



Is a Balanced Scorecard Useful in a Competitive Retail Environment?

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TO FIND OUT IF BALANCED SCORECARDS ARE USEFUL IN THE RETAIL AREA, WE EXAMINED MANAGERS' PERCEPTIONS OF QUALITY AND SATISFACTION WITH THEIR SCORECARD SYSTEM AT SUCH A COMPANY. TWO UNIQUE FEATURES OF THIS STUDY ARE A LOOK AT HOW THESE PERCEPTIONS DIFFER ACROSS MANAGEMENT LEVELS AND A COMPARISON OF HOW THESE PERCEPTIONS ARE RELATED TO THE SYSTEM'S SCORES AND ACTUAL FINANCIAL RESULTS.

To be successful in a competitive environment, organizations must pursue and execute strategies consistent with their mission. Management needs to align its goals and objectives with those of the organization to execute strategies effectively. With this alignment, managers are motivated to attain higher levels of individual performance. Using a balanced scorecard (BSC) system is an integral component in these alignment efforts. It is also necessary for the company's results to improve with the use of the BSC, and, in the case of a profit-seeking firm, the BSC should be associated with improved financial performance. Understanding managers' perceptions and attitudes toward the BSC is an

important contribution to the literature.

Our study expands and further develops the empirical performance measurement literature by examining managers' attitudes toward the BSC and their perceptions of its usefulness. We also examine the association of the scores with both managerial attitudes and financial performance. Our results are of particular interest because respondents' perceptions and attitudes regarding the BSC differ across management levels, managerial satisfaction is associated with higher scores, and these higher scores are associated with higher levels of financial performance. Our results also indicate that upper-level managers perceive greater improvement in individual, store, and company performance, while unit-

level managers perceive higher levels of functionality in areas such as accuracy and reliability.

Since Robert S. Kaplan and David P. Norton's seminal article ("The Balanced Scorecard—Measures that Drive Performance," *Harvard Business Review*, January/February 1992), BSCs have been at the forefront of professional management accounting innovations. Two related offshoots of the BSC are strategic performance measurement systems and key performance indicator (KPI) systems that incorporate nonfinancial and financial measures linked to organizational strategy. Therefore, other studies that report the impacts of these systems are referenced as BSCs in this study.

A key innovation of BSCs is multiple, strategically linked measures that improve business performance, as opposed to traditional systems that focus primarily on financial metrics. Combining nonfinancial (nontraditional) and financial (traditional) measures enables a company to evaluate performance and, theoretically, improve employee/manager satisfaction, production efficiency, customer satisfaction, and, ultimately, long-term financial performance.

Prior literature suggests that for a BSC to produce optimal performance, a number of factors must be part of the system. Our study focuses on two factors: information usefulness and managers' support of the system. Employees must feel that the system provides useful information. Theresa Libby, Steven Salterio, and Alan Webb found that improving the perceived quality of performance measures increased managers' reliance on those measures.¹ If managers perceive that measures lack quality, their attitudes toward the system and support for its use is negatively affected, and they will not incorporate the information into their decision making.² Consequently, the organization will not obtain the benefits expected from the BSC.

Our study examined whether the characteristics of a BSC do indeed impact managers' attitudes, organizational functioning, and financial performance. We administered an Internet-based survey to store-, district-, and regional-level managers of Wildcat, Inc., a retailer.³ Wildcat's management was highly supportive of this project, as reflected in the survey's participation rate of more than 72%. Specifically, we used the survey responses to assess managers' attitudes toward the BSC,

its benefits, and the impact it has on the organization.

We found that Wildcat's managers perceive that the BSC is generally beneficial, and they report a positive attitude toward it. In addition, managers report favorable perceptions for most BSC characteristics and functionality. We also found that positive managerial attitudes toward the BSC are associated with higher BSC scores, which in turn are associated with higher financial performance. Further, our results suggest that many perceptions differ across management levels. One area in which managers do not perceive improvement, however, is the area of timeliness. We anticipate this finding in the case of a retailer whose traditional financial metric at the operating management level is actual sales relative to budgeted sales (sales-to-plan). Unlike traditional financial profit measures, which are delayed until the end of the reporting period, sales-to-plan information is available virtually on demand by the manager.

The remainder of the article contains five sections. First, we describe the company involved in the study and the characteristics of its BSC. Second, we discuss relevant research along with testable hypotheses and exploratory research questions. Third, we employ a detailed research methodology. Fourth, we present the results of the empirical analyses and, fifth, a discussion of this study's implications and conclusions.

INSTITUTIONAL SETTING

Wildcat, Inc., a national merchandising company, sells a specific type of tangible property as its primary business and operates food and beverage services with a limited menu. The company is one of a small number of merchandising companies that control a large portion of this product's retail market. Wildcat has little pricing power, however, because its suppliers hold an effective monopoly with respect to the product and there is intense competition between the leading companies, general retailers that carry identical products, and Internet retailers.⁴ In addition to these large retailers, smaller retailers offering the same product have organized a very active trade group. This competition causes Wildcat's suppliers to be unwilling to compensate larger retailers, such as Wildcat, for their economies of scale. This combination of factors places Wildcat in a difficult position for improving gross margin as its sales prices

and cost-of-goods-sold percentage are relatively fixed. As a result, the company pursues two primary means of improving profit: increasing sales volume and controlling costs (inventory control and in-store expenses). Of the in-store expenses, labor is the most controllable.⁵

Prior to its BSC implementation, Wildcat added performance measures as it needed to solve a particular problem or issue, which led to a performance measurement system that was neither concise nor well structured. Throughout these changes, top management focused on two critical-success factors: actual sales relative to budgeted sales (sales-to-plan variance) and inventory management. Company management continues to debate the relative importance of these two factors, both of which are included in the current BSC.

Wildcat initiated its BSC project in the mid-1990s.⁶ This implementation coincided with a period of rapid growth in the company and the centralization of management control. The BSC was Wildcat's first coordinated performance measurement effort and in many ways was an attempt to build a framework for prioritizing its existing financial and nonfinancial measures. Ultimately, the system represents an attempt to control and compare the results of management at the store, district, and regional levels.

Wildcat's BSC currently consists of measures that evaluate store performance. The measures for relevant stores are then aggregated to assess the performance of district and regional managers. Wildcat's choice of measures reflects upper management's desire to promote its annual goals even though Wildcat's culture incents managers to primarily focus on one measure—sales-to-plan. To communicate about performance on its measures, the company issues a monthly report to managers. The measures included in the performance system are:

1. Sales-to-plan (a comparison of actual sales to budgeted sales);
2. A customer service evaluation;
3. Payroll percentage;
4. Shrinkage⁷;
5. A company-specific measure of store efficiency in areas such as supply chain management, communications, and service;
6. In-store audits;

7. A measure of the efficiency in special programs, such as special orders for customers and food service operations; and

8. Position-specific measures.⁸

As mentioned earlier, sales growth and inventory management are Wildcat's primary critical-success factors. As one strategy for increasing sales growth is through improved customer service, Wildcat has surveyed customers regarding the value of customer service. The results, however, are ambiguous as to whether higher levels of service are a cost-effective means of increasing sales. This type of customer service is distinguished from special orders for customers because such orders do not have to be discounted and are at full retail with the full gross profit margin. Therefore, Wildcat encourages special orders, which have an important place in its scorecard.

With regard to inventory management, Wildcat's management knows that the physical organization of inventory (choice of slotting) can have a significant effect on a store's success. Therefore, most decisions regarding the stock individual stores carry are made on a centralized basis, including slotting arrangements, so a store manager's only merchandising control is over his/her compliance with instructions from corporate headquarters.

Wildcat's management is concerned with issues related to performance measurement weighting. Specifically, a fixed weighting system allows for "gaming," but a system that allows subjective weighting can, in reality, degenerate into one plagued with favoritism. Therefore, to avoid the problems associated with subjectivity, Wildcat has focused on using fixed weights. As the system has evolved, top management has adjusted the weight assigned to various components of the BSC to reflect changes in priorities and influence store-level decisions.

Written comments from store managers reflect two primary limitations of Wildcat's scorecard. First, managers say the reports are often too late for them to take corrective action. Second, store managers have little or no input into the budgeted sales forecast. As a result, they say they often feel that this part of the performance evaluation is out of their control.⁹

HYPOTHESES DEVELOPMENT AND RESEARCH QUESTIONS

Attitude

Many opinions exist regarding the best measure to use for determining the successful implementation of a management innovation, as noted by Annie McGowan.¹⁰ Michael Schultz and Randall Ginzberg noted that in cases where users do not have a favorable attitude toward a system, they are not likely to support it.¹¹ In regard to BSC research, Mary Malina and Frank Selto found that managers react positively to a BSC when the measures are properly aligned, the linkages in the reward system are visible, and the system provides guidance for improvement.¹² Stan Davis and Thomas Albright found that BSC usage resulted in higher levels of strategic-business-unit performance.¹³ Henry Lucas stated that “one expects poor user attitudes to result from such low-quality systems...the model or system must be of sufficient quality to facilitate the development of favorable attitudes.”¹⁴ Based on this prior research, we hypothesize that managers in this study will have a favorable attitude toward the BSC.

Hypothesis 1: Managers report favorable attitudes about the BSC.

BSC Benefits

Prior to balanced scorecards, research studying activity-based costing (ABC) supported the idea that information, which is perceived as providing benefits to an organization, is factored into managers' decisions, as noted by Mike Shields.¹⁵ The benefits of BSC information can be perceived differently along a number of dimensions. Robert Kaplan and David Norton noted that, to be truly beneficial, the BSC must clearly communicate an understandable strategy to employees.¹⁶ Our study examines the following benefits expected from the BSC: (a) increase in managers' understanding of how to achieve organizational strategy, (b) impact on job performance, and (c) improvement in financial performance.

Hypothesis 2(a - c): Managers report favorable perceptions about the benefits (as defined by (a) through (c) above) derived from the BSC.

Financial Performance

The BSC's ultimate goal is to improve firm performance. Our study investigates the association between the BSC scores and financial performance as well as the association between managerial attitudes and the BSC scores. We expect that higher BSC scores will be associated with a higher level of managerial satisfaction with the BSC and higher levels of financial performance.

Hypothesis 3: Managers' reported level of satisfaction with the BSC is positively associated with higher BSC scores.

Hypothesis 4: Financial performance is positively associated with higher BSC scores.

Organizational Benefits

Annie McGowan tested other benefits in addition to improved attitudes that can be expected from ABC implementation.¹⁷ To extend her research into a BSC environment, we modified her list of potential benefits so that it was consistent with BSC usage. Thus, we chose 12 measures to test the validity of BSCs in a variety of different areas. The measures are:

1. Communication across functions,
2. Communications between managers and employees,
3. Teamwork,
4. Goal alignment,
5. Fairness of individual performance evaluation,
6. Fairness of organization performance evaluation,
7. Decision quality,
8. Job satisfaction,
9. Employee performance,
10. Business performance,
11. Shareholder value, and
12. Overall focus on goals of my store.

These contentions lead to research questions 1a through 1l.

Research Questions 1(a - l): How do managers perceive the organizational benefits of the BSC?

Information Characteristics

For information to impact decision making, managers must perceive that the information is useful. According to David Otley, “Management control systems provide information that is intended to be useful to managers in performing their jobs and to assist organizations in

maintaining viable patterns of behavior.”¹⁸ Chris Ittner and David Larcker discussed concerns that traditional measures are too “backward-looking,” provide “little information on root causes or solutions to problems,” and are “too aggregated and summarized to guide managerial action.”¹⁹ Furthermore, Chris Ittner, David Larcker, and Marshall Meyer contend that increased emphasis should be placed on measures in the BSC that are “more reliable.”²⁰ Rajiv Banker, Gordon Potter, and Dhinu Srinivasan’s research suggests that BSCs provide value-added incremental information and support the contention that BSCs possess higher levels of the noted information characteristics.²¹

Conversely, Mark Frigo and Kip Krumwiede collected prior cross-sectional survey data and reported that managers perceive nonfinancial measures to be of lower quality than financial measures.²² In addition, the nature of Wildcat’s previous measure, sales-to-plan, potentially makes the use of other measures appear less timely. Anecdotal evidence from discussions with management indicates that it is common during peak sales periods for some managers to monitor sales-to-plan on an hourly basis. Thus, any BSC system that operates using a mixture of evaluation measures is likely to be perceived as less timely.

To examine managers’ perceptions, our study incorporates the five information characteristics Annie McGowan examined:

Research Question 2(a – e): How do Wildcat’s managers evaluate the information characteristics of the BSC: (a) accuracy, (b) accessibility, (c) reliability, (d) understandability, and (e) timeliness?²³

BSC Functionality

For managers to fully support a management innovation, a perceived application for the information must exist. Previously, ABC research by Mike Shields found that success of the system is related to the functioning of the system.²⁴ In assessing ABC functioning, Kip Krumwiede identified relevant factors to include the need for a clearly stated purpose for the project.²⁵ Annie McGowan and Thomas Klammer found that adequate training must be provided regarding the management innovation.²⁶ Rajiv Banker, Gordon Potter, and Dhinu Srinivasan showed that in the absence of

knowledge of the unit’s strategy, managers fail to utilize unique measures the BSC provides.²⁷ Therefore, our study evaluates the perceptions that Wildcat’s managers have regarding: (a) communication of a clear purpose and (b) inclusion of adequate training.

Research Question 3(a – b): How do managers perceive the BSC’s functionality (as defined by (a) and (b) above)?

Management Level

Two additional research questions exist related to management issues. The first is whether the level of a manager within Wildcat affects the responses to the hypotheses and research questions. The second is whether the store size or the manager’s level of experience has an impact on his or her attitude toward the BSC.

David Marginson found that “managerial perceptions of MCS (management control systems) are a crucial factor in determining the effect that MCS may have on managers’ strategic activities...which determined the influence it exerted on managers’ strategic endeavors.”²⁸ In their study, Rajiv Mehta, Rolph Anderson, Khalid Dubas, Alan Dubinsky, and Sandra Liu found that “the more senior the hierarchical position...the greater the need to focus on attaining economic objectives.”²⁹

Research Question 4: Does the organizational level of the manager impact his/her perceptions regarding the BSC?

It is possible that certain characteristics might lead a manager to have a more favorable or less favorable attitude toward the BSC. Specifically, a manager who has had more managerial experience will have more reference points to compare to the BSC than will a manager with less experience. Similarly, a manager with more experience within Wildcat will have these additional comparable experiences and will have observed previous systems within the company itself. Further, it is possible that tenure with the same store may provide the manager with more insight into the system’s value. The size of the store, based on the number of employees, may also have a bearing on a manager’s attitude toward the system.

Research Question 5: Does a manager’s tenure or store size affect his/her attitude toward the BSC?

RESEARCH METHODOLOGY

We used an Internet-based survey to collect the data for this study, and senior managers pretested our survey. After modifying a few questions as a result of the pretest, we e-mailed requests for Wildcat managers to participate, and then two weeks later we sent a second e-mail as a reminder. Of the 475 Wildcat managers at the time, 361 respondents submitted a survey. Of these responses, we eliminated 15 because of incomplete information, so we had 346 usable responses (308 store managers and 38 district and regional managers) and a response rate of 72.8%.³⁰

We captured responses using a seven-point scale from 1 to 7, with 1 indicating no emphasis or strongly disagree (depending on the question's specific wording) and 7 indicating great emphasis or strongly agree. Therefore, we employed the mean/median value of 4 on all scales. To elicit more accurate information, we assured respondents that we would not report their specific responses to upper management. Instead, we provided upper management with a summary report and analysis along with recommendations for improvements.³¹ We housed the survey on a university server, so upper management did not have direct access to the data.

Although we asked managers to furnish their store number, we did not require them to do so. Of those managers completing the survey, 235 voluntarily provided their store number. Wildcat provided financial results and BSC scores for all stores, so we then matched the

235 identified stores with the financial information provided. We eliminated five stores because of incomplete or missing data, and that resulted in 230 complete observations for testing hypotheses 3 and 4.³²

To test hypotheses 1 and 2, as well as research questions 1 through 3, we performed t-tests (a statistical test that compares values to determine if differences exist between two values) comparing the observed score with the mean value of 4 from the seven-point scale. To test responses for differences between store-level managers and higher-level (district and regional) managers, we performed an analysis of variance (ANOVA) of the measures examined in earlier t-tests. We also used an ANOVA to examine the relationship between attitude toward the BSC and managerial experience and store size.

RESULTS

Tables 1, 3, and 4 contain the results of the t-tests. Table 1 reports the t-test for attitude. The result reflects that managers have a positive attitude toward the BSC, and this result is statistically significant in support of hypothesis 1. This finding indicates that, on average, managers of Wildcat, Inc., have a favorable attitude toward the BSC. Because a positive attitude toward the BSC is crucial to securing managerial support for the system, this response is necessary for system success.

Table 1 also shows the findings for hypotheses 2(a) through 2(c). These results suggest that the BSC

Table 1: t-Test Results
Attitude Toward the BSC and Benefits of BSC Usage (n=346)

Hypothesis	Dependent Variable	Mean	Standard Deviation	t-value
1	Attitude	4.803	1.398	10.688***

Hypothesis	Dependent Variable	Mean	Standard Deviation	t-value
2a	Improves Understanding of How to Achieve Strategy	4.398	1.626	4.555***
2b	Impacts Way I Perform Job	4.974	1.576	11.491***
2c	Provides Financial Benefit to Store	4.605	1.538	7.312***

Variable Scale (1 = strongly disagree, 7 = strongly agree); test value $H_0 \leq 4$ (median)

***Significant at the 0.01 level

Table 2: Correlation Matrix Significance
BSC Scores, Satisfaction, and Financial Performance
 (n=230)

	Financial Performance	BSC Score	Satisfaction
Financial Performance	1.0000		
BSC Score	0.6334 (0.0000)***	1.0000	
Satisfaction	0.0982 (0.1375)	0.1783 (0.0067)***	1.0000

() indicates significance of the pair-wise correlation

***Significant at the 0.01 level

Table 3: t-Test Results
Organizational Benefits of BSC
Improvement in the Specified Area Resulting from the BSC
 (n=346)

Research Question	Dependent Variable	Mean	Standard Deviation	t-value
1a	Communication across Functions	4.035	1.538	0.423
1b	Communications between Managers and Employees	3.869	1.563	-1.557
1c	Teamwork	4.219	1.578	2.578***
1d	Goal Alignment	5.047	1.489	13.070***
1e	Fairness of Individual Performance Evaluation	3.761	1.651	-2.694***
1f	Fairness of Organization Performance Evaluation	4.369	1.601	4.290***
1g	Decision Quality	4.143	1.465	1.814*
1h	Job Satisfaction	3.423	1.560	-6.883***
1i	Employee Performance	3.650	1.525	-4.268***
1j	Business Performance	4.735	1.541	8.871***
1k	Shareholder Value	3.722	1.820	-2.839***
1l	Overall Focus on Goals of My Store	5.082	1.472	13.670***

Variable Scale (1 = strongly disagree, 7 = strongly agree); test value Ho = 4 (median)

* Significant at the 0.10 level, ***Significant at the 0.01 level

improves managers' understanding of how to achieve organizational strategy (2a), impacts how managers do their job (2b), and provides a financial benefit to the store (2c). Thus managers perceive that the BSC is beneficial for Wildcat.

To test hypotheses 3 and 4, we used a correlation matrix (see Table 2). The results indicate that a signifi-

cant association exists between the BSC score and managerial satisfaction, supporting hypothesis 3. Similarly, the results indicate a significant association between the BSC score and the financial results as measured by sale-to-plan, supporting hypothesis 4.

As additional tests of the BSC's potential benefits, Table 3 contains the results for research questions 1a

Table 4: t-Test Results
BSC Information Characteristics and Functionality
 (n=346)

Research Question	Dependent Variable	Mean	Standard Deviation	t-value
2a	Accuracy	4.647	1.464	8.228***
2b	Accessibility	4.324	1.538	3.916***
2c	Reliability	4.374	1.481	4.696***
2d	Understandability	4.930	1.459	11.855***
2e	Timeliness	2.730	1.590	-14.855***

Variable Scale (1 = extremely low, 7 = extremely high); test value Ho = 4 (median)

3a	Purpose Is Clear and Concise	4.805	1.622	9.233***
3b	Adequate Training Is Provided for the System	3.631	1.723	-3.986***

Variable Scale (1 = strongly disagree, 7 = strongly agree); test value Ho = 4 (median)

* Significant at the 0.10 level, ***Significant at the 0.01 level

through 1l related to organizational benefits. Specifically, these items examine the areas the BSC affects. We noted perceived improvement at a statistically significant level in these research questions: teamwork (1c), goal alignment (1d), fairness of the organization's performance evaluation (1f), decision quality (1g), business performance (1j), and the overall focus on goals of the individual store (1l).

We found disagreement, however, regarding the BSC's improvement in fairness of the individual performance evaluation (1e), job satisfaction (1h), employee performance (1i), and shareholder value (1k). These findings indicate that managers generally appreciate the unique characteristics of information the BSC provides with regard to the operation of their store. The dominance of common measures in the system (sales-to-plan and shrinkage), however, results in disagreement as to the improved value of the BSC as an individual performance measurement system.

Table 4 presents research questions 2(a) through 2(e) regarding managers' perceptions of five BSC information characteristics: (a) accuracy, (b) accessibility, (c) reliability, (d) understandability, and (e) timeliness. Managers perceive all of these characteristics as higher

than the median response of 4, except for timeliness (2e). For this question, managers report unfavorable opinions. This result is not surprising based on the written comments, which indicate timeliness is one area managers felt Wildcat's BSC needed improvement. This finding is consistent with the use of multiple measures, which take time to gather and consolidate in the BSC compared to the instantaneous availability of sales-to-plan data.

Table 4 also contains results for the system's functionality. Research questions 3a and 3b relate to the system's functionality, specifically: (a) a clearly stated purpose and (b) the provision of adequate training. The managers agreed that the BSC's purpose was clear and concise. They disagreed, however, about the provision of adequate training. This disagreement is extremely problematic for Wildcat because the expected BSC benefits cannot be realized without the provision of adequate training.

Table 5 reports the results of the ANOVA of differences between store managers and higher-level managers. Although Table 5 includes the complete list of items we compared, this discussion focuses on those areas that were statistically different between the two

**Table 5: ANOVA Results – Mean Comparison
Store Managers to District and Regional Managers**

Variable	F-stat	Store Managers	District/Region Managers
Attitude	1.08	4.776	5.026
Accuracy	7.18***	4.721	4.053
Accessibility	1.90	4.364	4.000
Reliability	8.76***	4.456	3.711
Understandability	3.43*	4.879	5.342
Timeliness	5.10**	2.798	2.184
Impacts Way I Perform Job	7.59***	4.892	5.632
Provides Financial Benefit to Store	4.57**	4.543	5.105
Purpose Is Clear and Concise	1.73	4.765	5.132
Other Departments Have Taken Ownership of System	7.10***	3.349	2.711
Adequate Training Is Provided for the System	12.63***	3.517	4.553
Communication across Functions	0.23	4.049	3.922
Communications between Managers and Employees	0.57	3.847	4.049
Teamwork	0.04	4.212	4.269
Goal Alignment	5.55**	4.981	5.580
Fairness of Individual Performance Evaluation	2.09	3.716	4.125
Fairness of Organization Performance Evaluation	1.23	4.336	4.641
Decision Quality	1.05	4.115	4.372
Job Satisfaction	0.14	3.419	3.511
Employee Performance	2.86*	3.602	4.043
Business Performance	7.82***	4.654	5.388
Shareholder Value	3.34*	3.660	4.230
Overall Focus on Goals of My Store	1.36	5.049	5.344

Variable Scale (1 = strongly disagree, 7 = strongly agree); test value Ho = 4 (median)

*Significant at the 0.10 level, **Significant at the 0.05 level, ***Significant at the 0.01 level

groups. Store managers' perceptions of the BSC are higher than those of district or regional managers in the areas of accuracy, reliability, and timeliness (although timeliness is below the scale mean of 4 for both groups). On the other hand, district and regional managers rated the BSC higher than store managers in the areas of understandability, impact on job performance, financial benefit to the store, adequate training, goal alignment, employee performance, business performance, and shareholder value.

These results indicate an impeded communication flow at Wildcat. Upper managers perceive that the BSC improves individual, store, and company performance, even though they have lower perceptions of technical qualities, such as accuracy, reliability, and timeliness. The unit-level managers appreciate the technical qualities that the system provides them but are not as confident the information will improve performance. For the system to achieve its maximum benefit, Wildcat's upper management should improve the communication flow

Table 6: ANOVA Results
Attitude Related to Store Size and Experience

Variable	F-stat	<i>n</i>	Standard Mean	Deviation
Number of Employees (four levels ^a)	1.90	325	1.88	0.952
Years of Experience with Wildcat	1.57**	328	10.82	17.566
Years of Experience as a Manager	0.87	313	12.47	13.668
Years as a Manager in Current Location	1.18	301	7.04	13.399

Note: *n* changes in this table because not all managers responding to the survey chose to provide this demographic information, which was optional in the instrument.

^a This variable is categorical as one of four levels based on the number of employees (store size).

**Significant at the 0.05 level

among management levels.

Table 6 presents the ANOVA results for managers' attitudes about the BSC based on store size and managers' experience. Our study employs three different measures of size and experience.³³ The first ANOVA relates attitude to the store's size, a categorical variable based on four ranges of the number of store employees. The results do not indicate a significant relationship between store size, as measured by employee count, and the manager's attitude.

The second ANOVA relates attitude to years of experience the manager has with Wildcat. This relationship is significant, indicating that managers with a longer tenure at Wildcat have more favorable attitudes toward the BSC. This result is not surprising as managers with longer tenure should have more experience with Wildcat's previous performance measures and the limitations of that system. The third ANOVA relates attitude to years of experience as a manager, but it is not restricted to their time as a manager with Wildcat. The fourth ANOVA relates attitude to experience as defined by the number of years in the manager's current location. Neither of these last two relationships is statistically significant.

The significance of the relationship between attitude and tenure with Wildcat, but not with managerial experience in total or time in a given location, has two likely explanations. The first is that managers view the BSC more favorably if they had more experience under the

previous one-dimensional measures Wildcat employed. The second is that managers gain an appreciation of the BSC as they have more personal experience with the measures in Wildcat's BSC.

SOME IMPLICATIONS

This study extends the balanced scorecard empirical literature by examining managers' perceptions of the information's usefulness and their attitudes toward a BSC. The results show that, in some areas, managers report higher levels of organizational benefits, information characteristics, and functionality, as well as positive attitudes toward the BSC. We also find that positive managerial attitudes toward the BSC are associated with higher BSC scores and that higher BSC scores are associated with higher financial performance. At the same time, the study highlights weaknesses in Wildcat's BSC, such as timeliness, adequacy of training, and individual employee performance measurement.

Our findings also contribute to BSC research by noting the differences in perceptions among multiple levels of management within the organization. Areas in which senior managers perceive the BSC as providing higher value include financial benefit and performance measures, and lower-level managers perceive characteristics such as accuracy and reliability more favorably. These results support previous research findings in which senior levels of management focus more on the strategic value a management technique such as a BSC provides.

Our study has clear implications for BSC users, who should understand that perceptions of the system vary across all levels of management. Therefore, adopters must work to overcome potential impediments to communication flows and provide adequate training to obtain full benefit from the system. One way to overcome these impediments is for upper management to implement a feedback mechanism for communication that will facilitate a common view across management levels of the system and its usefulness. In addition, managers at all levels need to be educated regarding the links between the company's strategy and the BSC. This education will allow lower-level managers to better understand the connection between the BSC metrics and shareholder value.

One trap for the unwary is the issue of timeliness in retail settings in which managers focus on sales data as the primary financial measure. The use of a multidimensional system incorporating a variety of nonfinancial measures typically results in delayed reporting relative to the sales-based financial measures. In cases such as the current study, managers may retain the ability to monitor financial measures in near real time, so the challenge is to ensure that they will use the additional information provided by the nonfinancial measures to improve store performance. Organizational systems can encourage the use of this information by increasing the speed at which the company reports nonfinancial measures. For example, organizations can increase the frequency of inventory counts to aid managers in controlling shrinkage, but the cost of the increased number of audits may be greater than the resulting savings. Likewise, customer service checks, such as mystery shoppers, could be conducted and reported on a more frequent basis, but again with increased costs. BSC users need to carefully weigh the benefit of more timely reporting against the cost of rapidly obtaining and disseminating such information.

As with any case study, this analysis is subject to limitations. First, all the respondents are employees of the same national retailer, so the results may not apply to other business settings. Similarly, all BSC dynamics cannot be captured with a single survey. The consistency of these results with those of other studies in both the BSC and ABC literature, however, helps to mitigate

concerns about this problem. Future studies could examine these relationships in other types of business settings. ■

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1 Theresa Libby, Steven Salterio, and Alan Webb, "The Balanced Scorecard: The Effects of Assurance and Process Accountability on Managerial Judgment," *The Accounting Review*, October 2004, pp. 1,075-1,094.

2 *Ibid.* A measure's quality reflects management's perception of its reliability. As the authors note, "Managers may fail to rely on the unique BSC measures in developing performance evaluation judgments due to perceptions that measures in common across divisions are of higher quality than those developed within one division," and that "when managers assess performance, they may place less weight on the measures perceived to be less reliable."

3 Wildcat, Inc. is a fictional name for the national retailer. Per a confidentiality agreement with the company, the authors are not permitted to disclose the actual name of the retailer.

4 The price of individual retail items is relatively low. As a result, the influence of price on the average consumer is debatable.

5 The cost of the store's retail space is not controllable by the store manager. The property location decision is made by the company's top management prior to the appointment of a store manager.

6 The firm in this study refers to its system internally as a BSC. Its measures, however, do not perfectly conform to the four areas of a BSC. Specifically, the learning and growth perspective and process-improvement perspective have little presence in the company's scorecard. Instead, the company underwent a "reengineering" of its processes prior to BSC implementation. As a result, the current system focuses heavily on the other two perspectives, financial and customer/quality. Therefore, a BSC purist would likely refer to this company's system as a KPI system rather than a true BSC.

7 Wildcat, Inc.'s primary product line is not generally subject to obsolescence or spoilage. The manufacturer credits Wildcat for

- these kinds of inventory losses. Shrinkage, therefore, reflects unauthorized losses of material.
- 8 An example of this type of measure is the store manager's compliance with corporate-specified slotting arrangements. Slotting involves decisions regarding how and where the store displays products.
 - 9 Because of the high-growth environment in which it operates, Wildcat faces challenges in attracting, identifying, retaining, and promoting talented store managers. Top management is, therefore, concerned with using the BSC to evaluate managers and with its effect on their job satisfaction, in addition to its effect on profits.
 - 10 Annie McGowan, "Impacts of ABCM on Job Performance and Environment," *Journal of Cost Management*, March/April 1999, pp. 32-36.
 - 11 Michael Schultz and Randall Ginzberg, "Implementation Research: The Third Generation," *Applications of Management Science*, JAI Press, London, England, 1984.
 - 12 Mary Malina and Frank Selto, "Communicating and Controlling Strategy: An Empirical Study of the Effectiveness of the Balanced Scorecard," *Journal of Management Accounting Research*, Vol. 13, 2001, pp. 47-90.
 - 13 Stan Davis and Thomas Albright, "An Investigation of the Effect of Balanced Scorecard Implementation on Financial Performance," *Management Accounting Research*, June 2004, pp. 135-153.
 - 14 Henry Lucas ("Empirical Evidence for a Descriptive Model of Implementation," *MIS Quarterly*, June 1978, pp. 27-42) notes that "technical quality must be evaluated on criteria of importance to users," and that if the model "is not validated and tested, potential users will have no faith in the solutions it provides." Therefore, such a system would be considered to lack quality.
 - 15 Michael Shields, "An Empirical Analysis of Firms' Implementation Experiences with Activity-Based Costing," *Journal of Management Accounting Research*, Vol. 7, 1995, pp. 148-166.
 - 16 Robert S. Kaplan and David P. Norton, *Translating Strategy into Action: The Balanced Scorecard*, Harvard Business School Press, Boston, Mass., 1996.
 - 17 Annie McGowan, "Perceived Benefits of ABCM Implementation," *Accounting Horizons*, March 1998, pp. 31-50, and *Journal of Cost Management*, March/April 1999.
 - 18 David Otley, "Performance Management: A Framework for Management Control Systems Research," *Management Accounting Research*, December 1999, pp. 363-382.
 - 19 Chris Ittner and David Larcker, "Innovations in Performance Measurement: Trends and Research Implications," *Journal of Management Accounting Research*, Vol. 10, 1998, pp. 205-238.
 - 20 Chris Ittner, David Larcker, and Marshall Meyer, "Subjectivity and the Weighting of Performance Measures: Evidence from the Balanced Scorecard," *The Accounting Review*, July 2003, pp. 725-758.
 - 21 Rajiv D. Banker, Gordon Potter, and Dhinu Srinivasan, "An Empirical Investigation of an Incentive Plan that Includes Nonfinancial Performance Measures," *The Accounting Review*, January 2000, pp. 65-92.
 - 22 Mark L. Frigo and Kip R. Krumwiede, "Balanced Scorecards: A Rising Trend in Strategic Performance Measurement," *Journal of Strategic Performance Measurement*, February/March 1999, pp. 42-48.
 - 23 Annie McGowan, March 1998.
 - 24 Michael Shields, 1995.
 - 25 Kip R. Krumwiede, "The Implementation Stages of Activity-Based Costing and the Impact of Contextual and Organizational Factors," *Journal of Management Accounting Research*, Vol. 10, 1998, pp. 239-277.
 - 26 Annie McGowan and Thomas P. Klammer, "Satisfaction with Activity-Based Cost Management Implementation," *Journal of Management Accounting Research*, Vol. 9, 1997, pp. 217-237.
 - 27 Rajiv D. Banker, Gordon Potter, and Dhinu Srinivasan, 2000.
 - 28 David Marginson, "Management Control Systems and Their Effects on Strategy Formation at Middle-Management Levels: Evidence from a U.K. Organization," *Strategic Management Journal*, November 2002, pp. 1,019-1,031.
 - 29 Rajiv Mehta, Rolph Anderson, Khalid Dubas, Alan Dubinsky, and Sandra Liu, "How Do Sales Managers Perceive Their Roles?" *Journal of Managerial Issues*, December 22, 1999, pp. 406-426.
 - 30 The response rate for store managers was 72.6% and the response rate for district and regional managers was 74.5%.
 - 31 This statement is consistent with the formal agreement between the researchers and upper management at Wildcat.
 - 32 Sales-to-plan (sales volume variance) was chosen as the financial performance measure because it was identified by Wildcat's management as the critical financial success factor at the store level. This measure is similar to same-store sales, which is commonly used by external analysts in the retail sector. It has the advantage of incorporating internal budget information that is not available to outside analysts.
 - 33 The number of observations for this analysis is less than the number of total responses because the demographic questions were optional. The researchers felt that it was critical that managers believe that their individual responses would be kept confidential to have honest information provided regarding the BSC. As a result, reporting demographic information that could possibly have identified a given manager, such as the time with the company and the store's size, was at the option of the respondent.