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The Diffusion of Balanced Scorecard from the Perspective of Adopters: Evidence from Australia

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***A*bstract:** The purpose of this paper is to explore the shortcomings of the Balanced Scorecard (BSC) as a performance measurement tool, and to examine the extent of association between its diffusion and the characteristics of its adopters in practice.

This study uses a survey approach and targets registered members of Chartered Institute of Management Accountants (CIMA) in Australia. The results show that ignoring the risks, environmental and sustainability factors as well as neglecting the concerns/rights of relevant stakeholders are the key shortcomings of the BSC in practice. The findings further confirm that it is vital to distinguish between the diffusion of the BSC as a practice (one single tool) and as a process (a chain of different activities). Because some attributes of adopters are only associated with the initial decisions to adopt (or not) the BSC (as a practice) but not with the sequential implementation stages of its adoption (as a process) and vice versa.

Keywords: Balanced Scorecard; Sustainability; Risk; Stakeholders' rights; Performance measurement; Diffusion of innovation

JEL Classification: L10, M41, M48

1. Introduction

This paper investigates the association between attributes of adopters and the diffusion the Balanced Scorecard (BSC) both as a 'practice' and as a 'process'. The paper is also aiming to identify the weaknesses of the BSC in practice by exploring its shortcomings from adopters' points of views.

The present literature has noticeably highlighted the effectiveness and the usefulness of the BSC as a performance measurement system for the businesses. The overall assessment is that the BSC can contribute to organizations' performance if fully implemented. It enables organizations to clarify their visions and strategies and translate them into actions. It provides feedback on both the internal business processes and external outcomes to (continuously) improve strategic performance and results. When fully deployed, the BSC transforms strategic planning from an academic exercise into the nerve center of an enterprise (Kaplan & Norton, 1992; Kaplan & Norton, 2004; Moon, 2010).

Nonetheless, research on the diffusion of the BSC indicates that the majority of organizations (over 50%) are not using the BSC in practice (Pavlatos & Paggios, 2009). So, it is unclear if there are some organizational factors which could be associated with the adoption of the BSC in practice and whether the BSC has any shortcoming (from adopters' points of view to deal with the requirements of the current changing environment of the 21st century).

The diffusion of innovation literature has already highlighted the importance of the impact of organizational factors on the diffusion of innovation. (Strang, 2013; Chandler & Hwang, 2015). Exploring the important role of organizational factors in information technology (IT) business, Wiengarten, *et al*. (2013) suggest that characteristics of adopters/organizations can have a significant impact on the adoption of new techniques/practices in organizations. However, there is scant research on the association between adopters' characteristics and the adoption of the BSC in practice.

Motivated by the suggestion made by Wiengarten *et al*. (2013), this paper surveys the adoption of the BSC in organizations in Australia and examines the association between organizational factors and the diffusion of the BSC (both as a practice and as a process at the same time). This study further gathers adopters' views regarding the shortcomings of the BSC in practice.

Up to our knowledge, this study is the first survey that makes a distinction between the diffusion of the BSC as a practice (one complete tool) and as a process (a chain of different activities). This distinction would help us to understand whether the diffusion of the BSC refers to the 'full' or 'partial' adoption of the practice. In this study, we define the adoption of the BSC as a practice when we look at it as a full product (e.g. adoption versus non-adoption). In this case, the potential adopters either implement or do not implement the BSC. We define the adoption of the BSC as a process when we divide it into four stages (1. Translating the company's vision into operational goals; 2. Communicating the vision to each and every employee of the company and linking it to the individual performance; 3. Business planning and index setting; and 4. Feedback and learning, as well as making adjustments to the strategy accordingly.) The remainder of this paper is structured as follows. The next section presents the literature review, followed by the research methodology, the findings and finally discussion, implications, and conclusions.

2. Literature Review

To illustrate the importance of the diffusion of the BSC for organizations, this section presents a brief description of the BSC and its evolution over time, its usefulness for organizations, culminating with the four main steps laid out by Kaplan and Norton (1992) through a review of the mainstream literature about BSC implementation.

The usefulness and importance of the BSC for businesses is well documented in the literature (Dilla & Steinbart, 2005; Banker, *et al.*, 2011; Heavey & Murphy, 2012; Yigitbasioglu & Velcu, 2012). The growing complexity of organizations' strategies and structures (due to organisational changes and innovations over the past few decades) has convinced many managers (e.g. Arthur & Cook, 2009) that financial indicators alone cannot provide a full picture of organizations' performance (Kaplan & Norton, 1992; Chung & Gibbons, 1997; Kaplan & Norton, 2004; Moon, 2010). Recognizing some of the weaknesses and vagueness of previous measurement approaches, Kaplan and Norton (1992) introduced the BSC to provide a better prescription as to what companies should measure to 'balance' the financial and non-financial perspectives (Kaplan & Norton, 1992; Kaplan & Norton, 2004; Moon, 2010).

According to the BSC literature (Kaplan & Norton, 1992; Kaplan & Norton, 2001; Kaplan & Norton, 2004), the adoption and implementation of BSC can be considered as a process that involves several stages but can be summarised into four main steps:

(1) Translating the company's vision into operational goals (the establishment of detailed corporate objectives and critical success areas),

(2) Communicating the vision to each and every employee of the company and linking it to the individual performance (measurement of overall performance based on a linked combination of financial and non-financial indicators),

(3) Business planning and index setting (communication and commitment to separate measures used to evaluate finance, processes, innovation and customers) and

(4) Feedback and learning, as well as making adjustments to the strategy accordingly (review of the implementation of strategies devised to impact on specific measures in the scorecard).

Considering the capabilities of the BSC, previous research has shown a positive attitude (by advocates of BSC) towards the diffusion and adoption of the BSC in practice (Kaplan & Norton, 1992; Chung & Gibbons, 1997; Simmons, 2000; Bititci, *et al.*, 2002; Admiraal & Helden, 2003; Moon, 2010; Cugini, *et al.*, 2011).

However, studies investigating the diffusion of the BSC indicate that the adoption of the BSC by organizations is relatively low (up to 30%). For instance, McCunn (1998) reported a 30% adoption rate for BSC in Australia. Surveying more than 500 CPA members in Australia, Askarany, *et al*. (2004) found that only 23% of Australian firms were using BSC. According to Hendricks, *et al*. (2004), the adoption of BSC in Canada is 23.5%, which is very similar to its adoption rate in Australia. Pavlatos and Paggios (2009) concluded that the adoption of the BSC is relatively lower (21.2%) than those of other performance evaluation techniques in the organizations. This level of adoption for the BSC would raise two important questions: "if there is any association between

organizational factors and the adoption of the BSC in practice? And if the BSC suffers from any shortcoming that could undermine its diffusion in practice?"

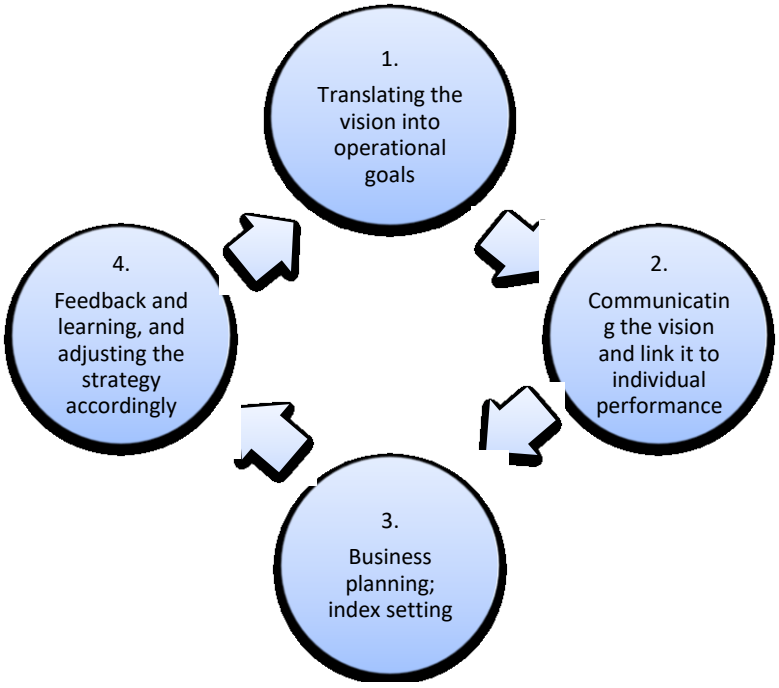

Figure 1. Balanced Scorecard as a Process (Kaplan & Norton, 2004)

We have examined the literature to identify a list of organizational factors which are considered to be influential. In line with the innovation diffusion theory (Libby & Waterhouse, 1996; Gosselin, 1997; Damanpour & Gopalakrishnan, 1998; Bjøornenak & Olson, 1999; Hoffman, 1999), the following thirteen items are considered as the most cited organizational factors that can impact on the diffusion of innovations in organizations:

1 Employee awareness of the benefits of an innovation
2 Employee awareness of the ready availability of an innovation
3 Cost of implementation and maintenance of the innovation
4 Dissatisfaction with the current system
5 Institutional pressures for innovation
6 Lack of confidence in the ability of innovation
7 A recognized need for change
8 The degree of uncertainty associated with the outcomes of the innovation
9 The amount of investment needed for an innovation on its implementation
10 The time involved to implement the new techniques(s)
11 Clear commitment from senior management towards the project
12 The existence of a widely recognized 'champion' of the implementation
13 The employment of management consultants to facilitate implementation

3. Research Method

A survey questionnaire was mailed to 1,175 registered CIMA (Chartered Institute of Management Accountants) members in Australia, followed by 34 interviews in 2011. The selection of CIMA members was due to the fact that these people have a good knowledge of managerial techniques (including the BSC) implemented in organizations.

The survey questionnaire was designed to examine the extent of the diffusion of the BSC in organizations; to gather information on the level of association between organizational factors and the adoption of the BSC in practice and also to explore the shortcomings of the BSC from adopters' points of view.

To examine the extent of diffusion of the BSC as a *practice*, respondents were asked to identify the adoption of the BSC by using a 5-point Likert-type scale (Innes, *et al.*, 2000; Abdel-Kader & Luther, 2006) as follows: with anchors of 1 "discussions have not taken place regarding the introduction of the technique"; 2 "a decision has been taken not to introduce the technique"; 3 "some consideration is being given to the introduction of the technique in the future"; 4 "the technique has been introduced on a trial basis"; and 5 "the technique has been implemented and accepted".

To examine the level of the adoption of the BSC as a *process*, respondents were asked to identify the stage/level of the adoption of the BSC based on Kaplan and Norton's (1992) four sequences of activity levels in the following orders: (1) translating the company vision into operational goals, (2) communicating the vision to each and every employee of the company and linking it to individual performance, (3) business planning and index setting, and (4) reviewing, learning, providing feedback and making adjustments to the strategy.

To examine the level of association between organizational factors and the adoption of the BSC in practice, respondents were asked to express their views regarding the influence of organisational factors (a list of 13 factors addressed earlier) on their decisions to implement the BSC as follows: the decision to implement (or not) the BSC in your organization would be influenced by organizational factors (listed in the survey questionnaire) based on the following scale: strongly agree = 1; agree = 2; uncertain = 3; disagree = 4; and strongly disagree = 5. This scale permits the calculation of mean and standard deviation scores for each factor and the conduct of regression analysis and t-tests (Emory & Cooper, 1991).

To explore the shortcomings of the BSC, we asked the respondents (in an open-ended question) to list the weaknesses/shortcomings of the BSC, which (in their views) could undermine its diffusion in their organizations.

Pilot tests of the instrument were initially undertaken by a group of university academics and managers. Before the survey instrument was mailed to the organizations under investigation, its content validity was addressed by asking a group of managers, lecturers and postgraduate students with managerial experience to review the instrument for clarity and meaning and to refine the design and focus of the content further. Modifications were made as deemed necessary. To help motivate response, we offered the respondents a copy of the final report of the results together with the resulting recommendations to improve the diffusion of the BSC in practice.

The survey questionnaire was also proceeded by some follow-up interviews (face-to-face, and over the phone) after the initial analyses of data, to improve our understanding of the nature of adoption of the BSC in organizations and to clarify some of the issues raised in responses to open-

ended questions. The interviewees were those respondents who had expressed their interests in participating in an interview by checking a box in the survey questionnaire and provided the researcher/s with their contact details. Consequently, 34 interviews (face to face and over the phone) were conducted. All interviews (except six) lasted between 1 and 2 hours. All interviews (except three) were tape recorded, and then transcribed. However, interviewees were assured beforehand that the taping was aimed entirely at enhancing the research process, and confidentiality was assured both externally and internally.

4. Findings

A total of 310 completed questionnaires were received, plus 88 not-completed or not delivered (e.g. change or wrong address), providing a satisfactory response rate of 28.5% (Brown, *et al.*, 2004; Al-Omiri & Drury, 2007a; b).

Non-response bias was examined by comparing the information provided by early (first two weeks) and late (three weeks and more) respondents in the survey. The results showed no perceived difference between these responses (confirming that they were independent and late respondents were an appropriate proxy for non-respondents), suggesting that non-response bias would not influence the outcomes. Please see Appendix Table for more details.

The survey questionnaire was designed to examine the extent of diffusion of the BSC in organizations as well as to gather information on the level of association between organizational factors and the adoption of the BSC in practice.

Table 1 shows the extent of the diffusion of the BSC as a *practice.* According to Table 1, only 28.6% (88/308) of organizations have adopted and accepted the BSC as a practice. A further 11.7% of organizations have implemented the BSC on a trial basis (but not accepted it yet). However, these findings show that the majority of organizations are not using the BSC in practice as the percentage of non-adopters is more than those that have adopted and accepted the BSC. It is important to emphasize that when we examine the diffusion of the BSC as a practice (adoption versus non-adoption), we cannot be sure if respondents' answers to the adoption of the technique refer to its full or partial implementation. As such meanings depend on the definitions and the interpretations of the BSC that can vary among potential adopters of the technique. That is why we examined the diffusion of the BSC as a process as well (by dividing it into four different stages and asking the adopters of the technique to specify their stages of implementation).

Table 1. The adoption of BSC as a practice

No discussion	Decided not to introduce	Some consideration is given	Introduced on trial basis	Implemented and accepted	Total
104	26	54	36	88	308
33.8%	8.4%	17.5%	11.7%	28.6%	100%

Table 2 shows the level of the adoption of the BSC as a *process* based on Kaplan and Norton's (1992) four sequences of activity levels in following orders: (1) translating the company vision into operational goals, (2) communicating the vision to each and every employee of the company and linking it to individual performance, (3) business planning and index setting, and (4) reviewing, learning, providing feedback and as well as making adjustments to the strategy. According to the

Table 2, out of all organizations that have considered themselves as adopters of the BSC, only 9.7% (30/308) have proceeded with the full adoption of the technique (implementing all four stages). The difference could be due to participants' perception/understanding of the BSC. For example, some firms may consider themselves as the full adopter of the BSC while they are just practicing the first three steps (but not the last step). In this case, we can assume only 30 (out of 88) respondents who considered themselves as the adopters of the BSC practice all four stages and the rest are practicing up to stage 3 or below. These results explain part of inconsistent results in the literature and can be considered as an important contribution to the literature. In other words, this study suggests that some of the high adoption rates reported in the literature (e.g. Chenhall & Smith, 1998) may only be attributed to adopters of earlier stages of the BSC (partial adoption) but not to the adopters of all four stages (full adoption) of the technique as are shown in this study.

Table2. The adoption of BSC as a process (for those 154 adopted and accepted the technique)

Stage of adoption of BSC	Number	Percentage
(1) translating the company vision into operational goals	20	13.0
(2) communicating the vision to each and every employee of the company and linking it to individual performance	56	36.3
(3) business planning and index setting to evaluate finance, processes, innovation and customers	48	31.2
(4) review, feedback and learning, as well as making adjustments to the strategy	30	19.5
Total	154	100

Table 3 on the next page examines the level of associations between organizational factors and the adoption of the BSC both as a practice and a process. According to Table 3, the significance of the association between organizational factors on the one hand and the adoption of the BSC as a practice and process, on the other hand, is quite different. We have used the Pearson Chi-Square for examining all associations discussed in the paper.

According to Table 3, there is a significant association (significant at $p<0.05$) between 9 organizational factors (out of 13 addressed in this study) and the adoption of the BSC as a *process*. However, the important finding is that not all of these organizational factors that are associated with the adoption of the BSC as a *process* are associated with the adoption of the BSC as a *practice* as well. While the findings show a significant association (significant at $p<0.05$) between 7 organisational factors (out of 13 addressed in this study) and the adoption of the BSC as a *practice*, only 4 factors (out of 13) are the same (with those that are associated with the adoption of BSC as a process). In other words, some organisational factors (e.g. 'institution/employee dissatisfaction with the current system') are only associated with the initial decisions to adopt (or not) the BSC but they are not associated with proceeding with higher level of adoption of the BSC as a process (e.g. after the decision was made to adopt the technique).

On the contrary, some organisational factors (e.g. 'the level of clear commitment from senior management towards the innovation') are not associated with the initial decisions to adopt (or not) the BSC but they are associated with proceeding with higher level of adoption of the BSC as a process (e.g. after the decision was made to adopt the technique). And finally, some organisational factors are associated with both the initial decisions to adopt (or not) the BSC and with proceeding with higher level of adoption of the BSC (e.g. 'Organizational pressures for innovation') and some

factors are not associated with the adoption of the BSC at all (e.g. 'the level of employment of management consultants by institution to facilitate adoption of innovation').

Table 3. The significance of association between organizational factors and the adoption of BSC both as a practice and a process

Thirteen organizational factors	BSC as a practice	BSC as a process
Institution/employee awareness of the benefits of an innovation	0.362	**0.000****
Institution/employee awareness of the ready availability of an innovation	0.102	**0.000****
Institution/employee awareness of running cost of implementation of the innovation	**0.020***	**0.000****
Institution/employee dissatisfaction with the current system	**0.002****	0.134
Organizational pressures for innovation	**0.002****	**0.000****
Institution/employee lack of confidence in the ability of innovation	**0.004****	0.910
Institution/employee recognized need for change	0.115	**0.039***
Institution/employee ability to afford the amount of investment required to adopt the innovation	0.082	**0.003****
Institution/employee level of uncertainty associated with the outcomes of the innovation	**0.010****	**0.020***
Institution/employee ability to afford the amount of time required to implement the innovation	**0.018***	**0.000****
The level of clear commitment from senior management towards the innovation	0.086	**0.000****
The existence of a widely recognized 'champion' for institution	**0.014***	0.527
The level of employment of management consultants by institution to facilitate adoption of innovation	0.141	0.054

Note: *, and ** indicate P-value at 95%, and 99% confidence interval, respectively.

We just used part of interview results for validation and clarifications on answers provided to the open questions regarding the shortcoming of the BSC. Exploring the shortcomings of the BSC, the targeted respondents (in an open-ended question in the distributed survey questionnaire) were asked to list the weaknesses/shortcomings of the BSC. According to the findings, the adopters' points of view are that ignoring the risks, environmental and sustainability factors as well as neglecting the concerns/rights of other relevant stakeholders (besides customers) are the key shortcomings of the BSC, which could undermine its diffusion in practice. While some of these shortcomings of the BSC have already been addressed (e.g. under sustainability BSC) in the literature (e.g. Figge, *et al.*, 2002), this study presents experimental evidence regarding the existence of such limitations in practice from adopters' points of view.

There are some arguments in the literature that suggest conventional BSC is capable of including sustainability factors such as environmental and social perspectives (Figge, *et al.*, 2002; Möller & Schaltegger, 2005; Schaltegger, *et al.*, 2006; Tsai, *et al.*, 2009). However, the findings reveal that such capabilities are not seen in practice by potential adopters of the BSC. So, proposing a revised version of the BSC with a clear inclusion of the above perspectives (besides its four traditional perspectives) is likely to contribute to its further diffusion.

The classical BSC that was introduced in the 1990s has only four perspectives: financials, internal process, customers and innovation & learning (Kaplan & Norton, 1992). So, the inclusion of the risk, environmental and sustainability factors as well as the concerns/rights of other relevant stakeholders (besides customers, such as non-customers) to the BSC perspectives is likely to increase the capability of the BSC as a performance measurement tool and to enhance its sustainability for further diffusion in long term.

5. Discussion, Implications, and Conclusions

Investigating the diffusion of BSC as a practice (adoption versus non-adoption), the findings show that only 28.6% of organizations have adopted and accepted the BSC as a practice. A further 11.7% of organizations have implemented the BSC on a trial basis (but not accepted it). Examining the adoption of the BSC as a process (which involves four stages), the findings show that only 9.7% of organizations have proceeded with the full adoption of the technique (implementing all four stages of the BSC addressed in this study). These findings explain part of inconsistent results in the literature and, therefore, can be considered as an important contribution to the literature. In other words, this study suggests that some of the high adoption rates reported in the literature may just refer to adopters of earlier stages of the BSC (partial adoption) but not to the adopters of all four stages (full adoption) of the technique as discussed in this study.

Examining the adoption of the BSC both as a 'practice' and as a 'process' at the same time in this study, the findings provide some interesting information. This paper contributes to the literature by providing evidence to show that the level of associations between the diffusion of the BSC and the organizational factors can vary at different stages of the diffusion process. The results indicate that some organisational factors (e.g. 'institution/employee dissatisfaction with the current system') are only associated with the initial decisions to adopt (or not) the BSC but not associated with proceeding with higher level of adoption of the BSC (e.g. when the decision has been made to adopt the technique).

On the contrary, some organisational factors (e.g. 'the level of clear commitment from senior management towards the innovation') are not associated with the initial decisions to adopt (or not) the BSC but they are associated with proceeding with higher level of adoption of the BSC (e.g. after the decision was made to adopt the technique). And finally, some organisational factors are associated with both the initial decisions to adopt (or not) the BSC and with proceeding with higher level of adoption of the BSC (e.g. 'Organizational pressures for innovation') and some organisational factors are neither associated with the initial decisions to adopt (or not) the BSC nor with proceeding with higher level of adoption of the BSC (e.g. 'the level of employment of management consultants by institution to facilitate adoption of innovation'). We only focused on the organizational factors in this study. Further studies are recommended to examine the impact of other contextual factors such as characteristics of innovation on the diffusion of BSC in practice.

Exploring the shortcomings of the BSC, the findings show that ignoring the risk, environmental and sustainability factors as well as neglecting the concerns/rights of other relevant stakeholders (besides customers) are the key shortcomings of the BSC from adopters' points of view. While some of these shortcomings of the BSC may have been addressed in the literature, this study presents empirical evidence regarding the existence of such limitations in practice from adopters' points of view. The findings suggest that adding the above perspectives to the BSC is likely to facilitate its further diffusion.

The findings, conclusions and the implications in this study should be interpreted with caution, due to some limitations as follows: Given that the respondents were mostly strategic managers and management accountants who had a CIMA qualification, this may have caused a bias toward reporting a higher adoption rate for the BSC in organizations. Thus, generalizing the results of this study to other organizations should be carried with caution.

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Appendix

Table A. Chi-Square Test of Independence: Comparing early responses (first two weeks) *verse* late responses (last three weeks) regarding the adoption of the BSC

	Adoption of the Balanced Scorecard					**Total**
	Discussions have not taken place regarding the introduction	A decision has been taken not to introduce this practice	Some consideration is being given to the introduction of this	This practice has been introduced on a trial basis	This practice has been implemented and accepted	
Early responses	66	10	38	18	44	176
Late responses	38	16	16	18	44	132
Total	104	26	54	36	88	308

Value and significance / **Tests applied**	Value	d.f.	Asymp. Sig. (2-sided)	**Monte Carlo Sig. (2-sided)**			**Monte Carlo Sig. (1-sided)**		
				Sig.	95% Confidence Interval		Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound		Lower Bound	Upper Bound
Pearson Chi-Square	11.842[a]	4	0.019	0.016[b]	0.014	0.019			
Likelihood Ratio	11.951	4	0.018	0.017[b]	0.015	0.020			
Fisher's Exact Test	11.798			0.017[b]	0.014	0.019			
Linear-by-Linear Association	2.697[c]	1	0.101	0.107[b]	0.101	0.113	0.055	0.050	0.059
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 11.14.									
b. The standardized statistic is 1.642.									
c. Based on 310 sampled tables									