However, the numbers of hotels applying the BSC in Vietnam is still very low, thus the research on the BSC in Vietnam is quite modest. The objective of this study is not just to cover all aspects of the BSC

* Corresponding author.

E-mail address: cuongpd@neu.edu.vn (D. C. Pham)

but will focus on determining the managerial factors influencing the decisions to apply the BSC in Vietnamese hospitality firms.

2. Theoretical framework and hypothesis

2.1 Theoretical framework involved the BSC application

Based on the research objective, we apply the Stakeholder Theory, the Theory of Innovations by Rogers (1962) and Technology Acceptance Model by Davis's (1986). The following sections briefly describe those theoretical frameworks. Stakeholder theory was initiated in Freeman's (2010) study named "A Stakeholder Approach". This is the theory of corporate governance and business ethics. According to Freeman (2010), stakeholders are any group or individual that can influence or be affected by achieving organizational goals. This definition is modified in Freeman (2004) in that the stakeholders consist of very important groups for the survival and success of organizations. The main groups of stakeholders are: customers, employees, local communities, suppliers, distributors, shareholders. In addition, other groups and individuals are considered as stakeholders such as previous generations (founders of the organization), competitors, union representatives or trade associations, creditors, government, regulators, policymakers, etc. (Friedman & Miles, 2006). From an organizational point of view, businesses have a duty to treat all stakeholders equally, from a managerial point of view, to assess the importance of meeting the needs of stakeholders, and strategic objectives of the enterprise. Consequently, the theory of stakeholders is used to explain the reasons behind the use of not only financial indicators but also non-financial measures for performance evaluation in firms and organizations. That can be the reason for the current trend of application of the BSC. According to Rogers (1962), three factors affect the decision of choosing one management system like the BSC by an organization including: (1) personal characteristics of the manager- the commitment and support to implement an innovation; (2) Organizational characteristics- the important implications for the spread and implementation of new ideas and plans. An organization that connects, shares, communicates, among good departments is conducive to the diffusion of innovations and vice versa; (3) The external characteristics, that is, beside the internal characteristics of the organization, external characteristics also have a significant impact on the acceptance of innovation, for instance, the highly competitive environments might lead firms to apply new initiatives like the BSC. Applying this theory, the study investigates the factors that influence to the firms' managers in relation to the application of the BSC. The Technological Acceptance Model (TAM) was introduced by Davis in 1986. TAM has undergone some changes since it was built. The original TAM proposed by Davis (1986) outlines three factors that affect the adoption of technology, including: the perceived usefulness of the technology, the perception of ease of technology application, and the attitude of the user for use (See Fig.1).

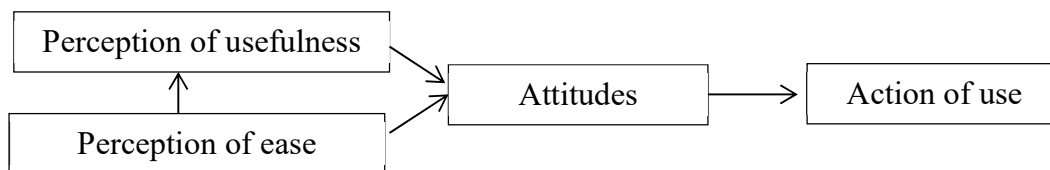


Fig. 1. Technology Acceptance Model (Davis, 1986)

The Technology Acceptance Model (TAM) is a widely used theory in the study of adoption of new technology. This model is also useful in behavioral studies for general acceptance (Bui Thi Hai Van, 2009). The author uses the modified TAM in 1996 to study the factors influencing the decision of using the BSC. Applying this model, the author took into account the effects of perception on usefulness and perceptions of the ease of the BSC application in the research model. According to Davis, those are two main factors that influence decisive behavior. Based on the literature review of previous studies, our paper proposes five factors that affect the decision to implement the BSC in hospitality firms in Vietnamese context. These factors include: (1) the management control system which is being used in the

firms; (2) the managers' ability to acquire new knowledge; (3) the managers' methods applying to evaluate subordinates; (4) the perception of the usefulness of the BSC; and (5) the ease of use of the BSC perceived by the managers. The detailed discussion for these factors are presented in the following sections.

2.2. The research hypothesis

2.2.1 The management control system being used in firms

Up to date, the balanced scorecard has been described in a variety of ways. The BSC is believed differently, including a performance management system; a management information system; a strategic management system, or a management control system. Otley (1999) argues that most organizations use a management control system and the BSC is a management control tool. It has been said that employees are affected by the organization's control system via behavioral control, personal control, and cultural control. Controlling people behaviors is defined as the rules and procedures to guide the actions of employees to achieve specific desired outcomes, to control on selecting employees when recruiting to achieve high performance and to control the culture to build an ethical organization. According to Sandelin (2008), the BSC is a control system for results and is used in conjunction with other management tools such as behavioral control systems, personal control, and culture control. Thus,

H₁: The implementation of control management systems, including behavioral control, personal control, cultural control positively influence the utilization of the BSC.

2.2.2. The managers' ability to receive new knowledge

According to Wiersman (2009), managers who are capable of receiving knowledge from the new accounting information system will be more likely to use the BSC. Baird et al. (2004) argued that managers who are more creative and open minded with new ideas will more easily to accept new accounting management systems such as the BSC. Moreover, Baird et al. (2004) also documented that firm's creative manager firm in turn could build the creative culture for their environment. As a result, the firm will have quick approval for new management system, like the BSC. Thus,

H₂: The ability of the manager to absorb new knowledge has a positive influence on the intention of the BSC application.

2.2.3. The managers' methods applying to evaluate subordinates

According to Otley and Pollanen (2000), the manner of which managers use to evaluate subordinates will influence on the extent and level of firms' management control system. When managers have a rigid evaluation approach, they might have problems with BSCs because this system presents a lot of information and it is difficult to aggregate them in a benchmark. On the contrary, when using BSCs in addition to financial measures, managers can also measure on the basis of non-financial measures. Consequently, the managers' assessment influences the way of BSC application. Managers who value non-financial information are expected to use more BSCs because it provides both financial and non-financial information for making a decision.

H₃: Managers with flexible subordinate assessment methods will positively influence the BSC application.

2.2.4. The perception of the usefulness and the ease of the BSC

We use two factors of the Technology Acceptance Model (TAM) including the usefulness and ease of BSC usage to evaluate the intended use of the BSC. Because when users are aware of the usefulness of using BSCs and improve their productivity, they will surely use it more often. In addition, when they are

aware of their ease of using BSC users wish to use it, especially senior managers who have very little time to learn how to use the BSC (Tanyi, 2011). Thus, we have proposed the following hypotheses:

H4: Managers' perception of the usefulness of the BSC positively influence the application of the BSC.

H5: Managers' perception of the ease of the BSC application positively influence the application of the BSC

2.2.5 Decision of using the BSC

According to Kaplan and Norton (1992,1993,2001a,b), BSC primary purpose at the organizational level is to interpret the strategy and implement it. At the individual level of managers Chenhall (2003) argued that managers first use to assess whether decisions are consistent with the company's strategy. Regarding this purpose, managers receive feedback from the BSC to help them evaluate whether the strategies are effective and whether they can develop new, improved strategies. Second managers use BSC to communicate information, both horizontally and vertically. Accordingly, managers create information sharing with members of the organization. However, as a manager, according to Wiesman (2009), managers use the BSC to help make decisions and get feedback on those decisions, rather than communicating with others and using the BSC to coordinate the work and monitor the performance of the individuals. In summary, BSC can be used for a variety of purposes. In this paper, the purpose is to examine BSC at the individual decision-making level, coordinate work and monitor individual performance.

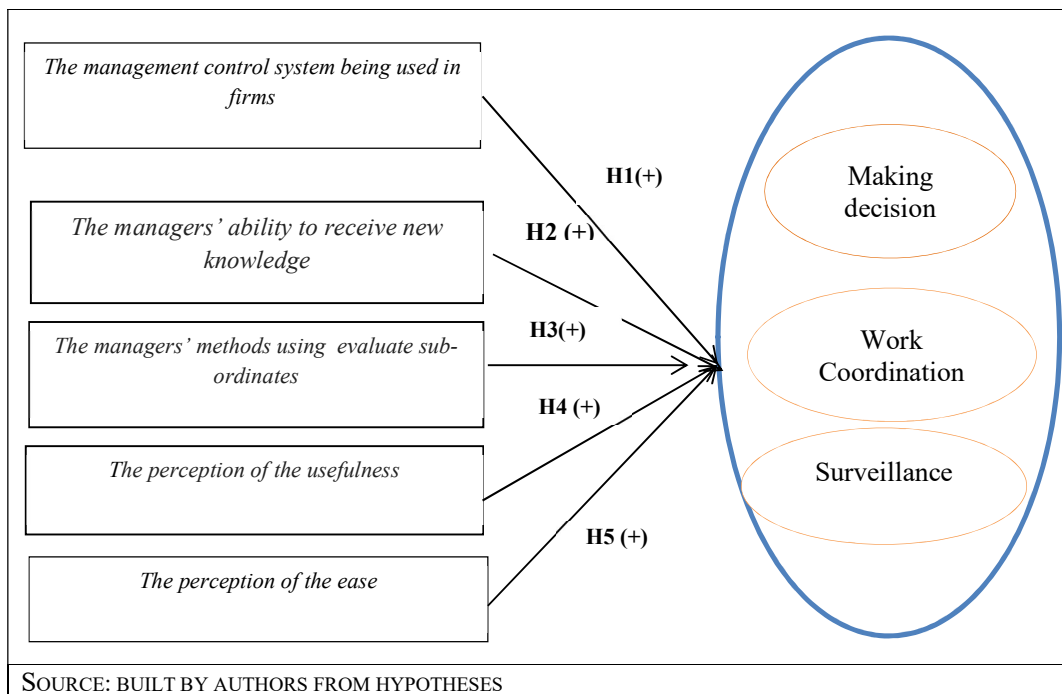


Fig. 2. Research model

3. Research methodology

3.1. Variables and measurement

There are five concepts used in this study as independent variables, including: the management control system being used in the organization; the managers' ability to receive new knowledge; the managers' methods applying to evaluate subordinates; the perception of the usefulness; and the perception of the ease of the BSC. In addition, the managers' decision to use the BSC is representative as dependent variable. The management control systems are measured by variable named from KS1 to KS5; The managers' ability to receive new knowledge is measured through variables from KT1 to KT2; The managers' methods applying to evaluate subordinates variables from E1 to E4; the perception of the usefulness

measured through variables from HI1 to HI4; the perception of the ease of the BSC measured through the variable, SD1 to SD5. The decision to use the BSC is dependent variable and represented by three variables: decision making, work coordination, and performance evaluation. These scales are measured on a 5 point Likert scale: Absolutely not affected, Not affected, Normal, Influential, Very influential.

3.2. Research sample

The study was conducted by quantitative research. The questionnaire has been built with 50 questions representative for five independent variables and one dependent variable. The questionnaire is then distributed to 315 managers randomly chosen from Vietnamese hotels, 3-star to 5-star ones. There are 25 directors and vice directors, the remaining managers are heads of departments of 3-5 star hotels. In relation to sample size, it is accepted that for the EFA exploratory factor analysis, the sample size is at least 5 times the total number of observations (Hair et al., 2006, cited in Nguyen Dinh Tho, 2013). For multivariate regression analysis: the minimum sample size to be calculated is $n = 50 + 8 \times m$ (where m is independent variables) (Tabachnick and Fidell, 2007, cited in Nguyen Dinh Tho, 2011). For our paper, the factors influencing the use of BSCs are five independent variables (25 scales) and three dependent scales (15 scales), sample size is at least 175, the content of the system of indicators MPA has 4 factors corresponding to 39 scales, sample size is at least 195 samples. So, the sample size is at least 195. This means that the sample size satisfies the minimum requirements for statistical test.

4. Research results

4.1. Evaluation of scale reliability

The Cronbach alpha method was used to evaluate the reliability of the scale and the exploratory factor analysis (EFA) was used to evaluate the convergence value and group the scale. The Cronbach alpha results indicate that the scales meet the reliability requirement. The details are represented in Table 1.

Table 1
Summary of the results of independent variables

Variable	Measurement	Factor loading
KS	The management control system being used in the organization: $\alpha = 0.861$	
KS1	Rules, procedures that specify the tasks in the organization will be implemented	.748
KS2	Regulations, procedures that regulate the way of doing things very closely	.825
KS3	The rules and procedures in the organization are useful to motivate people to do their task at best and make the BSC unnecessary.	.787
KS4	The rules, procedures and regulations on recruitment will replace the performance evaluation by the BSC	.837
KS5	The rules, procedures and regulations on recruitment will be used concurrently with the BSC to effectively serve the functions of measurement, reward assessment, assignment of authority and responsibility in the organization.	.774
DG	The managers' methods applying to evaluate subordinates: $\alpha = 0.883$	
DG1	To assess subordinates, financial indicators are more appropriate to present than non-financial indicators	.903
DG2	To assess subordinates, financial indicators are used more than non-financial indicators.	.824
DG3	For subordinate reviews, quantitative information is needed more than qualitative information.	.808
DG4	If the results do not match expectations, you will adjust the rating the subordinates	.852
HI	The perception of the usefulness: $\alpha = 0.851$	
HI1	BSC is useful for performing my task.	.864
HI2	BSC is useful for measuring performance.	.813
HI3	BSC is useful for controlling, managing, and executing strategies.	.766
HI4	Using BSC helps me to have more skills	.788
SD	The perception of the usefulness: $\alpha = 0.875$	
SD2	Easy to communicate strategy through BSC	.811
SD3	BSC makes it easy for me to do my job	.910
SD4	Learning how to use BSC is quite easy	.664
SD5	BSC is a versatile application to use	.912

Specifically, the management control system used in the organization has a Cronbach alpha coefficient of 0.861, Cronbach alpha coefficient for the managers' methods applied to evaluate subordinates is 0.883; the perception of the usefulness has Cronbach alpha of 0.851; and the perception of the ease of the BSC has a value of 0.875. The EFA results show that five factors were extracted with a total variance of 72.463%. The variable SD1 has two load factors less than 0.3, so the variable SD1 has been removed.

All other measurement variables have a high load factor (greater than 0.5) on the concept they measure. Thus, the scales achieve convergence and discrimination.

4.2. Regression for relationship of variables

Using multivariate regression analysis with the support of SPSS 22 software to test the hypothesis of the relationship between independent variables and dependent variable. Specifically, this step will be performed in turn with three dependent variables drawn from the literature review. The regression analysis has shown that there are four managerial factors that influence the use of the BSC: the management control system being used in the organization; the managers' ability to receive new knowledge; the managers' perception of the BSC's usefulness; and the perception of the ease of the BSC, and all 4 factors have maintained positive influences. Among these, the perception of the usefulness has the greatest impact on decision making and performance monitoring, and the perception of the ease of the BSC has the greatest impact on using BSC for work coordination. Thus, the hypotheses H1, H2, H4, H5 are accepted. The variable indicates the managers' methods applying to evaluate subordinate performance was not statistically significant, so the hypothesis H3 was not accepted. The detailed results are represented in Table 2.

Table 2

Summarize the results of the research on the factors affecting the use of BSC

Variables	Making decision		Work coordination		Surveillance	
	β	Sig	β	Sig	β	Sig
The management control system being used in the organization	.308	.000	.196	.000	.179	.000
The managers' ability to receive new knowledge	.291	.000	.196	.000	.203	.000
The managers' methods applying to evaluate subordinates	.019	.652	.051	.271	.054	.253
The perception of the usefulness of the BSC	.309	.000	.262	.000	.391	.000
The perception of the ease of the BSC	.123	.004	.281	.000	.079	.105

5. Conclusion

The research has provided theoretical and practical contributions to the use of the BSC in Vietnamese hotels. In theory perspective, research has successfully applied research models and research theories in other countries to Vietnam. Specifically, the decision of the BSC application can be explained by both theoretical theories. The first is the theory of Diffusion Innovation by Rogers (1995) which documents three factors affecting to new management system in firms, including (1) managers' characteristics; (2) organizations' characteristics; and (3) organizations' external factors. The second theory is the *Model of Technology Acceptance by Davis (1986)* which is theoretical framework applicable to new technology acceptance. It is believed that this model is very useful for the researches of behavior acceptance. Our research result is consistent with Davis (1986) and Bùi Thị Hải Vân, (2009) where the managers' perception of usefulness and perception of the ease of the BSC are major factors affecting to application of the BSC in firms. Moreover, the findings also confirm the role of managers in deciding to apply BSC. We believe that the level of involvement and support of managers are the most powerful factor for the success of the BSC application. In practice, the research results will help managers to realize their role in the decision process to apply the BSC. The result also suggests some practical recommendation for Vietnamese hotels in applying the BSC in their operation aiming to improve performance and competitiveness.

This research has shown that the usefulness factors, the ease of use, the ability to acquire new knowledge, and the management control system in use could influence the implementation of the BSC. Based on these we suggest some following instructive points:

The managers should know the usefulness of the BSC and this evaluation system is not very difficult to apply. This system can integrate with the existing measurement and management systems where the organization uses. Therefore, the members of the organization can be easily used if being trained, not only the managers. This reality should be diffused intensively and broadly so that the level of BSC acceptance in the organization will increase, facilitating the application process. In addition, the managers' ability to receive new knowledge is also decisive to use the BSC application, so in hotel industry, when recruiting we should choose the managers who are creative,

and always support innovation. Our study advocates behavioral attitudes at the individual level, influenced by organizational behavior, so when a manager sets goals for innovation, leaders must organize training and support. Employees have the necessary skills and knowledge to realize the innovation and send messages to other employees. The management control system being used in the organization is also critical for the intended use of the BSC. Research results show that management control tools are used in conjunction with the BSC to improve management efficiency and performance, so when deploying and implementing the BSC hotel managers should use the BSC concurrently with other the management control tools in a proper manner.

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