The Effects of an Implementation Timeline, Strategy Buy-in, Experience, and Affect on Balanced Scorecard Based Performance Evaluations and Bonus Allocations

by

Geoffrey Bartlett

A Dissertation Presented in Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy

Approved August 2012 by the
Graduate Supervisory Committee:

Philip Reckers, Chair
D. Jordan Lowe
Yuhchang Hwang

ARIZONA STATE UNIVERSITY

December 2012

ABSTRACT

The Balanced Scorecard (BSC) is a strategic planning and management system that causally links actions and subsequent financial and nonfinancial outcomes. The primary goal of the BSC is to motivate actions that are congruent with the organization's long-term strategy. A secondary purpose of the BSC is to facilitate the performance evaluation of managers charged with advancing the corporate strategy. To serve this second purpose the BSC must include a time dimension. Specifically, the strategic plan must recognize time lags between actions taken, lead outcomes (often nonfinancial in nature) and lagged outcomes (usually financial success measures). If an evaluator is not provided with timeline information a subordinate may be evaluated based on inappropriate performance metrics; that is, a subordinate may be held accountable for an outcome beyond the subordinate's time span of control. This study evaluates the effect on performance evaluations and bonus allocations when evaluators are provided (or not provided) with a strategy implementation timeline. This issue has not been previously examined in the literature. This study also examines the moderating effect of experience, management buy-in to the corporate strategy, and affect on performance evaluations and bonus allocations. Results from an experiment conducted with evening MBA students show that inclusion of a strategy implementation timeline leads to more normatively correct performance evaluations, but only for experienced participants. Higher levels of both positive and negative affect were found to result in choice avoidance behavior. Buy-in to the corporate strategy was not found to have an effect.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I: INTRODUCTION

A key goal of organizations is to improve managerial decision-making. Without superior managerial decision-making, organizational success in today's competitive world is difficult to achieve. One of management's critical decision tasks is performance measurement and evaluation (Hilton 2008). Strong performers should be rewarded, promoted, and motivated, while weak performers must be retrained or replaced. Performance evaluations can be contentious as individuals' careers can be significantly affected by the outcome. Therefore, the criteria used to evaluate personnel should be appropriate and fair. In this regard, personnel should only be held responsible for factors under their control. If performance evaluations are based on measures that have not been under an employee's control then decision quality declines and negative repercussions inevitably follow (Wilson and Chua 1993). For example, when measures that are reflective of performance are ignored in *post hoc* performance evaluations, while non-reflective measures are emphasized, personnel can be expected to respond and adjust their decision-making processes in ways not in the firm's best interest (Ghosh and Lusch 2000; Holmstrom and Milgrom 1991; McNamara and Fisch 1964).

The Balanced Scorecard (BSC) was developed to help overcome observed deficiencies in extant evaluation models (Kaplan and Norton 1992). The BSC is a multidimensional performance evaluation system that translates an organization's strategic goals into a set of causally linked financial *and nonfinancial* objectives and performance measures. The BSC has significantly increased in popularity

since its development. For example, a survey of 382 companies in 44 countries found that more than 50-percent of respondents use a BSC approach to performance measurement tracking (Lawson et al. 2006). However, recent research (e.g., Ittner et al. 2003a) argues that the cognitive limitations of managers may lead to non-normative judgments and decisions in BSC systems. The increased complexity and subjectivity of BSCs can lead to dysfunctional performance evaluations wherein employees are evaluated based on uncontrollable measures or measures incongruent with the organization's strategic objectives (Ittner et al. 2003a). The findings of prior studies examining the influence of cognitive limitations in BSC-based performance evaluations have differed in their conclusions (e.g., Banker et al. 2004; Dilla and Steinbart 2005; Ittner and Larcker 1998; Ittner et al. 2003a; Ittner et al. 2003b; Kaplan et al. 2011; Libby et al. 2004; Lipe and Salterio 2000, 2002; Tayler 2010; Wong-on-Wing et al., 2007). One possible explanation for these mixed results is that prior studies have not provided evaluators with sufficient information to support optimal decision-making. If there has been a critical missing variable in prior BSC studies, as I contend, findings of prior research may not be reliable.

For example, non-normative behavior might manifest in instances where decision makers are not provided with adequate information to infer which performance measures have been under a subordinate's control. The nature of causal linkages in the BSC model implies a time lag between actions and outcomes. If a manager is not provided with information regarding the requisite time span for an action to yield an outcome, then a subordinate may be held

responsible for measures beyond her/his *time span of control*. Specifically, failure to provide requisite time span information between actions and BSC intermediate and ultimate outcomes (*a* causes *b*, which in turn causes *c*) may lead a manager to hold a subordinate responsible for a lagged measure (e.g., "*c*") prior to there being sufficient time for improvement in the leading measures (e.g., "*a*" and/or "*b*") to drive the lagged measure.

Despite the importance of time span of control information, the original formulation of the BSC did not include a time dimension. Researchers have recently commented on the absence of a time dimension in BSCs. For example, Franco-Santos and Bourne (2005) note the scarcity of guidance in BSC literature regarding the identification of project milestones and timelines and attribute many BSC implementation failures to this cause. Nørreklit (2000) argues that it is impossible to establish cause and effect linkages in the absence of an explicit time dimension as part of the BSC. Further, Kaplan (2009) himself acknowledges the absence of a time dimension as a developmental limitation of the BSCs currently used in research and practice. In response to these criticisms, I examine the effect of providing evaluators with an explicit strategy implementation timeline in BSC-based performance evaluations and bonus allocations.

Adding a strategy implementation timeline to future research studies, however, may not be sufficient. That is, an evaluating manager must not only be provided with information regarding the timing between leading and lagged measures, but s/he must also "buy-in" to the logic and validity of the causal linkages contained within a strategy. If this latter condition is not met then a

manager conducting a performance evaluation may rely on non-strategically-linked measures contained within a BSC because s/he believes this action to be appropriate. Though recent studies have demonstrated the importance of creating strategic awareness (Banker et al. 2004) and providing managers with information regarding the relevance and reliability of measures contained within a BSC (Libby et al. 2004), buy-in itself has not been explicitly examined in the context of BSC-based performance evaluations. Consequently, I also examine the effect of evaluator buy-in on BSC-based performance evaluations and bonus allocations.

Individuals' experience may moderate the effectiveness of a strategy implementation timeline. Prior research has consistently shown that more experienced managers are better able to disregard irrelevant information compared to less experienced managers (Bédard and Chi 1993). This is at least partly explained by the fact that experienced individuals use their knowledge to apply directed information search strategies aimed at only acquiring relevant information. Less experienced individuals tend to employ a sequential information search strategy, which exposes them to irrelevant information (Biggs et al. 1987; Biggs and Mock 1983; Bouwman 1984). In a context in which a strategy and the related performance measures are unfamiliar, more experienced individuals may use a strategy map and accompanying implementation timeline to distinguish between relevant (strategically-linked measures within the controllable timeline) and irrelevant (non-strategically-linked measures and/or strategically-linked measures beyond the controllable timeline) information better

than less experienced individuals. Therefore, I also examine the moderating influence of experience on a strategy implementation timeline.

In addition to an implementation timeline, buy-in, and experience, individuals' affective states may have an effect how information is processed in BSC performance evaluation contexts. Affect, a general term used to describe both moods and emotions, is considered to be an integral component of judgment and decision making (Slovic 2000). In fact, it is argued that decision-making behavior cannot be fully understood unless both cognition and affect are jointly considered (Ding and Beaulieu 2009; Iyer et al. 2012; Kida et al. 2001; LeDoux 1996). Prior research has shown that positive affect can result in individuals desiring to avoid stimuli that can alter their mood state (Mackie and Worth 1989). Consequently, individuals with positive affect have been shown to have poorer performance on tasks that involve effortful, detailed, and systematic thinking (Schwarz and Bless 1991). Negative affect has been shown to result in choice avoidance behavior as a task becomes more difficult (Sawyer 2005). Negative affect has also been shown to lead individuals to acquire larger quantities of information and to process individual pieces of information faster. This has resulted in individuals with relatively higher levels of negative affect to spend less time examining the most important attributes of choice problems (Stone and Kadous, 1997). The large quantity and potential ambiguity of information contained in BSCs makes performance evaluations in this context inherently difficult. Further, effortful, detailed, and systematic cognition is required in these settings, which may lead individuals experiencing relatively higher levels of

positive or negative affect to process information differently than individuals with relatively lower levels of these affective states. Therefore, I also measure and control for individual levels of both positive and negative affect in BSC-based performance evaluations and bonus allocations. Subsequently, both positive and negative affect are partitioned into "high" and "low" groups to examine the choice avoidance behavior exhibited by individuals experiencing these affective states.

An experiment was conducted in which participants acting as divisional managers of a hypothetical high-end retail chain evaluated subordinates based on strategically- and non-strategically-linked measures within and beyond the subordinates' time span of control. Results indicate that experienced participants that were provided with a strategy implementation timeline conducted performance evaluations and bonus allocations in a normatively correct manner (i.e., evaluated subordinates based on strategically-linked measures within the subordinate's time span of control).[1] Inexperienced participants that were provided with timeline information, based subordinates' evaluations on strategically-linked measures beyond the controllable timeline, and/or on non-strategically-linked measures. This result is consistent with prior literature that finds that more experienced individuals have the sophisticated knowledge structures and procedural knowledge required to base BSC performance evaluations on only relevant performance measures (Krumwiede et al. 2011). Both positive and negative affect were shown to account for significant variance

[1] Four different measures of experience were tested in this study. However, as discussed in the results section, only two provided significant results – years of full-time professional work experience and experience with being personally evaluated on both financial and nonfinancial performance measures.

in BSC-based performance evaluations and bonus allocations. This reinforces the calls made in prior research regarding the necessity of controlling for individual affective states (Stone and Kadous 1997). Further, higher levels of both positive and negative affect were found to result in choice avoidance behavior. The extent to which managers bought-in to the strategy did not affect their performance evaluations or bonus allocations of subordinates.

The results of this study contribute to the existing BSC literature in three important ways and have implications for multidimensional performance evaluation systems used in both research and practice. First, this study is the first to explicitly test the effectiveness of providing managers with timeline information in an effort to induce more normative BSC-based performance evaluations (i.e., the extent to which evaluating managers hold subordinates responsible for only strategically-linked measures within subordinates' time span of control). Second, this study evaluates the moderating influence of experience on an implementation timeline. Less experienced individuals were found to be unable to disregard irrelevant information even in the presence of timeline information. However, more experienced participants used the timeline information to distinguish between relevant and irrelevant information, and therefore, based subordinates performance evaluations and bonus allocations on only relevant information. These findings provide a key methodological consideration in both practice and future research pertaining to multidimensional performance evaluations that include outcome measures with time horizons that may extend beyond the controllable timeframe of the evaluation period.

Specifically, the results indicate that normative BSC-based performance evaluations require (a) evaluators to have experience (preferably experience with multidimensional performance evaluations systems) and (b) that evaluators need to be provided with information regarding the timing relationship between lead and lag performance measures. If these conditions are not met, then subordinates may be held accountable for performance metrics beyond their controllable time horizon and/or non-strategically-linked performance metrics. Consequently, the subordinates can be expected to adjust their behavior in subsequent periods by focusing on improvement in areas that may not be in the best long-term interest of the firm. Lastly, the results indicate that future BSC-related performance evaluation studies need to, at a minimum, consider controlling for individual affective states. Individuals in this study with relatively higher levels of positive or negative affect were more reticent to make a difficult decision compared to individuals that with relatively lower levels of positive or negative affect. While future studies can measure and control for individual affective states, it may be difficult to do so in practice. However, companies should consider adopting training programs aimed at educating managers on the influence that affective states can have on the judgments and decisions they make.

The remainder of this paper is organized as follows: Chapter II reviews relevant literature and hypotheses are developed, Chapters III and IV describe the experimental method and results, and Chapter V concludes with a discussion of the study's implications and limitations.

CHAPTER II: MOTIVATION

THE BALANCED SCORECARD

The BSC was developed in the early 1990s in response to observed deficiencies in existing evaluation models (Kaplan and Norton 1992). Kaplan and Norton contend that an exclusive reliance on short-term financial performance causes an organization to sacrifice long-term value creation for short-term financial gains (Kaplan and Norton 1996, 2001). The BSC retains financial measures, but compliments them with measures on the drivers, or leading indicators of future financial performance. The basic premise behind the BSC is that by measuring and improving performance on causally-linked leading indicators in the areas of an organization's learning and growth activities, internal business processes, and customer relations, financial performance will, *in time*, improve (Kaplan and Norton 2001).

Atkinson et al. (1997, p. 94) state, "the balanced scorecard is among the most significant developments in management accounting and, thus, deserves intense research attention." Several researchers have subsequently responded to this call. One line of research, in combination with numerous anecdotal examples from Kaplan and Norton (1996, 2001), finds general support for the basic premise underlying the BSC. Specifically, financial performance *may* improve following efforts to measure and improve performance on causally-linked nonfinancial measures (Banker et al. 2000; Davis and Albright 2004; Hoque and James 2000; Ittner and Larcker 1998). However, recent research (e.g., Ittner et al. 2003a) demonstrates that the effectiveness of a BSC may be constrained by the extent to

which managers' cognitive limitations affect their judgments and decisions in BSC-based performance evaluations.

BSC-based performance evaluations and cognitive limitations. Lipe and Salterio (2000) was the first study to examine how managers' cognitive limitations may lead to cognitive biases in a BSC performance evaluation context. Fundamental limitations in the mental processing of complex and ambiguous information may cause individuals to employ various simplifying strategies. These strategies may lead to cognitive biases (mental errors), which are consistent and predictable and may lead to non-normative behavior (Heuer 1999). Lipe and Salterio (2000) find that managers use a simplifying strategy of ignoring measures that are unique to a particular division, and rely instead on measures that are common across divisions when conducting performance evaluations (even though unique measures are designed to capture a particular division's unique business strategy). They find that individuals overly rely on common measures because they are easier to compare across divisions than unique measures. This simplifying strategy has come to be known as the "common measure bias." Subsequent studies of the influence of managers' cognitive limitations in BSC-based performance evaluations have examined: the format/organization of the BSC (Lipe and Salterio 2002), fixation on financial measures (Ittner and Larcker 1998; Ittner et al. 2003a), process accountability and information quality (Libby et al. 2004), BSC training (Dilla and Steinbart, 2005), and involvement in BSC design, and describing the BSC as a causal chain (Tayler 2010). Additional biases that have been found to manifest in BSC-based performance evaluations

include the actor-observer attribution bias (Wong-on-Wing et al. 2007) and the negativity bias (Kaplan et al. 2011).

When evaluators are not provided with sufficient information cognitive limitations have been found to result in cognitive biases and non-normative behavior. For example, Banker et al. (2004) also found evidence of the common measure bias. However, they find that this bias is mitigated when evaluators are provided with additional information (i.e., a narrative and graphical representation (strategy map) of a business unit's strategy). Wong-on-Wing et al. (2007) examined the effect of requiring both supervisors and subordinates to assess the quality (validity) of a strategy as a means of reducing conflict in BSC-based performance evaluations. Consistent with Banker et al. (2004), all participants in their study were provided with a strategy map showing the causal linkages among the BSC elements and BSC results for two stores. The pattern of BSC results indicated that both stores exceeded targets in the Learning & Growth and Internal Processes perspectives and both stores fell below targets in the Customer and Financial perspectives. However, Store B's performance was superior to Store A's performance on all strategically-linked measures (i.e., Store B exceeded the strategically-linked targets in the Learning & Growth and Internal Processes perspectives more than Store A and was less negative on the strategically-linked Customer and Financial targets than Store A). Wong-on-Wing et al. designed their study so that participants would infer poor divisional performance by "presenting across two stores, a consistent pattern of performance suggesting weak linkages between driver and outcome measures" (p. 8). Further, participants

were informed that the store managers were recently hired to execute the *new* strategy.

Wong-on-Wing et al. (2007) interpret their findings to reflect a supervisor (observer) bias, but not a subordinate (actor) bias, when evaluating subordinate performance with respect to achievement of the BSC strategy. However, the pattern of results presented to participants may not have been reflective of weak linkages between drivers and outcomes (particularly with respect to Store B). Rather, the pattern may have suggested strong linkages between drivers and outcomes, but given that the strategy was new, an insufficient amount of time had elapsed for the improvement in the leading measures to be reflected in financial performance. In the absence of an explicit strategy implementation timeline it is not clear whether supervisors relied on non-strategically-linked measures and/or strategically-linked measures beyond the controllable timeline of the subordinate when conducting the performance evaluations. This appears to be a major limitation of their study.

STRATEGY IMPLEMENTATION TIMELINE

Timing between lead and lag performance measures. Kaplan and Norton (1996, p. 17) assert that an essential benefit from BSC implementation is an understanding of the link between the timing and magnitude of the levers managers control and future financial performance (Banker et al. 2000). Further, Atkinson (2006) claims that a critical element in the usefulness of the BSC in guiding strategic improvement is recognition that an adequate amount of time must elapse between the implementation of a strategic initiative and the

determination of whether the strategy has been successful. Field studies conducted over the past decade have provided evidence of temporal lags of various lengths between improvement in leading, nonfinancial measures and improved financial performance (e.g., Banker et al. 2000; Davis and Albright 2004; Ittner and Larcker 1998).[2] Moreover, Kaplan and Norton (2001) provide numerous anecdotal examples in which BSC adopting organizations see improvement in financial performance within 12 – 24 months after the BSC has been implemented.[3] Despite the importance of timing considerations in BSC implementation and BSC-based performance evaluations, and evidence that time lags exist, it is surprising that prior research has not explicitly examined the effect of providing managers with a strategy implementation timeline.

Banker et al. (2000) highlights the importance of communicating information regarding the relationship between the timing and magnitude of leading and lagged performance measures. The managers in their study could receive a substantial bonus (up to 35 percent of base salary) prior to the implementation of a BSC-based incentive plan. Further, they found only a six-month lag between improvement in customer satisfaction and improved financial performance. The authors inquired as to why the managers had not previously focused on sufficiently improving customer satisfaction and why, after the incorporation of customer service measures into the compensation plan, did both

[2] Ittner and Larcker (1998) and Banker et al. (2000) provide evidence of a six-month lag between improvement in measures of customer service and improvement in financial performance. Davis and Albright (2004) show significant improvement in financial performance for BSC implementing branches within two years.

[3] Kaplan and Norton (2001) note that in some cases this may take up to 36 months.

customer satisfaction and profit improve. Interviews with the senior managers revealed that

> …although hotel managers were aware of the strategic importance of customer satisfaction for financial performance, they did not know either the timing or the magnitude of this relation. Without such knowledge, managers did not recognize the true benefit of allocating more effort and resources to improve customer satisfaction…(pp. 89-90)

Several researchers have recently commented on the absence of a BSC strategy implementation timeline in both research and practice (e.g., Ahn 2001; Bukh and Malmi 2005; Franco-Santos and Bourne 2005; Papalexandris et al. 2005). Further, Nørreklit (2000, p. 71), in a broad critique of the BSC's theoretical foundations, notes, "If a cause-and-effect relationship requires a time lag between cause and effect, then it is problematic that the time dimension is not part of the scorecard." More recently, Kaplan (2009) commented on the absence of a strategy implementation timeline in the current conceptualization of the BSC:

> [S]trategy maps still represent a highly-aggravated view of the causal relationship among strategic objectives. In order to make strategy maps more visually appealing to managers and employees, we have simplified the causal relationships assumed within the strategy map…A detailed systems dynamics model would incorporate causal linkages that have estimates of magnitude and *time delay*…[emphasis added] (p. 1268)

When managers are not provided with information regarding the timing between drivers and outcomes, they may not only fail to undertake appropriate strategic initiatives, but they may also base performance evaluations on measures beyond a subordinate's time span of control.

Controllability and responsibility accounting. Controllability is the degree to which a specific manager's action(s) influences the probability distribution of costs, revenues, or other items in question (Demski 1994). Increases in perceived controllability should lead to greater responsibility being attached to a manager for the consequences of her/his decisions (Ghosh 2005; Kelley and Michela 1980). Conversely, decreases in perceived controllability should lead to less responsibility being attached to a manager for the consequences of her/his decisions. Therefore, the higher the perceived control a manager has the higher (lower) they should be evaluated based on the positive (negative) outcomes resulting from their actions. This concept is similar to responsibility accounting. Under responsibility accounting managers should only be evaluated based on measures under their control. Managers should not be rewarded for revenues which are not a result of their own efforts, nor should they be held responsible for costs which they cannot control (Wilson and Chua 1993).

Consideration of the timing relationship between leading, nonfinancial measures and lagged financial performance is essential, not only in strategy implementation, but also in the performance evaluation of managers responsible for a strategy's implementation. Consistent with the concepts of controllability and responsibility accounting, a manager that is charged with implementing a

strategy should only be held responsible for outcomes that have been under her/his control. In the context of this study, evaluators that are provided with a strategy map and implementation timeline are expected to evaluate subordinates based on strategically-linked measures that have been under the subordinates' time span of control. Evaluators that are not provided with this information are expected to evaluate subordinates based on non-strategically- and strategically-linked performance measures, irrespective of whether or not they have been under the subordinates' time span of control. This prediction is formally stated as Hypothesis 1:

H1a: Evaluators provided with a strategy map and implementation timeline will base subordinates' performance evaluations more on measures that are congruent with firm's long-term strategy and that are under the subordinates' time span of control compared to evaluators that are provided with a strategy map, but not an implementation timeline.

H1b: Evaluators provided with a strategy map and implementation timeline will base subordinates' bonus allocations more on measures that are congruent with the firm's long-term strategy and that are under the subordinates' time span of control compared to evaluators that are provided with a strategy map, but not an implementation timeline.

"BUY-IN" TO THE CORPORATE STRATEGY

A key factor in the successful implementation of a strategy is management and employee buy-in to the strategy.[4] If lower-level employees buy-in to a BSC strategy they will have awareness of the strategy, perceive the causal linkages between drivers and outcomes to be valid, and be committed to improving performance on the leading measures of financial success. In addition to these components, managers that buy-in to a BSC strategy will evaluate the performance of subordinates charged with implementing the strategy based on measures congruent with the strategy.

Prior work highlights the importance of generating buy-in (e.g., see Barr 2011 and Cokins 2005). Further, Kaplan and Norton (2001, p. 217) list "develop[ing] buy-in to support the organization's strategy" as the second of four steps in creating strategic awareness. Organizations actively seek to persuade employees to buy-in to the organization's vision, and a lack of employee buy-in (at all levels of the organization) can hinder successful implementation of a BSC (Kay 2009). Recent studies have demonstrated the positive effects of generating components of buy-in at the management level, as well as the negative repercussions that may result when not generating it.

For example, Banker et al. (2004) found that managers that were provided with narrative and graphical representations of the corporate strategy (strategy

[4] Buy-in is commonly divided into intellectual and emotional components. Intellectual buy-in relates to individuals being aware of, and aligned with, key business issues and understanding how they can positively affect them. Emotional buy-in relates to individuals' commitment and engagement in the achievement of organizational goals. Both components of buy-in are thought to be equally valuable (Thomson et al. 1999; Thomas and Hecker 2000).

maps) evaluated subordinates more on strategically-linked measures relative to non-linked measures. Similarly, Libby et al. (2004) found that providing evaluating managers with a third-party assurance report signaling the reliability and relevance of the performance measures included in a BSC resulted in reliance on measures unique to a business unit in performance evaluations. Further, Webb (2004) found that managers that perceived the causal linkages in a strategy to be valid were more willing to commit to both nonfinancial and financial goals than managers that did not perceive the causal linkages to be valid. More recently, Guymon and Mitchell (2012) found that subordinates are more willing to accept risk when the linkage between the performance measures they will be evaluated on and the firm's strategy is explained to them. Specifically, they found that when managers use the firm's strategy to explain the imposition of compensation risk in subordinates' performance measures, the subordinates had increased beliefs regarding the informational justice that exists in the relationships between risk and the performance measures. In turn, they found that higher levels of informational justice increased the amount of risk the subordinates were willing to accept, which led them to allocate greater effort. Subordinates that received no explanation for the imposition of compensation risk had lower beliefs regarding informational justice and were not as willing to accept higher levels of risk.

In contrast to these studies, which show positive implications of generating components of buy-in, Ittner et al. (2003a) demonstrates the negative consequences that may be attributable to not generating management buy-in. Ittner et al. found that the use of subjectivity in weighting BSC measures allowed

managers to ignore leading measures of strategy success in bonus allocation decisions. Instead, managers primarily relied on financial measures and, in some instances, on measures that were not included in the BSC. Though the managers were reported as having a good understanding of the BSC process, they clearly were not committed to it. Consequently, the BSC-based incentive plan was replaced with a plan that focused on revenues. More recently, Hibbets et al. (2012) found that managers were more likely to evaluate subordinates on measures that were common across divisions, as opposed to measures unique to a particular division, when they felt a particular division's strategy did not adequately differentiate itself from the market conditions faced by a separate division of the same company.

Based on these prior results, and in the context of this study, I predict that managers that buy-in to the corporate strategy will base their performance evaluations and bonus allocations on measures congruent with the firm's long-term strategy. Conversely, managers that do not buy-in to the corporate strategy are predicted to not rely on strategically linked measures, and therefore, will base subordinates' performance evaluations and bonus allocations on measures incongruent with the long-term strategy of the firm. These predictions are formally stated as Hypothesis 2:

H2a: Evaluators that buy-in (do not buy-in) to the corporate strategy will base their performance evaluations of subordinates on measures congruent (incongruent) with the firm's long-term strategy.

H2b: Evaluators that buy-in (do not buy-in) to the corporate strategy will base their bonus allocation decisions for subordinates on measures congruent (incongruent) with the firm's long-term strategy.

EXPERIENCE

Participation in events or tasks associated with a particular area provides individuals with domain experience, which facilitates the creation of knowledge stored in memory (Libby 1995; Vera-Muñoz 2001; Victoravich 2010). As individuals gain further domain experience they have greater access to knowledge structures stored in memory related to that domain (Vera- Muñoz, 2001). Prior literature has shown that the application of knowledge gained through domain experience can improve performance on judgment and decision-making tasks (Bonner et al. 1997; Nelson 1993; Nelson et al. 1995; Victoravich 2010). However, the effect of experience on performance has been shown to be indirect. Specifically, experience directly affects knowledge, which then affects judgment and decision-making performance (Dearman and Shields 2001; Krumwiede et al. 2011; Libby 1995; Vera-Muñoz 2001).

Two recent studies have examined the effect of experience in BSC settings. Griffth and Neely (2009) used a quasi-experiment to evaluate the impact of a BSC-related pay scheme on branch performance in a multinational distributor of heating and plumbing products. Their results indicate that the use of a BSC only had a positive effect on branch performance when branch managers had

higher levels of experience.[5] Specifically, the authors found that more experienced managers were better able to perform under the BSC compared to less experienced managers. They conclude that the more experience a manager has, the greater his/her ability is to understand where to allocate their effort in order to achieve the greatest payoff (i.e., they have sufficient knowledge, gained through experience, to know how to best allocate their effort).

Krumwiede et al. (2011) used a multi-period experimental setting to examine the effect of task outcome feedback and broad domain evaluation experience on the use of unique BSC scorecard measures. They find that, when coupled with outcome feedback, managers with greater levels of broad domain experience place more weight on unique measures relative to managers with less experience. Further, in post-experimental questioning they find that managers with greater broad domain experience found the unique measures to be more relevant in the evaluation process compared to managers with less experience.[6] This study demonstrates that broad domain experience can result in the sophisticated knowledge structures and procedural knowledge required to make better use of data in a BSC performance evaluation context.

The findings of Griffith and Neely (2009) and Krumwiede et al. (2011) highlight a common finding in studies examining the effect of experience on judgment and decision-making tasks. Specifically, more experienced individuals

[5] Griffith and Neely (2009) partition their sample at the median of 10-years of experience and found that all of the effect of the BSC was in the greater-than-10-years-experience group.
[6] The "unique" measures used in this study were designed to capture the unique strategy of a particular division. Given that the two divisions in the experiment had different strategies, the unique measures were more relevant in the performance evaluation relative to measures that were common across divisions.

possess the more highly developed knowledge structures and procedural knowledge required of them to be able to disregard irrelevant information, and thus, base their judgments and decisions on only relevant information (Bedard and Mock 1992; Bonner and Lewis 1990; Vera-Muñoz et al. 2001; Victoravich 2010). This is due, at least in part, to differences in how experts and novices search for information. For example, research in auditing has found that while less experienced auditors examine information sequentially, which exposes them to irrelevant information, more experienced auditors use their knowledge to apply directed information search strategies aimed at acquiring only relevant information (Biggs et al. 1987; Biggs and Mock 1983; Bouwman 1984). Shelton (1999), citing Shanteau (1993) and Lesgold et al. (1988) states:

> It is not necessarily the knowledge of what is relevant or irrelevant that distinguishes the expert's judgment from the novice. The expert tends to ignore irrelevant information while the novice seems unable to do so even when the irrelevancy of the information is recognized prior to making the decision. (p. 219)

Based on the preceding discussion, more experienced individuals that are provided with a strategy map and implementation timeline are expected to use this information to evaluate subordinates' performance based on only relevant information. In the context of this study, relevant information includes measures that are linked to the firm's long-term strategy and that are under the subordinates' time span of control. Irrelevant information includes measures that are linked to the firm's long-term strategy, but are beyond the subordinates' time

span of control and/or non-strategically-linked measures. Less experienced individuals are expected to evaluate subordinates' performance on both relevant and irrelevant information, irrespective of whether or not they receive an implementation timeline. This prediction is formally stated as Hypothesis 3:

H3a: Evaluators with higher levels of experience that are provided with a strategy map and implementation timeline will base subordinates' performance evaluations on relevant information while evaluators with lower levels of experience will base subordinates' performance evaluations on both relevant and irrelevant information, irrespective of whether or not they receive an implementation timeline.

H3b: Evaluators with higher levels of experience that are provided with a strategy map and implementation timeline will base subordinates' bonus allocations on relevant information while evaluators with lower levels of experience will base subordinates' bonus allocations on both relevant and irrelevant information, irrespective of whether or not they receive an implementation timeline.

AFFECT

Affect, which is a general term used to describe both moods and emotions, is considered to be an integral component of judgment and decision-making (Slovic 2000). In fact, decisions based solely on cognition (in the absence of affect) are considered uncommon (Forgas 1995; Iyer et al. 2012). Therefore,

decision-making behavior cannot be fully understood unless both cognition and affect are jointly considered (Ding and Beaulieu 2009; Iyer et al. 2012; Kida et al. 2001; LeDoux 1996). Rational decision-making requires both deliberate analysis and affective input. However, affect can take precedence over deliberate analysis in the decision-making process because it requires less effort, and therefore, is more efficient (Damasio et al. 1990; Epstein 1994; Lowenstein et al. 2001).

Prior research has historically separated affect into orthogonal valence states of positive and negative affective states (Chung et al. 2008, 2011; Cianci and Bierstaker 2009; George and Jones 1997; Iyer et al. 2012; Stone and Kadous 1997). Positive affect (positive feeling states) can facilitate flexible, effective problem solving, decision-making, thinking, and evaluations of events irrespective of whether the positive affect is naturally occurring or induced (Aspinwall and Taylor 1992; Estrada et al. 1997; Isen 1999; Taylor and Aspinwall 1996; Weiss et al. 1999). Positive affect can also result in more creative problem solving through the use of broader categories and flexible schemas in sorting information (Chung et al. 2008; Isen and Daubman 1984). While higher levels of creativity and flexible thinking may be desirable in some situations (e.g., artistic or entrepreneurial endeavors), it can have more of a detrimental effect in others. For example, in auditing decisions consensus is often used as a measure of decision quality. Chung et al. (2008) found that auditors in a positive affect condition exhibited more creativity in an inventory valuation task, and therefore, had lower levels of consensus on inventory values than auditors in neutral or negative affect conditions.

According to the mood maintenance theory, individuals experiencing positive affect are interested in maintaining their positive mood state (Isen and Simmonds 1978; Wegener and Petty 1994, 1996). This can result in individuals in a positive mood avoiding stimuli that can alter their mood state (Mackie and Worth 1989). Therefore, these individuals can become overly reliant on heuristic thought, which can reduce efforts to seek out and consider other, potentially more promising alternatives (Baron et al. 2012; Klayman et al. 1999). This can be particularly problematic in tasks that involve effortful, detailed, and systematic thinking (Schwarz and Bless 1991). In a performance evaluation context, the mood maintenance approach of positive-mood individuals may lead them to avoid difficult and unpleasant situations. Thus, they may be less likely to make judgments and decisions that could have negative implications for others (e.g., evaluating one individual less favorably than another) (Connelly et al. 2004).

Negative affect (negative feeling states) can interrupt information processing, and therefore, decrease processing capacity (Eysenck 1982; Sarason 1975; Simon 1967). Negative affect requires attention, which can reduce the amount of attention available for task-related information processing (Stone and Kadous 1997). This opens the door for extraneous thoughts to enter the mind, which can detract from thoughts that are necessary to the successful performance of the task at hand (Raghunathan and Pham 1999; Seibert and Ellis 1991). Therefore, individuals experiencing negative affect may also rely on heuristic decision strategies, which may result in lower task performance. In an experiment using undergraduate students as participants, Stone and Kadous (1997, p. 171)

found that high negative affect resulted "in decision makers acquiring more information and processing individual pieces of information faster compared with conditions of low negative affect." Consequently, participants with higher levels of negative affect that were facing a relatively more difficult decision spent less time examining the most important attributes of the choice problem compared to participants facing a relatively easier decision. The authors conclude that it is essential to, at a minimum, control for individual affective states when manipulating task-related variables.

Negative affect can also make individuals reticent to make a decision. Individuals experiencing negative affect may anticipate that poor decisions will result in future unpleasant outcomes and feelings (Connelly et al. 2004; Iyer et al. 2012; Kida et al. 2001; Loewenstein et al. 2001). Therefore, these individuals tend to take the course of least resistance or avoid making a decision at all (Anderson 2003; Lerner and Keltner 2000). For example, Sawyer (2005) found that negative affect increases as a task becomes more difficult, which leads to a desire to avoid making a decision altogether. Specifically, the executive MBA students in her experiment that were faced with a more challenging decision task (more ambiguous capital investment decision) experienced higher levels of negative affect compared to participants in a less challenging decision task. Those participants with higher levels of negative affect exhibited a significantly stronger desire to avoid making a decision (choice avoidance). In a performance evaluation context, individuals experiencing higher levels of negative affect may

be more likely to avoid making a difficult decision (evaluating one individual less favorably than another) because it can lead to unpleasant outcomes or feelings.

Higher levels of both positive and negative affect have been shown to lead to choice avoidance behavior, particularly when a choice is difficult. Whereas individuals with positive affect may not want to "spoil their good mood," individuals with negative affect do not want to worsen theirs or experience additional components of negative affect. Therefore, individuals experiencing higher levels of positive or negative affect are predicted to be more likely to avoid making a difficult decision (evaluating one subordinate less favorably than another) compared to individuals experiencing relatively lower levels of positive or negative affect. Thus, the following is the fourth hypothesis:

H4a: Evaluators with higher (lower) levels of positive affect will exhibit more (less) choice avoidance in subordinates' performance evaluations.

H4b: Evaluators with higher (lower) levels of negative affect will exhibit more (less) choice avoidance in subordinates' performance evaluations.

H4c: Evaluators with higher (lower) levels of positive affect will exhibit more (less) choice avoidance in allocating subordinates' bonuses.

H4d: Evaluators with higher (lower) levels of negative affect will exhibit more (less) choice avoidance in allocating subordinates' bonuses.

CHAPTER III: METHODOLOGY

RESEARCH DESIGN

This study utilizes a 2 x 2 x 2 between-subjects design. Strategy implementation timeline was manipulated at two levels (no timeline provided; timeline provided). Buy-in was also manipulated at two levels (low; high). Experience was a measured variable and categorized into two levels as described below. Affect was included as a covariate in the testing of Hypotheses 1 – 3 and as a partitioned variable ("high" vs. "low" positive affect and "high" vs. "low" negative affect) to test Hypothesis 4.

PARTICIPANTS

Participants in the study were 86 evening MBA students from a major metropolitan university that were enrolled in a management accounting course.[7] Prior experimental BSC research has commonly used MBA students as participants (e.g., Banker et al. 2004; Kaplan et al. 2011; Libby et al. 2004; Lipe and Salterio 2000, 2001; Webb 2004; Wong-on-Wing et al. 2007). Therefore, the results of this study allow for a legitimate comparison of findings across prior experimental BSC research. Participants ranged in age from 22 to 56 years old with an average of 30.7 years and 24.4-percent of the participants were female.

EXPERIMENTAL TASK

The experimental case used in this study was adapted from those used by Lipe and Salterio (2000, 2002), Banker et al. (2004), Wong-on-Wing et al. (2007), and Kaplan et al. (2011). The case was based on a hypothetical high-end retail

[7] The Balanced Scorecard had not been covered in class prior to the experiment.

organization, which was patterned after an actual high-end leading retailer. Many of the actual company's strategic objectives were included in the experimental BSC materials. Participants assumed the role of a divisional manager rating the performance of two different store managers that report to the divisional manager. The two store managers were each responsible for the performance of one of two retail stores in the same metropolitan area (the North Store and the South Store). The stores were described as being located in nearly identical socio-economic areas and catered to clientele that were demographically similar. Each participant performed performance evaluations and bonus allocations for both store managers (North and South). At the end of the case, participants were asked standard demographic questions (age, gender, academic background, current emphasis of study, undergraduate degree, and current/past employment) to control for any cross-sectional differences. Further, they responded to manipulation checks and questions regarding the perceived realism, understandability, and difficulty of the case materials. Eighty-eight percent of participants found the task realistic and 96.5 percent understood the case. The mean rating for task difficulty was 3.52 (1 = "very easy" and 7 = "very difficult").

MANIPULATED INDEPENDENT VARIABLES

Strategy Implementation Timeline. A strategy implementation timeline was manipulated between subjects. All participants received a strategy map patterned after Banker et al. (2004) (see Figure 1). In addition to the strategy map, one-half of the participants were randomly assigned to receive a strategy implementation timeline, which was shown below the strategy map. The case

materials for participants in the strategy implementation timeline condition described the strategy as requiring two to three years, on average, for results to fully manifest. Specifically, it took an average of 22 months overall for the strategy to result in improvement in three causally-linked nonfinancial areas and an average of 30 months overall for improvement in the leading measures to be reflected in financial performance. However, the case also indicated that the strategy had been implemented at each of the two stores only 18 months previously, at the same time each of the two store managers were promoted to their current position and charged with implementing the strategy. Therefore, at neither store had the new strategy been in place long enough for improvement in leading, nonfinancial measures to be fully reflected in financial performance (i.e., achievement of the financial performance targets was beyond the store managers' time span of control).

The BSC contained 16 measures spread evenly across the four BSC perspectives: Learning and Growth, Internal Processes, Customer, and Financial (see Figure 2). Each perspective contained two measures that were explicitly linked to the strategy map (relevant) and two that are not (irrelevant). The following patterns of performance across the four BSC perspectives were embedded in the case as follows:[8]

1. **Learning and Growth perspective:** The North Store clearly exceeded, and the South Store fell below, the two strategically linked measures, while the South Store clearly exceeded, and the North Store

[8] The amount of time for improvement in each perspective was kept constant (6 to 9 months) to reduce the cognitive load placed on participants.

fell below, the two non-strategically linked measures. The implementation timeline for phase one of the strategic plan was 6 to 9 months (average of 7.5 months). Therefore, the strategic timeline called for a minimum of 6 months, and an average of 7.5 months, following the initial implementation of the strategy to achieve measurable success on the first set of strategically linked target goals.

2. **Internal Processes perspective:** The North Store clearly exceeded, and the South Store fell below, the two strategically linked measures, while the South Store clearly exceeded, and the North Store fell below, the two non-strategically linked measures. The implementation timeline for phase two of the strategic plan was an *additional* 6 to 9 months (average 7.5 months). Therefore, the strategic timeline called for a minimum of 12 months, and an average of 15 months, following the initial implementation of the strategy to achieve measurable success on the second set of strategically linked target goals.
3. **Customer perspective:** The North Store slightly exceeded, and the South Store fell slightly below, the two strategically linked measures, while the South Store exceeded the North Store on the two non-strategically linked measures. The implementation timeline for phase three was an *additional* 6 to 9 months (average of 7.5 months). Therefore, the strategic timeline called for a minimum of 18 months, and an average of 22.5 months, following the initial implementation of

the strategy to achieve measurable success on the third set of strategically linked target goals.

4. **Financial perspective:** The South Store clearly exceeded, and the North Store clearly fell below, the two strategically linked measures, while the North Store clearly exceeded the South Store on the two non-strategically linked measures. The implementation timeline for the final phase of the strategy was an *additional* 6 to 9 months (average 7.5 months). Therefore, the strategic timeline called for a minimum of 24 months, and an average of 30 months, following the initial implementation of the strategy to achieve measurable success on the strategy's lagged financial performance goals.

With the strategy map and implementation timeline, the store managers should have only been held responsible for their performance on the Learning and Growth and Internal Processes measures, as they were the only measures clearly within the store managers' 18-month time span of control. It was possible, under the most favorable conditions, for the store managers' to be held responsible for the Customer measures. However, improvement in the Financial measures was clearly outside of the store manager's time span of control as they required a minimum of 24 months for improvement subsequent to the strategy being implemented.

Within each BSC perspective, the sum of the variance (difference between actual results and target results) was offset between the stores for each perspective; with the sum of the variance across both stores for each perspective

equaling zero, and therefore, the aggregate sum of the variance equaling zero. The variances were constructed in this manner so that participants that failed to attend to the strategy would evaluate the store manager's performance as equivalent. However, if a participant (a) attended to the strategy implementation timeline and (b) bought-in in to the strategy, they would evaluate the North Store manager more positively than they would evaluate the South Store manager.

Buy-in. Buy-in to the corporate strategy was manipulated between subjects. Participants were randomly assigned to either a "high buy-in" or "low buy-in" condition. The case materials indicated that the company pilot-tested the strategy prior to rolling it out company wide. In the high (low) condition the pilot-test stores achieved a 100-percent (50-percent) success rate (i.e., the degree to which stores met financial performance targets). Further, in the high (low) condition the case indicated that stores that implemented the strategy subsequent to pilot-testing experienced a 95-percent (60-percent) success rate.

Thomson and Hecker (2000) describe communication as being essential when attempting to generate buy-in. Thomson et al. (1999, p. 830) found that "people with high levels of buy-in rate their company's communication highly, and those with low levels generally rate communication as average or poor." Kaplan and Norton (2001) emphasize the necessity of communication and commitment from executive level management when designing and implementing a BSC. In discussing the generation of buy-in, they list quarterly town meetings, brochures, monthly newsletters, education programs, and the company intranet as ways an executive team can communicate a strategy and BSC to all levels of the

organization, as well as demonstrate a high level of commitment. Therefore, case materials for participants in the high buy-in condition also described the executive management team's communication and commitment as follows:

> CEO Michael Reynolds is a strong proponent of the new corporate strategy and accompanying Balanced Scorecard. He has taken the following steps to ensure its success:
>
> - He has had various members of the corporate executive team that developed the Balanced Scorecard visit every store prior to implementing the strategy. These executives hold meetings with all employees of the implementing store, fully explain the strategy and Balanced Scorecard to the employees, and hand out brochures that describe the strategic objectives and how they will be measured. They also answer any questions the employees may have.
> - He assigned Brandon Lewis, a business performance analyst at eXclusivity, to oversee the deployment of the Balanced Scorecard full-time.
> - He has required the Balanced Scorecard to be made highly visible to all employees by having it posted in all break rooms, employee manuals, and on the company's intranet.
> - He also required that the company's intranet have voice and video segments of the corporate executive team describing the

overall strategy and explanations for individual objectives, measures, targets, and initiatives.

- He has made the strategy and Balanced Scorecard an integral part of the orientation process for all new employees.
- He requires the company's newsletter to provide periodic reports on stores that have implemented the Balanced Scorecard and share success stories from top-performing managers.

Case materials for participants in the low buy-in condition described the executive team's degree of communication and commitment as follows:

> When eXclusivity began rolling out the new strategy three years ago a memo was sent out to all employees stating what the strategy was and when each store would begin implementing it. When the stores you oversee began implementing the new strategy 18 months ago you received an additional memo which contained the strategy and Balanced Scorecard. The memo requested that you review the strategy with store managers you oversee and that they, in turn, review the strategy with their employees.

While the sum of the variance (difference between actual results and target results) was offset between the stores for each perspective, with the sum of the variance across both stores for each perspective equaling zero, the North Store manager performed significantly better overall on the strategically linked measures. Specifically, the North Store manager's sum of variance for

strategically linked measures was 39.2% while the South Store manager's was -39.3%. Participants who understood and bought-in to the strategy should have evaluated the store managers based on strategically-linked measures. In turn, these participants were expected to evaluate the North Store manager more favorably than the South Store manager.

MEASURED INDEPENDENT VARIABLE

Experience. Participants were asked to respond to four primary questions regarding their prior experience. Specifically, participants were asked to respond to the following questions: (1) Their number of years of full-time professional work experience, (2) The number of years they have had experience working with the BSC, (3) If they have evaluated subordinates on both financial and nonfinancial measures in the past, and if so, the weight placed on each type of measure, and (4) if they are personally evaluated on both financial and nonfinancial measures, and if so, the weight placed on each type of measure. Each of these measures are discussed in the results section below.

CONTROL VARIABLE

Affect. Participants completed the PANAS scale (Positive Affect Negative Affect Schedule) developed by Watson and Tellegan (1985). A principal components factor analysis was conducted with the selection criterion being the retention of variables with eigenvalues ≥ 1.00 and factor loadings ≥ 0.50. The results of the factor analysis are described below.

DEPENDENT VARIABLES

Each participant rated the performance of each store manager (North and South). Participants were presented with the following prompt: "As divisional manager, please indicate, on the following scale, your evaluation of the performance of the North (South) Store manager, Alex Kluger (Kurt Holmgren) over the past eighteen months." Participants responded on an 11-point scale (0 = Extremely Poor; 10 = Excellent). Further, participants were asked to make a bonus allocation decision by responding to the following: "As divisional manager you are responsible not only for evaluating the performance of the store managers under your supervision, but also for allocating their bonuses from a pool. You have a pool of $50,000 to allocate between Alex Kluger (North Store manager) and Kurt Holmgren (South Store manager). Please allocate the $50,000 between these two store managers by writing their bonus amounts in the space provided." The difference in performance evaluation scores (North minus South) and bonus allocation amounts (North minus South) were used as the dependent measures in this study.

CHAPTER IV: ANALYSIS AND RESULTS

MANIPULATION CHECKS

Participants responded to four manipulation check/attentiveness questions. The first question asked participants to respond to the following, "Without looking back at any prior information, please use the following scale to indicate how successful you believe the new eXclusivity corporate strategy will be in meeting competitive challenges. That is, please indicate the degree to which you feel that by following the corporate strategy eXclusivity stores will be able to *grow same-store sales* and *net sales margins* (to what degree to you "buy-in" to the corporate strategy?)" Participants responded to this question on an 11 point scale (0 = "Very Unlikely" and 10 = "Very Likely"). The mean response for participants in the high (low) buy-in condition was 7.08 (5.94). The difference in these means (1.14) is statistically significant ($t = 2.808$, $p = 0.003$, one-tailed). Therefore, participants in the high buy-in condition appear to have "bought-in" to the strategy more than those in the low buy-in condition. However, as discussed in the results section, the mean scores in both cases are greater than the scalar mid-point of 5.

The second question participants responded to was, "Without looking back at any prior information, please respond to the following question: I was provided with an explicit detailed timeline which showed how long it should take for the eXclusivity corporate strategy to play out as well as how long it should take for improvement in one category to lead to improvement in the subsequent category."

Participants responded by either circling "True" or "False." Eight participants failed this manipulation check, and thus, were eliminated from the analysis.

The third (fourth) question asked participants to respond to the following, "Without looking back at any prior information, please respond to the following questions: How long has Alex Kluger (Kurt Holmgren) been manager of the North (South) Store?" Participants circled either 6 months, 18 months, or 30 months. Seven participants responded by circling 30 months for one or both managers, and thus, were eliminated from the analysis. In total 15 participants (17.9 percent) failed manipulation checks/attentiveness questions and were eliminated from the analysis.[9]

TESTS OF HYPOTHESES

Strategy Implementation Timeline. An Analysis of Covariance (ANCOVA) was used to test Hypotheses 1 – 3. Hypothesis 1a predicts that, when provided with a strategy map and implementation timeline, store managers' performance evaluations will be based on strategically-linked measures within the managers' controllable timeline. Specifically, evaluators that are provided with a strategy map and implementation timeline are expected to rate the performance of a store manager that has met strategically-linked, nonfinancial targets within the controllable timeline, but has not met lagged financial targets beyond the controllable timeline (the North Store manager) more favorably than the performance of a manager who has not met strategically-linked, nonfinancial targets within the controllable timeline, but has met lagged financial performance

[9] The results are inferentially similar when the dropped participants are included in the analysis.

targets beyond the controllable timeline (the South Store manager). Evaluators that are not provided with an implementation timeline are expected to base subordinates' performance evaluations on non-strategically- and strategically-linked performance measures, irrespective of whether or not they were within the subordinates' time span of control. Consequently, this latter group is expected to evaluate the North and South Store managers equivalently and/or to evaluate the South Store manager more favorably than the North Store manager. Table 1, Panel A and Table 2, Panel A show that this hypothesis was supported ($F = 5.672$, $p = 0.020$ in Table 1 and $F = 6.532$, $p = 0.013$ in Table 2)[10]. Table 1 (2), Panel B shows that when participants were provided with a strategy implementation timeline the North Store manager's performance evaluation exceeded, on average, the South Store manager's performance evaluation by 1.998 (2.065). When participants were not provided with a strategy implementation timeline this difference was only 0.591 (0.568).

Hypothesis 1b predicts that, when provided with a strategy implementation timeline, store manager's bonus allocations will be based on whether or not they met strategically-linked measures within the controllable timeline. Specifically, evaluators that are provided with a strategy map and implementation timeline are expected to award larger bonus amounts to the North Store manager than the South Store manager. Evaluators that are not provided with an implementation timeline are expected award an equal amount of bonus to the North and South Store managers and/or award a larger amount of bonus to the

[10] As described in the results section on experience below, there were two sets of results to test Hypotheses 1 and 2 since two different measures of experience were used.

South Store manager. Table 3, Panel A and Table 4, Panel A show that this hypothesis was also supported (F = 7.107, p = 0.010 in Table 3 and F = 8.834, p = 0.004 in Table 4). Table 3 (4), Panel B shows that when participants were provided with a strategy implementation timeline the average amount of bonus awarded to the North Store manager exceeded the average amount of bonus awarded to the South Store manager by $10,433 ($10,883). When participants were not provided with a strategy implementation timeline this difference was only $1,486 ($1,104).

"Buy-in" to the Corporate Strategy. Hypothesis 2a predicts that evaluators that are in the high (low) buy-in condition will base their performance evaluations on strategically-linked (non-strategically-linked) measures. Therefore, high (low) buy-in participants are expected to evaluate the North (South) Store manager higher than the South (North) Store manager. Table 1, Panel A and Table 2, Panel A show that this hypothesis was not supported (F = 0.037, p = 0.849 in Table 1 and F = 0.227, p = 0.635 in Table 2). Table 1 (2), Panel C shows that participants in the high buy-in condition rated, on average, the North Store manager 1.238 (1.456) points higher than the South Store manager. Participants in the low buy-in condition rated, on average, the North Store manager 1.350 (1.178) points higher than the South Store manager.

Hypothesis 2b predicts that evaluators that are in the high (low) buy-in condition will base subordinates' bonus allocation decisions on strategically-linked (non-strategically-linked) performance measures. Therefore, participants in the high (low) buy-in condition are expected to award a larger amount of bonus

to the North (South) Store manager compared to the South (North) Store manager. Table 3, Panel A and Table 4, Panel A show that this hypothesis was also not supported ($F = 0.036$, $p = 0.850$ in Table 3 and $F = 0.569$, $p = 0.454$ in Table 4). Table 3 (4), Panel C shows that on average, participants in the high buy-in condition awarded the North Store manager $6,276 ($7,230) more in bonus than the South Store manager. In the low buy-in condition, this difference was $5,643 ($4,757). It is important to note that Hypotheses 2a and 2b were not supported given that the buy-in manipulation appeared to be effective (as described in the "Manipulation Checks" section above). However, even though participants in the high buy-in condition bought-in to the strategy more than participants in the low buy-in condition, the low buy-in participants had an average buy-in rating of 5.94 on an 11-point scale, which is higher than the scalar mid-point of 5. One explanation as to why this hypothesis may not have been supported is because, on average, all participants appear to have bought-in to the strategy to some degree.

Experience. Participants' responses to each of the four experience questions described in the methods section were analyzed. Participants had an average (median) of 7.1 (5.0) years of full-time professional work experience and 0.67 (0.00) years of experience working with the BSC. Only 22 (30.6-percent) participants had experience evaluating subordinates on both financial and nonfinancial performance measures. Thirty-four (47.9-percent) participants had experience being personally evaluated on both financial and nonfinancial measures.

Hypothesis 3a and 3b were not supported when using years of BSC experience as an experience measure (F = 2.571, p = 0.114 and F = .0121, p = 0.729 for Hypotheses 3a and 3b, respectively). These hypotheses were also not supported when using experience evaluating subordinates on multiple dimensions as an experience measure (F = 0.014, p = 0.905 and F = 0.015, p = 0.903 for Hypotheses 3a and 3b, respectively). These results are largely due to the lack of statistically meaningful variance within these measures as well as a lack of statistical power. For example, when using experience evaluating subordinates on multiple dimensions as an experience measure only 8 participants were in the cell "no timeframe, experienced." As described below, Hypothesis 3 was supported when using years of full-time professional work experience and experience being personally evaluated on both financial and nonfinancial measures as experience measures.

To distinguish relatively high experience from low experience the median value of 5 years of full-time professional work experience was used as the cutoff. Participants in the "low experience" category had five years or less of experience (mean = 4.1 years) and participants in the "high experience" category had more than five years of experience (mean = 10.1 years). This difference between means is statistically significant (t = 10.544, two-tailed p = 0.000). The low (high) experience group had an average of 0.78 (0.67) years of experience working with the BSC. This difference is not statistically significant (t = 0.340, two-tailed p = 0.735).

As mentioned above, 34 (47.9-percent) participants had experience being personally evaluated on both financial and nonfinancial performance measures. Experienced (inexperienced) participants had an average of 6.5 (7.8) years of full-time professional experience. This difference was not significant (t = -1.395, two-tailed $p = 0.168$). Experienced (inexperienced) participants had an average of 1.1 (0.38) years of experience working with the BSC. This difference is statistically significant (t = 2.319, two-tailed $p = 0.023$).

Hypothesis 3a predicts an interaction between strategy implementation timeline and experience. Specifically, this hypothesis predicts that more experienced participants that are provided with a strategy implementation timeline will base subordinates' performance evaluations on relevant (strategically-linked measures within the controllable timeline) information and will disregard irrelevant (strategically-linked measures beyond the controllable timeline and non-strategically-linked measures) information. Therefore, more experienced participants that are provided with an implementation timeline are expected to rate the performance of the North Store manager higher than the South Store manager. Less experienced participants are expected to base subordinates' performance evaluations on both relevant and irrelevant information, irrespective of whether or not they receive an implementation timeline. Therefore, less experienced participants are expected to rate the North and South Store managers equivalently.

Table 1, Panel A shows that, when using years of full-time professional work experience as an experience measure, this hypothesis is supported (F =

4.005, $p = 0.050$). These results are displayed graphically in Figure 4. To further evaluate the significance of this interaction, simple effect tests were conducted. The average amount by which the North Store manager's performance was rated higher than that of the South Store manager's was significantly different for more experienced participants based on whether or not they received a strategy implementation timeline (3.066 and 0.478 for timeline and no timeline, respectively; F = 9.427, $p = 0.003$) (Table 1, Panel C). This difference was also significant between more experienced and less experienced participants when both groups received a strategy implementation timeline (3.066 and 0.929 for more experienced and less experienced participants, respectively; F = 6.177, $p = 0.016$). The average amount by which the North Store manager's performance was rated higher than that of the South Store manager's did not differ for less experienced participants, irrespective of whether they were provided with a strategy implementation timeline or not (0.929 and 0.704 for timeline and no timeline, respectively; F = 0.075, $p = 0.786$). Further decomposition of this interaction reveals that the average performance evaluation of the North Store manager (8.250) was significantly higher than the average performance evaluation of the South Store manager (5.184) for more experienced participants that were provided with a strategy implementation timeline (F = 22.43, $p = 0.000$). However, when more experienced participants were not provided with a strategy implementation timeline the average performance evaluation of the North Store manager (6.927) was not significantly different than the average performance evaluation of the South Store manager (6.449) (F = 0.803, $p = 0.374$). The

average amount by which the North Store Manager was rated higher than the South Store Manager did not differ significantly between less experienced participants, irrespective of whether or not they received an implementation timeline.

Hypothesis 3a is also supported when experience being personally evaluated on both financial and nonfinancial performance measures is used as an experience measure ($F = 7.202$, $p = 0.009$) (Table 2, Panel A). These results are displayed graphically in Figure 5. The average amount by which the North Store manager was rated higher than the South Store manager was significantly different for experienced participants based on whether or not they received an implementation timeline (3.150 and 0.042 for timeline and no timeline, respectively; $F = 13.055$, $p = 0.001$) (Table 2, Panel C). This difference was also significant between experienced and inexperienced participants based on whether or not they received an implementation timeline (3.150 and 0.980 for experienced and inexperienced participants, respectively; $F = 6.096$, $p = 0.016$). The average amount by which the North Store manager was rated higher than the South Store manager did not differ significantly for inexperienced participants, irrespective of whether or not they received an implementation timeline (0.980 and 1.095 for timeline and no timeline, respectively; $F = 0.020$, $p = 0.889$). Experienced participants that received an implementation timeline rated the North Store manager significantly higher than the South Store manager (8.280 and 5.130 for the North Store and South Store managers, respectively; $F = 24.125$, $p = 0.000$). The North Store manager was not rated significantly higher than the South Store

manager was by experienced participants that did not receive an implementation timeline or by inexperienced participants, irrespective of whether or not they received an implementation timeline.

The prediction for Hypothesis 3b is similar to that for Hypothesis 3a, but with bonus allocations as the dependent measure instead of performance evaluations. Specifically, Hypothesis 3b predicts that more experienced managers that are provided with a strategy map and implementation timeline will base their bonus allocations on relevant information and disregard irrelevant information. If this prediction holds, then these participants will award a significantly higher amount of bonus to the North Store manager than the South Store manager. Less experienced participants are expected to base the store managers' bonus allocations on both relevant and irrelevant information, irrespective of whether or not they receive an implementation timeline. Therefore, these participants are expected to award an equivalent amount of bonus to the store managers.

Table 3, Panel A shows that this hypothesis is supported when years of full-time professional work experience is used as the experience measure ($F = 5.127$, $p = 0.027$). These results are displayed graphically in Figure 6. The average amount by which the North Store manager's bonus exceeded that of the South Store manager's was significantly different for more experienced participants depending on whether or not they were provided with a strategy implementation timeline ($14,335 and $-2,186 for timeline and no timeline, respectively; $F = 11.927$, $p = 0.001$) (Table 3, Panel C). The average amount by which the North Store manager's bonus exceeded the South Store manager's did

not significantly differ for less experienced participants, irrespective of whether or not they were provided with a strategy implementation timeline ($6,512 and $5,157 for timeline and no timeline, respectively; F = 0.083, p = 0.774). More experienced participants that were provided with an implementation timeline awarded a significantly higher amount of bonus to the North Store manager than the South Store manager ($32,172 and $17,818 for the North and South Store managers, respectively; F = 15.231, p = 0.000). The amount of bonus awarded to the store managers by less experienced participants did not significantly differ, irrespective of whether or not they received an implementation timeline.

When using prior experience being personally evaluated on both financial and nonfinancial measures as the measure of experience, Hypothesis 3b was also supported (F = 7.864, p = 0.007) (Table 4, Panel A). The amount by which the North Store Manager's bonus exceeded the South Store manager's was significantly higher for experienced participants that received an implementation timeline compared to experienced participants that did not ($14,335 and -$2,186 for timeline and no timeline, respectively; F = 15.847, p = 0.000) (Table 4, Panel C). This difference was also significant between experienced and inexperienced participants, with both groups receiving an implementation timeline ($16,339 and $5,426 for experienced and inexperienced participants, respectively; F = 4.885, p = 0.031). Experienced participants that received an implementation timeline award a significantly higher amount of bonus to the North Store manager than the South Store manager ($32,788 and $16,448 for the North and South Store managers, respectively; F = 20.562, p = 0.000). The amount of bonus awarded to

the two store managers by experienced participants without an implementation timeline or by inexperienced participants, irrespective of whether or not they received an implementation timeline, did not significantly differ.

Affect. Both positive and negative affect have been shown to influence judgment and decision-making. Therefore, participants' affect was measured. As described below, affect was used as a covariate in the testing of Hypotheses 1 – 3 and as a partitioned variable to test Hypothesis 4. After completing the case materials the participants filled out the PANAS scale (positive affect and negative affect schedule) developed by Watson and Tellegan (1985). This scale has been shown to be internally consistent, reliable, and stable over time (Crawford and Henry 2004; Russel and Carroll 1999; Watson et al. 1988). Participants were asked to rate the extent to which they experienced each of the twenty emotions listed on the PANAS scale on a five point Likert scale (*Very Slightly or Not At All* = 1, *Extremely* = 5) (see Figure 3).

The affect factors were isolated using principal components factor analysis with varimax rotation and Kaiser correction. The selection criterion was to retain variables with eigenvalues ≥ 1.00 and factor loadings ≥ 0.50. Five factors that accounted for approximately 69 percent of the total variance were produced (see Table 5). Two factors (Factors 1 and 4) are positive affect factors. Factor 4 loaded on the attributes of alert, attentive, and active. It had a Cronbach's alpha of 0.765, which indicates reasonable levels of scale reliability (Iacobucci and Duhachek 2003; Nunnally and Bernstein 1994). Factor 4 was significantly correlated ($\alpha = 0.01$) with the performance evaluation difference score and was

marginally correlated ($\alpha = 0.10$) with the bonus allocation difference score (see Table 6). Therefore, it was included as a covariate in the ANCOVA models used to test Hypotheses 1 - 3. Factor 1 loaded on the attributes of enthusiastic, excited, proud, inspired, determined, and strong. However, this factor was not significantly correlated with either of the dependent measures and it did not yield significance in the ANCOVAs. Therefore, it is not discussed further.

Three negative affect factors resulted from the factor analysis (Factors 2, 3, and 5 in Table 5). Factor 3 loaded on the attributes of guilty, ashamed, and scared and had a Cronbach's alpha of 0.737. This factor was marginally correlated with the performance evaluate difference score ($\alpha = 0.10$) and was significantly correlated with the bonus allocation difference score ($\alpha = 0.01$). Therefore, this factor was also included as a covariate in the testing of Hypotheses 1 – 3. Factor 2 (upset, irritable, distressed, and afraid) and Factor 5 (jittery and nervous) were not significantly correlated with the dependent measures and did not yield significance in the ANCOVAs. Therefore, these factors are not discussed further.

When testing Hypotheses 1 - 3 with the performance evaluation difference score as the dependent measure, Panel A in Tables 1 and 2 show that positive affect was significant as a covariate when both years of full-time professional experience ($F = 7.253$, $p = 0.009$) and experience being personally evaluated on both financial and nonfinancial performance measures ($F = 14.870$, $p = 0.000$) were used as experience measures. With the same dependent measure being used, negative affect was significant as a covariate when years of professional

experience was used as an experience measure (F = 4.109, p = 0.047). However, negative affect was not a significant covariate when prior experience being evaluated on both financial and nonfinancial measures was used as an experience measure (F = 0.331, p = 0.567). This latter result may be explained by the marginal correlation that was found to exist between negative affect and the performance evaluation difference score.

When using the bonus allocation difference score as the dependent measure in testing Hypotheses 1 – 3, Table 3, Panel A shows that positive affect was not a significant covariate when using years of full-time work experience as an experience measure (F = 1.386, p = 0.244). This result may be explained by the marginal correlation that was found to exist between positive affect and the bonus allocation difference score. Table 4, Panel A shows that positive affect was a significant covariate when using prior experience being evaluated on both financial and nonfinancial performance measures was used as an experience measure (F = 5.331, p = 0.024). Using the same dependent measure, negative affect was found to be a significant covariate when both years of full-time professional work experience (F = 11.256, p = 0.001) and prior experience being evaluated on both financial and nonfinancial performance measures (F = 4.025, p = 0.049) were used as experience measures (see Panel A in Tables 3 and 4). The results from including positive and negative affect as covariates reaffirm the call made by Stone and Kadous (1997) to consider the inclusion of individuals' affective states as control variables in judgment and decision-making studies.

To test Hypothesis 4, positive and negative affect were partitioned. Specifically, the sum of individuals' ratings on each of the attributes within Factor 4 (positive affect) and Factor 3 (negative affect) were computed and split at the median point. This resulted in the creation of "high" and "low" positive affect categories and "high" and "low" negative affect categories. These groupings were then used in the testing of Hypothesis 4.

Hypothesis 4a predicts that individuals with higher (lower) levels of positive affect will exhibit more (less) choice avoidance in subordinates' performance evaluations. Therefore, individuals with higher (lower) levels of positive affect are expected to evaluate the store managers equivalently (differently). The effect of positive affect on the store managers' performance evaluations was significant ($F = 9.809$, $p = 0.003$). Participants with relatively higher levels of positive affect did not rate the North and South Store managers significantly different from each other (6.551 and 6.500 for the North and South Store managers, respectively; $F = 0.041$, $p = 0.906$). However, participants with relatively lower positive affect did rate the North Store manager (7.757) higher than the South Store manager (5.729). This difference is statistically significant ($F = 19.589$, $p = 0.000$). Further, participants with lower levels of positive affect evaluated the North Store manager significantly higher than participants with higher positive affect (7.757 and 6.551 for lower and higher active positive affect, respectively; $F = 8.715$, $p = 0.004$). Participants with higher levels of positive affect rated the South Store manager marginally higher than participants with lower levels of active positive affect (6.550 and 5.729 for higher and lower,

respectively; F = 3.470, p = 0.066). Thus, Hypothesis 4a is supported. Specifically, participants with higher levels of positive affect were more reticent to make a decision when evaluating subordinates' performance compared to participants with lower levels of positive affect.

Hypothesis 4b predicts that individuals with higher (lower) levels of negative affect will exhibit more (less) choice avoidance in subordinates' performance evaluations. While there were some cells that individually had significance when performing this analysis, the effect of negative affect on the store managers' performance evaluations was not significant (F = 2.555, p = 0.114). Therefore, Hypothesis 4b is not supported. Again, this result is likely due to the marginal correlation that was found to exist between negative affect and the performance evaluation scores.

Hypothesis 4c predicts that individuals with higher (lower) levels of positive affect will exhibit more (less) choice avoidance in allocating subordinates' bonuses. Therefore, individuals with higher (lower) positive affect are expected to award an equal (different) amount of bonus to the store managers. The effect of positive affect on the subordinates' bonus allocations was marginally significant (F = 3.172, p = 0.079). Therefore, Hypothesis 4c was marginally supported, which may be explained by the marginal correlation between positive affect on bonus allocations. Participants with higher levels of positive affect awarded a higher amount of bonus to the North Store manager ($25,462) than to the South Store manager ($24,538). However, this difference is not statistically significant (F = 0.126, p = 0.724). Participants with lower levels

of positive affect awarded a significantly higher amount of bonus to the North Store manager than the South Store manager ($28,686 and $21,029 for the North and South Store managers, respectively; F = 7.781, p = 0.007). Participants with lower levels of positive affect awarded a marginally higher amount of bonus to the North Store manager compared to participants with higher levels of positive affect ($28,686 and $25,462 for low and high positive affect, respectively; F = 2.901, p = 0.093). Participants with lower levels of positive affect awarded a marginally lower amount of bonus to the South Store manager compared to participants with higher positive affect ($21,029 and $24,538 for low and high positive affect, respectively; F = 3.421, p = 0.068).

Hypothesis 4d predicts that individuals with higher (lower) levels of negative affect will exhibit more (less) choice avoidance in allocating subordinates' bonuses. The effect of negative affect on the store managers' bonus allocations was significant (F = 8.852, p = 0.004). While participants with high negative affect awarded a different amount of bonus to the store managers ($22,278 and $27,722 for the North and South Store managers, respectively), this difference was not statistically significant (F = 2.176, p = 0.145). Participants with low negative affect awarded a higher amount of bonus to the North Store manager ($28,500) compared to the South Store manager ($21,321). This difference was statistically significant (F = 11.69, p = 0.001). Participants with lower negative affect awarded a significantly higher amount of bonus to the North Store manager compared to participants with higher negative affect ($28,500 and $22,278 for low and high negative affect, respectively; F = 8.583, p = 0.005).

Further, participants with lower negative affect awarded a significantly lower amount of bonus to the South Store manager compared to participants with higher negative affect ($21,321 and $27,722 for low and high negative affect, respectively; $F = 9.025$, $p = 0.004$). Therefore, Hypothesis 4d is supported. Specifically, individuals with higher levels of negative affect were more reticent to make a decision when allocating subordinates' bonuses compared to individuals with lower levels of negative affect.

CHAPTER V: CONCLUSION

The BSC is a strategic performance planning and management system that causally links actions and subsequent financial and nonfinancial outcomes. The primary goal of the BSC is to motivate managers to engage in actions that are congruent with the firm's long-term strategy. A secondary purpose of the BSC is to facilitate the performance evaluation of managers charged with advancing the corporate strategy. To serve this second purpose the BSC must include information regarding the timing between lead (typically nonfinancial in nature) and lag (typically financial in nature) performance measures. If an evaluating manager is not provided with this information then they may hold subordinates responsible for measures which are outside of the subordinate's time span of control.

This study investigated the effect of providing (or not providing) evaluating managers with a strategy implementation timeline that explicitly showed the timing relationship between lead and lag performance measures on subordinates' performance evaluations and bonus allocations. This study also examined the moderating influence of experience on a strategy implementation timeline. Lastly, this study evaluated the effects of buy-in to the corporate strategy and affect on BSC-based performance evaluations and bonus allocations.

The results indicate that providing evaluators with a strategy implementation timeline leads them to conduct performance evaluations and bonus allocations in a normatively correct manner. Specifically, when evaluators are provided with this information they evaluate subordinates based on measures

that are congruent with the long-term strategy of the firm and that are under the subordinates' time span of control. When evaluators are not provided with an implementation timeline they evaluate subordinates' performance based on non-strategically- and/or strategically-linked performance measures, irrespective of whether or not they have been within the subordinates' time span of control. However, this result was only found to hold when managers have certain types of experience. The two measures of experience that yielded significant results were years of full-time professional work experience and experience with being personally evaluated on both financial and nonfinancial performance measures.

This study supports and extends the findings of recent studies (Griffith and Neely 2009; Krumwiede et al. 2011) that have examined the effect of experience in BSC-related contexts. These studies have found that experience results in the sophisticated knowledge structures and procedural knowledge required to make normative decisions involving the BSC. Consistent with prior literature, the experienced participants in this study appeared better able to disregard irrelevant information, and therefore, base their judgments and decisions on only relevant information. Though not explicitly tested, prior literature (e.g., Biggs et al. 1987; Biggs and Mock 1983; Bouwman 1984), suggests that the more experienced participants in this study may have used the strategy implementation timeline to apply a directed information search strategy which allowed them to focus on only relevant information (strategically-linked measures under the subordinates' time span of control). Less experienced participants may have examined the information contained in the BSCs sequentially, which exposed them to irrelevant

information (non-strategically-linked measures and/or strategically-linked measures beyond the subordinates' time span of control).

While only two of four measures of experience yielded significant results, one these measures appeared superior. Specifically, using years of full-time professional work experience resulted in significance at the $\alpha = 0.05$ level. Using prior experience being personally evaluated on both financial and nonfinancial measures resulted in significance at the $\alpha = 0.01$ level. While using years of BSC specific experience itself did not result in significance, it may help explain the differences between the two categories of experience that were found to be significant. Specifically, when using years of full-time professional experience more and less experienced participants did not significantly differ in their BSC-related experience. However, using prior experience being evaluated on both financial and nonfinancial measures resulted in participants with this type of experience having significantly more BSC-related experience than participants that have not been evaluated on both types of measures. Prior literature in psychology has found that the more experience and exposure an individual has with a particular innovation or strategy, the more intense their attitudes are towards it (Brannon et al. 2007). This can result in individuals selectively exposing themselves to information that is consistent with what they have experience with in the past. In the context of this study, the more significant findings that were found when using prior experience being evaluated on multiple dimensions may be explained by the fact that individuals with this type of experience also had significantly more BSC-related experience. This may have

strengthened their attitude towards the BSC and their willingness and ability to work with the information contained therein.

The extent to which managers bought-in to the firm's long-term strategy did not have an effect on performance evaluations or bonus allocations. This result may be due to the buy-in manipulation not being sufficiently strong. Specifically, the low buy-in manipulation appears to have led participants to buy-in to the strategy more than intended. While the extent to which managers bought-in to the strategy was significantly higher for participants in the high buy-in condition compared to those in the low buy-in condition, those in the low buy-in condition had an average buy-in of 5.94 on an 11 point scale, which is higher than the scalar midpoint of 5. Therefore, all participants appear to have bought-in to the strategy to some degree.

This study reaffirms the call made by Stone and Kadous (1997) regarding the necessity of controlling for individuals' affective states. Both positive and negative affect were found to account for significant variance in performance evaluations and bonus allocations (though some of these effects were dependent on the experience measure used). Prior literature has found that both positive and negative affect can result in choice avoidance, though for different reasons. This study found that participants with higher levels of either positive or negative affect avoided making a difficult choice. Consequently, the performance evaluations and bonus allocations made by these participants did not significantly differ between store managers. Conversely, participants with lower levels of these affective states were willing to make a difficult choice and evaluated the

store managers normatively. That is, these participants evaluated subordinates based on measures congruent with the firm's long-term strategy (i.e., they evaluated the North Store manager more favorably than the South Store manager). This study supports prior literature, which argues that decision-making behavior cannot be fully understood unless both cognition and affect are jointly considered (Ding and Beaulieu 2009; Iyer et al. 2012; Kida et al. 2001; LeDoux 1996).

The results of this study contribute to both practice and the BSC literature in three important ways. First, this study provides evidence on the effectiveness of providing managers with a strategy implementation timeline when conducting performance evaluations and bonus allocations. Second, this study shows the effectiveness of a strategy implementation timeline only manifests with experienced individuals[11]. In the context of this study, only experienced participants that were provided with an implementation timeline conducted normatively correct performance evaluations and bonus allocations. The inclusion of a strategy implementation timeline with strategy maps used in both practice and future research studies will aid managers with certain types of experience in holding subordinates accountable for only strategically-linked performance measures that have been under the subordinate's time span of control. Third, this study demonstrates the necessity of, at a minimum, controlling for affect in future BSC-related performance evaluation studies.

This study is subject to several limitations. First, although the case materials were developed to be as realistic as possible, the task and information

[11] This statement is subject to the caveat mentioned above that only two of four experience measures were found to yield significant results.

presentation may differ from what participants are faced with in the "real world." For example, participants with experience being evaluated on multiple dimensions may not be evaluated on the same dimensions as those used in this study. Further, participants may not have had experience working in the retail industry. Second, participants in this study did not have a personal relationship with the fictional subordinates they were evaluating. Evaluating managers commonly have at least a professional relationship with those they oversee and this relationship may result in performance evaluations that differ from those in a controlled experimental setting involving unknown subordinates. Third, participants were not subjected to the same incentives or pressures that they may face in practice. For example, the participants did not have their own performance evaluations being possibly affected by the performance of the subordinates. In practice, managers may be more likely to evaluate subordinates based on measures that they themselves are evaluated on. Third, this study asked participants to evaluate the performance of a subordinate on multiple dimensions. However, only 31-percent of the participants actually had experience performing this type of task in practice. Lastly, affect was not explicitly manipulated in this study. Therefore, it is not clear if the affect individuals experienced was directly related to the case materials or extraneous factors outside of the experimental setting.

Future research on the effect of a strategy implementation timeline in BSC-based performance evaluations should consider measuring more specific components of participants' experience. Specifically, it may be useful to ask participants that have prior experience using strategic performance measurement

systems which measures their company use. This will allow researchers to understand how well the measures used in the study map onto the measures participants are familiar with. Future research should also examine the effectiveness of a strategy implementation timeline in an actual company currently using the BSC. This would help address several of the limitations mentioned above. Future BSC research in general should further examine the effect of buy-in on BSC-based performance evaluations by making low buy-in conditions stronger than that used in this study. Lastly, future BSC related research should consider examining how different affective states within the same broad valence category affect the acquisition and use of information. For example, positive affect can be associated with both *passive* (happy, content, pleased, or satisfied) and *active* (enthusiastic, excited, or inspired) adjectives. Negative affect can also be associated with *passive* (frustration, depression, or fear) and *active* (anger) adjectives (Iyer et al. 2012). As research on affect has progressed, researchers have found that affective states of the same valence can produce differential behavior (Iyer et al. 2012). Therefore, researchers argue that it is increasingly important to look beyond the general valence states of positive and negative in order to provide a more complete view on the effects of affect (Connelly et al. 2004; Iyer et al. 2012; Lazarus 1991; Lee and Allen 2002; Lerner and Tiedens 2006).

REFERENCES

Ahn, H. 2001. Applying the balanced scorecard: An experience report. *Long Range Planning* 34 (4): 441-461.

Anderson, C. J. 2003. The Psychology of doing nothing: Forms of decision avoidance result from reason and emotion. *Psychological Bulletin* 129 (1): 139-167.

Aspinwall, L. G., & Taylor, S. E. 1992. Modeling cognitive adaptation: A longitudinal investigation of the impact of individual differences and coping on college adjustment and performance. *Journal of Personality and Social Psychology* 63: 989-1003.

Atkinson, A. A., R. Balakrishnana, P. Booth, J. M. Cote, T. Groot, T. Malmi, H. Roberts, E. Uliana, and A. Wu. 1997. New directions in management accounting research. *Journal of Management Accounting Research* 9: 79-108.

Atkinson, H. 2006. Strategy implementation: A role for the balanced scorecard? *Management Decision* 44 (10): 1441-1460.

Banker, R. D., G. Potter, and D. Srinivasan. 2000. An empirical investigation of an incentive plan that includes nonfinancial performance measures. *The Accounting Review* 75 (1): 65-92.

_____, H. Chang, and M. J. Pizini. 2004. The balanced scorecard: Judgmental effects of performance measures linked to strategy. *The Accounting Review* 79 (1): 1-23.

Baron, R. A., K. M. Hmieleski, and R. A. Henry. 2012. Entrepreneurs' dispositional positive affect: The potential benefits – and potential costs – of being "up." *Journal of Business Venturing* 27: 310-324.

Barr, S. 2011. The secret to get buy-in to performance measurement. *Dashboard Insight Online* (March 09, 2011).

Bédard, J., and T. J. Mock. 1992. Expert and novice problem-solving behavior in auditing planning. *Auditing: A Journal of Practice and Theory* 11 (Supplement): 1-20.

_____, and M. T. H. Chi. 1993. Expertise in auditing. *Auditing: A Journal of Practice and Theory* 12 (supplement): 21-45.

Biggs, S. F., and T. J. Mock. 1983. An investigation of auditor decision processes in the evaluation of internal controls and audit scope decisions. *Journal of Accounting Research* 21: 234-255.

_____, W. F. Messier, Jr., and J. V. Hansen. 1987. A descriptive analysis of computer audit specialists' decision-making behavior in advanced computer environments. *Auditing: A Journal of Practice and Theory* 6 (Spring): 1-21.

Bonner, S. E., and B. L. Lewis. 1990. Determinants of auditor expertise. *Journal of Accounting Research* 28 (Supplement): 1-20.

_____, R. Libby, and M. W. Nelson. 1997. Audit category knowledge as a precondition to learning from experience. *Accounting, Organizations and Society* 22: 387-410.

Bouwman, M. J. 1984. Expert vs. novice decision-making in accounting: A summary. *Accounting, Organizations and Society* 9: 325-327.

Brannon, L. A., M. J. Tagler, and A. H. Eagly. 2007. The moderating role of attitude strength in selective exposure to information. *Journal of Experimental Social Psychology* 43: 611-617.

Bukh, P. and T. Malmi. 2005. Re-examining the cause-and-effect principle of the balanced scorecard. In *Accounting in Scandinavia – The Northern Lights*. S. Jönsson and J.Mouritsen (ed.). Malmö/Copenhagen: Liber & Copenhagen Business School Press.

Chung, J. O. Y., J. R. Cohen, and G. S. Monroe. 2008. The effect of moods on auditors' inventory valuation decisions. *Auditing: A Journal of Practice and Theory* 27 (2): 137-159.

_____. _____, and _____. 2011. The influence of ethical conflict and emotion on auditors' inventory judgments. Working Paper, Boston College.

Cianci, A. M., and J. L. Bierstaker. 2009. The impact of positive and negative mood on the hypothesis generation and ethical judgments of auditors. *Auditing: A Journal of Practice and Theory* 28 (2): 119-144.

Cokins, G. 2005. Performance management: Making it work: The promise and perils of the balanced scorecard. *DM Review Online* (August 2005).

Connelly, S., W. Helton-Fauth, and M. D. Mumford. 2004. A managerial in-basket study of the impact of trait emotions on ethical choice. *Journal of Business Ethics* 51: 245-267.

Crawford, J. R., Henry J. D. 2004. The Positive and Negative Affect Schedule (PANAS): Construct validity, measurement properties and normative data in a large non-clinical sample. *British Journal of Clinical Psychology* 43: 245-265.

Damasio, A., Tranel, D., and Damasio, H. 1990. Individuals with sociopathic behavior caused by frontal damage fail to respond autonomically to social stimuli. *Behavioral Brain Research* 41 (2): 81-94.

Davis, S. and T. Albright. 2004. An investigation of the effect of balanced scorecard implementation on financial performance. *Management Accounting Research* 15 (2): 135-153.

Dearman, D., and M. Shields. 2001. Cost knowledge and cost-based judgment performance. *Journal of Management Accounting Research* 13 (1): 1-18.

Demski, J. 1994. *Managerial uses of accounting information*. Norwell, MA: Fluwer Academic Publishers.

Dilla, W. N., and P. J. Steinbart. 2005. Relative weighting of common and unique balanced scorecard measures by knowledgeable decision makers. *Behavioral Research in Accounting* 17: 43-53.

Ding, S. and P. Beaulieu: 2009. The balanced scorecard and mood congruency bias. Working paper, York University.

Epstein, S. 1994. Integration of the cognitive and the psychodynamic unconscious. *American Psychologist* 49 (8): 709-724.

Estrada, C. A., A. M. Isen, and M. J. Young. 1997. Positive-affect improves creative problem solving and influences reported source of practice satisfaction in physicians. *Motivatoin and Emotion* 18: 285-299.

Eysenck, M. W. 1982. *Attention and negative Affect: Cognition and performance*. New York: Springer-Verlag.

Forgas, J. P. 1995. Mood and judgment: The affect infusion model (AIM). *Psychological Bulletin* 117 (1): 39-66.

Franco-Santos, M., and M. Bourne. 2005. An examination of the literature relating to issues affecting how companies manage through measures. *Production Planning & Control* 16 (2): 114-124.

George, J. M. and G. R. Jones. 1997. Experience work: values, attitudes, and moods. *Human Relations* 50: 393-416.

Ghosh, D., and R. F. Lusch. 2000. Outcome effect, controllability and performance evaluation of managers: Some field evidence from multi-outlet businesses. *Accounting, Organizations and Society* 25 (4-5): 411-425.

_____. 2005. Alternative measures of managers' performance, controllability, and the outcome effect. *Behavioral Research in Accounting* 17: 55-70.

Griffith, R., and A. Neely. 2009. Performance pay and management experience in multitask teams: Evidence from within a firm. *Journal of Labor Economics* 27 (1): 49-82

Guymon, R. and W. T. Mitchell. 2012. The decision motivating influence of strategy. Working paper.

Heuer, R. R. Jr. 1999. *Psychology of Intelligence Analysis*. Retrieved from http://www.au.af.mil/au/awc/awcgate/psych-intel/

Hibbets, A. R., Robers, M. L. and T. L. Albright. 2012. Common-measure bias in the balanced scorecard: Cognitive effort and general problem-solving ability. Working paper.

Hilton, R. W. 2008. *Managerial accounting: Creating value in a dynamic business environment* 8th Edition. New York, NY: McGraw-Hill Irwin.

Holmstrom, B., and P. Milgrom. 1991. Multitask principal-agent analyses: Incentive contracts, asset ownership, and job design. *Journal of Law, Economics, and Organization* 7: 24-52.

Hoque, Z., and W. James. 2000. Linking balanced scorecard measures to size and market factors: Impact on organizational performance. *Journal of Management Accounting Research* 12: 1-17.

Iacobucci. D., and A. Duhachek. 2003. Advancing alpha: Measuring reliability with confidence. *Journal of Consumer Psychology* 13: 478-487.

Isen, A.M., and S.F. Simmonds. 1978. The effect of feeling good on a helping task that is incompatible with good mood. *Social Psychology* 41: 346-349.

_____. and K.A. Daubman. 1984. The influence of affect on categorization. *Journal of Personality and Social Psychology* 47: 1206-1217.

_____. 1999. Positive affect. In T. Dagleish & M. Powers (Eds.), *Handbook of cognition and emotion*, Sussex, England: Wiley.

Ittner, C., and D.F. Larcker. 1998. Are nonfinancial measures leading indicators of financial performance? An analysis of customer satisfaction. *Journal of Accounting Research* 36: 1-35.

_____, _____, and M. W. Meyer. 2003a. Subjectivity and the weighting of performance measures: Evidence from a balanced scorecard. *The Accounting Review* 78 (3): 725-758.

_____, _____, and T. Randall. 2003b. Performance implications of strategic performance measurement in financial service firms. *Accounting, Organizations and Society* 28: 715-741.

Iyer, G., D. McBride, and P. Reckers. 2012. The effect of a decision aid on risk aversion in capital investment decisions. *Advances in Accounting* 28 (1): 64-74.

Kaplan, R. 2009. Conceptual foundations of the balanced scorecard. In *Handbook of management accounting research*, Volume 3. Edited by C. Chapman, A. Hopwood, and M. Shields: 1253-1269. Oxford, UK: Elsevier Ltd.

_____, and D. Norton. 1992. The balanced-scorecard: Measures that drive performance. *Harvard Business Review* (January-February): 71-79.

_____, and _____. 1996. *The balanced scorecard*. Boston, MA: Harvard University Press.

_____, and _____. 2001. *The strategy focused organization: How balanced scorecard companies thrive in the new business environment*. Boston, MA: Harvard University Press.

Kaplan, S. E., M. J. Petersen, and J. Samuels. 2011. An examination of the effect of positive and negative performance on the relative weighting of strategically and non-strategically linked balanced scorecard measures. Working paper.

Kay, M. 2009. Renewal Capacity: Moderating the relationship between entrepreneurial orientation and performance in entrepreneurial networks. Working paper.

Kelley, H. H., and J. L. Michela. 1980. Attribution theory and research. *Annual Review of Psychology* 31: 457-501.

Kida, T. E., K. K. Moreno and J. F. Smith. 2001. The influence of affect on managers' captial-budgeting decisions. *Contemporary Accounting Research* 18 (3): 477-494.

Klayman, J., J. B. Soll, C. Gonzolez-Vallejo, and S. Barlas. 1999. Overconfidence: It depends on how, what, and whom you ask. *Organizational Behaviro and Human Decision Processes* 79 (3): 216-247.

Krumwiede, K. R., M. R. Swain, T. A. Thornock, and D. L. Eggett. 2011. The effect of task outcome feedback and broad domain evaluation experience on the use of unique scorecard measures. Working paper.

Lawson, R., W. Stratton, and T. Hatch. 2006. Scorecarding goes global. *Strategic Finance* 87 (9): 35-41.

LeDoux, J. E. 1996. *The Emotional Brain: The mysterious underpinnings of emotional life*. Simon & Schuster, New York.

Lerner, J. and D. Keltner. 2000. Beyond valence: Toward a model of emotion-specific influences on judgments and choice. *Cognition and Emotion* 14: 473-493.

Lesgold, A., H. Rubinson, P. Feltovich, R. Glaser, D. Klopfer, and Y. Wang. 1988. Expertise in complex skill: Diagnosing x-ray pictures. In *The nature of expertise*, edited by Chi, M.T.H. and Farr, M.J.: 311-342. Hillsdale, NJ: Erlbaum.

Libby, R. 1995. The role of knowledge and memory in audit planning. In *Judgment and decision making research in accounting and auditing*, edited by Ashton, R.A. and Ashton, A.H. New York, NY: Cambridge University Press.

Libby, T., S. E. Salterio, and A. Webb. 2004. The balanced scorecard: The effects of assurance and process accountability of managerial judgment. *The Accounting Review* 79 (4): 1075-1094.

Lipe, M. G., and S. E. Salterio. 2000. The balanced scorecard: Judgmental effects of common and unique performance measures. *The Accounting Review* 75 (3): 283-298.

_____, and _____. 2002. A note on the judgmental effects of the balanced scorecard's information organization. *Accounting, Organizations and Society* 27 (6): 531-540.

Loewenstein, G. F., C. K. Hsee, E. U. Weber, and N. Welsh. 2001. Risk as feelings. *Psychological Bulletin* 127 (2): 267-286.

Mackie, D. M., and L. T. Worth. 1989. Processing deficits and the mediation of positive affect in persuasion. *Journal of Personality and Social Psychology* 57 (July): 27-40.

McNamara, H., and R. Fisch. 1964. Effect of high and low motivation on two aspects of attention. *Perceptual and Motor Skills* 19: 571-578.

Nelson, M. W. 1993. The effects of error frequency and accounting knowledge on error diagnosis in analytical review. *The Accounting Review* 68 (4): 804-824.

_____, R. Libby, and S. E. Bonner. 1995. Knowledge structure and estimation of conditional probabilities in audit planning. *The Accounting Review* 70 (1): 27-47.

Nørreklit, H. 2000. The balance on the balanced scorecard – A critical analysis of some of its assumptions. *Management Accounting Research* 11 (1): 65-88.

Nunnally, J. C., and I. H. Bernstein. 1994. *Psychometric Theory* (3rd Ed.) (McGraw-Hill, New York).

Papalexandris, A., G. Ioannou, G. Prastacos, and K. Soderquist. 2005. An integrated methodology for putting the balanced scorecard into action. *European Management Journal* 23 (2): 214-227.

Raghunathan, R., and M. T. Pham. 1999. All negative moods are not equal: Motivational influences of anxiety and sadness on decision-making. *Organizational Behavior and Human Decision Processes* 79 (1): 56-77.

Russell, J. A., and Carroll J. M. 1999. On the bipolarity of positive and negative affect. *Psychological Bulletin* 125(1): 3-30.

Sarason, I. G. 1975. Anxiety and self-preoccupation. In I. G. Sarason & D. C. Spielberger (Eds.), *Stress and Anxiety* (2): 27-44. Washington, DC: Hemisphere.

Sawyer, K. M. 2005. Evidence of choice avoidance in capital investment judgments. *Contemporary Accounting Research* 22: 1063-1092.

Schwarz, N., and H. Bless. 1991. Happy and mindless, but sad and smart? The impact of affective states on analytic reasoning. In *Emotion and Social Judgments*, edited by J. Forgas, 55-71. London, U.K.: Pergamon Press.

Seibert, P. S., and H. C. Ellis. 1991. Irrelevant thoughts, emotional mood states, and cognitive task performance. *Memory & Cognition* 19 (5): 507-513.

Shanteau, J. 1993. Discussion of expertise in auditing. *Auditing: A Journal of Practice and Theory* 12 (Supplement): 51-56.

Shelton, S. W. 1999. The effect of experience on the use of irrelevant evidence in auditor judgment. *The Accounting Review* 74 (2): 217-244.

Simon, H. A. 1967. Motivational and emotional controls of cognition. *Psychological Review* 74: 29-39.

Slovic, P. 2000. Rational actors and rational fools: The influence of affect on judgment and decision-making. *Roger Williams University Law Review* 1 (6): 163-212.

Stone, D. and K. Kadous. 1997. The joint effects of task-related negative affect and task difficulty in multi-attribute choice. *Organizational Behavior and Human Decision Processes* 70 (2): 159-174.

Taylor, S. E., and L. G. Aspinwall. 1996. Mediating and moderating processes in psychosocial stress: Appraisal, coping, resistance, and vulnerability. In H.B. Kaplan (Ed.), *Psychosocial stress: Perspectives on structure, theory, life-course, and methods* (71-110). San Diego, CA: Academic Press.

Tayler, W. B. 2010. The balanced scorecard as a strategy-evaluation tool: The effects of implementation involvement and a causal-chain focus. *The Accounting Review* 85 (3): 1095-1117.

Thomson, K., L. deChernatony, L. Arganbright, and S. Khan. 1999. The buy-in benchmark: How staff understanding and commitment impact brand and business performance. *Journal of Marketing Management* 15 (8): 819-835.

Thomson, K., and L. Hecker. 2000. The business value of buy-in: How staff understanding and commitment impact on brand and business performance. In *Internal marketing: Directions for management*, edited by R. J. Varey and B. R. Lewis, 160-175. New York, NY: Routledge.

Vera-Muñoz, S., W. Kinney Jr., and S. E. Bonner. 2001. The effects of domain experience and task presentation format on accountants' information relevance assurance. *The Accounting Review* 76 (3): 405-430.

Victoravich, L. M. 2010. When do opportunity costs count? The impact of vagueness and project completion stage, and management accounting experience. *Behavioral Research in Accounting* 22 (1): 85-108.

Watson, D., and A. Tellegen. 1985. Toward a consensual structure of mood. *Psychological Bulletin* 98 (2): 219-235.

_____, L. A. Clark, and _____. 1988. Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology* 65 (6): 1063-1070.

Webb, R. A. 2004. Managers' commitment to the goals contained in a strategic performance measurement system. *Contemporary Accounting Research* 21 (4): 925-958.

Wegener, D. T., and R. E. Petty. 1994. Mood management across affective states: The hedonic contingency hypothesis. *Journal of Personality and Social Psychology* 66 (June): 1034-1048.

_____, and _____. 1996. Effects of mood on persuasion processes: Enhancing, reducing, and biasing scrutiny of attitude-relvant information. In *Striving and Feeling: Interactions Between Goals and Affect*, edited by L. L. Martin, and A. Tesser, 329-362. Mahwah, NJ: Lawrence Erlbaum.

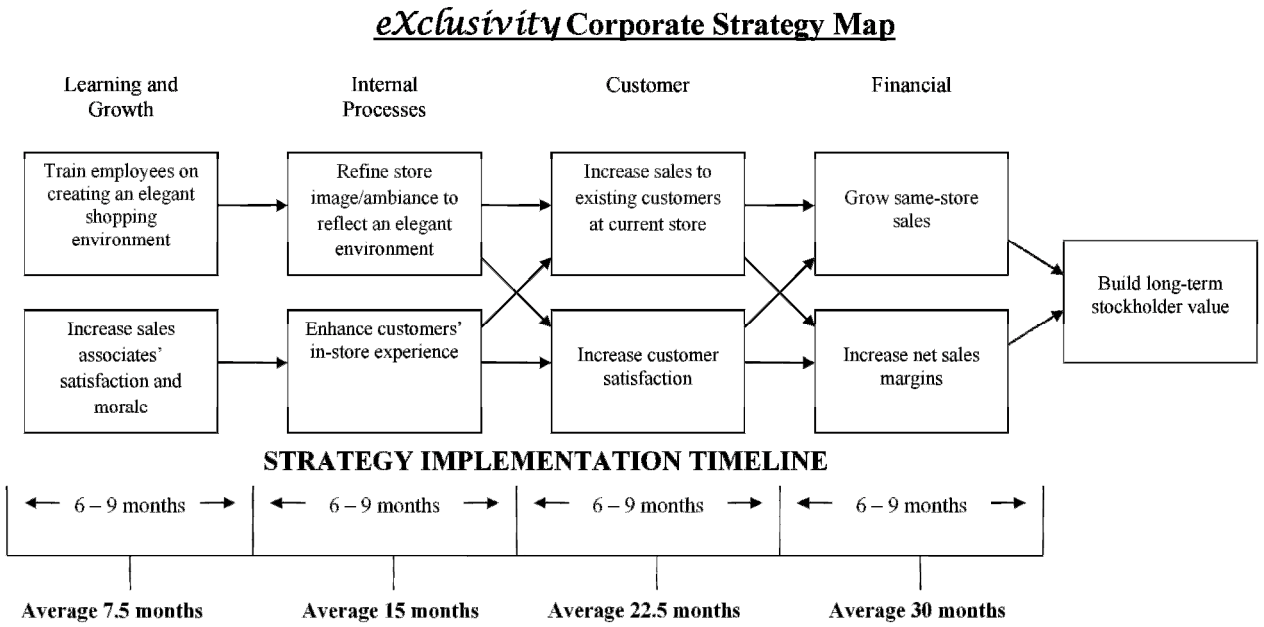
Weiss, J. J., K. Suckow, and R. Cropanzano. 1999. Effects of justice conditions on discrete emotions. *Journal of Applied Psychology* 84: 786-794.

Wilson, R. M. S., and W. F. Chua. 1993. *Managerial accounting: Method and meaning*. London: Chapman & Hall.

Wong-on-Wing, B. L., L. Guo, W. Li, and D. Yang. 2007. Reducing conflict in balanced scorecard evaluations. *Accounting, Organizations and Society* 32 (4-5): 363-377.

APPENDIX A

FIGURES AND TABLES



According to the *eXclusivity* CORPORATE STRATEGY stores will first focus on training employees on creating an elegant shopping environment and on increasing the satisfaction and morale of the sales associates. Better trained employees will lead to the image and ambiance of the store being refined to reflect an environment of elegance. More satisfied sales associates will embrace new customer focused processes and will be more able and motivated to enhance customer's in-store experience. This, in turn, will lead to higher customer satisfaction and an increase in sales to existing customers at the current store, which will lead to same-store sales growth and higher net sales margins.

Figure 1. Corporate Strategy Map.

Balanced Scorecard Recent Results:		Alex Kluger, North Store		Kurt Holmgren, South Store	
Measure	Target	Actual	% Over / (Under) Target	Actual	% Over / (Under) Target
Financial Perspective:					
1. *Net sales margin*	50%	47.35%	(5.3%)	53.35%	6.7%
2. Market share relative to retail space	$70	$74.00	5.7%	$68.00	(2.9%)
3. Inventory turnover	6	6.4	6.7%	5.43	(9.5%)
4. *Same-store sales growth*	14%	13.00%	(7.1%)	14.80%	5.7%
Customer Perspective:					
1. Customer returns as a % of sales	3.5%	3.60%	(2.9%)	3.44%	1.7%
2. *Repeat sales*	75%	77.00%	2.7%	73.40%	(2.1%)
3. *Customer satisfaction rating*	90%	92.00%	2.2%	87.50%	(2.8%)
4. Out-of-stock items	5%	5.10%	(2.0%)	4.84%	3.2%
Internal Processes Perspective:					
1. Vendor rating	85%	77.60%	(8.7%)	90.5%	6.5%
2. Returns to suppliers	5%	5.40%	(8.0%)	4.49%	10.2%
3. *"Mystery Shopper" audit rating*	90%	97.00%	7.8%	83.10%	(7.7%)
4. *Store "elegance" rating*	90%	98.00%	8.9%	81.90%	(9.0%)
Learning and Growth Perspective:					
1. Average tenure of sales personnel	4	3.56	(11.0%)	4.41	10.1%
2. *Employee satisfaction rating*	85%	93.50%	10.0%	69.80%	(17.9%)
3. Employee suggestions per employee / year	3	2.43	(19.0%)	3.60	19.8%
4. *Hours of training per employee / year*	30	36	20.0%	26.35	(12.2%)

* The strategically-linked measures are shown in italics above. However, the actual BSCs participants viewed did not distinguish between strategic and non-strategic measures.

Figure 2. Balanced Scorecard Results.

Using the table below, please indicate how you feel **right now**. Please read each item and then **CIRCLE** the appropriate answer.

		Very slightly or not at all	A little	Moderately	Quite a bit	Extremely
1.	Interested	1	2	3	4	5
2.	Distressed	1	2	3	4	5
3.	Excited	1	2	3	4	5
4.	Upset	1	2	3	4	5
5.	Strong	1	2	3	4	5
6.	Guilty	1	2	3	4	5
7.	Scared	1	2	3	4	5
8.	Hostile	1	2	3	4	5
9.	Enthusiastic	1	2	3	4	5
10.	Proud	1	2	3	4	5
11.	Irritable	1	2	3	4	5
12.	Alert	1	2	3	4	5
13.	Ashamed	1	2	3	4	5
14.	Inspired	1	2	3	4	5
15.	Nervous	1	2	3	4	5
16.	Determined	1	2	3	4	5
17.	Attentive	1	2	3	4	5
18.	Jittery	1	2	3	4	5
19.	Active	1	2	3	4	5
20.	Afraid	1	2	3	4	5

Figure 3. PANAS Scale.

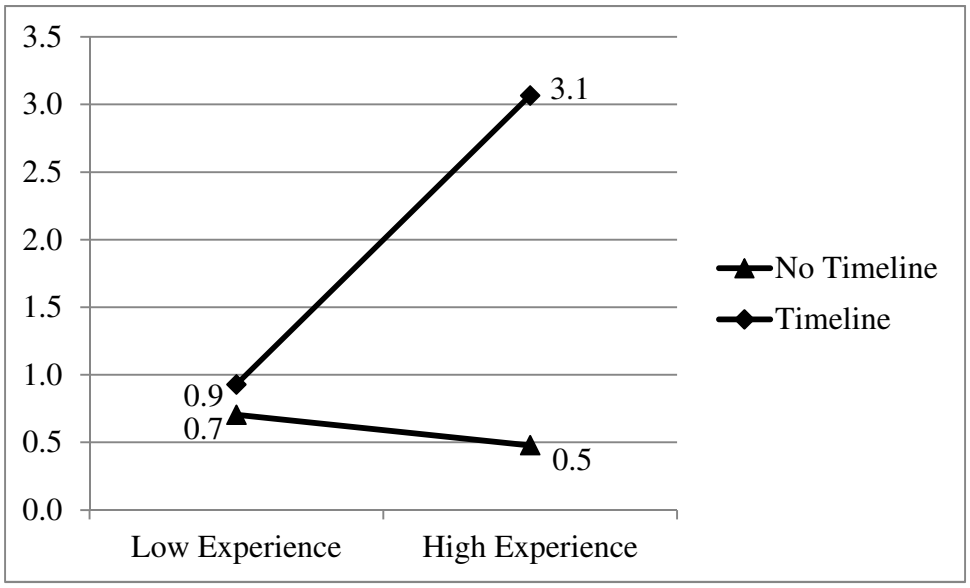


Figure 4. Performance Evaluation Difference Score (North Store – South Store): Timeline and Years of Professional Experience.

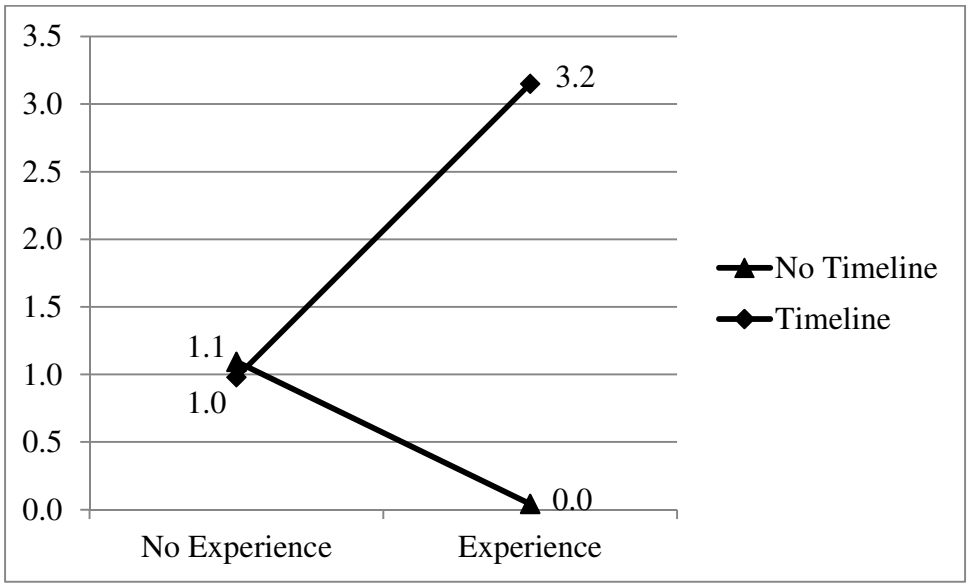


Figure 5. Performance Evaluation Difference Score (North Store – South Store): Timeline and Multidimensional Performance Evaluation Experience.

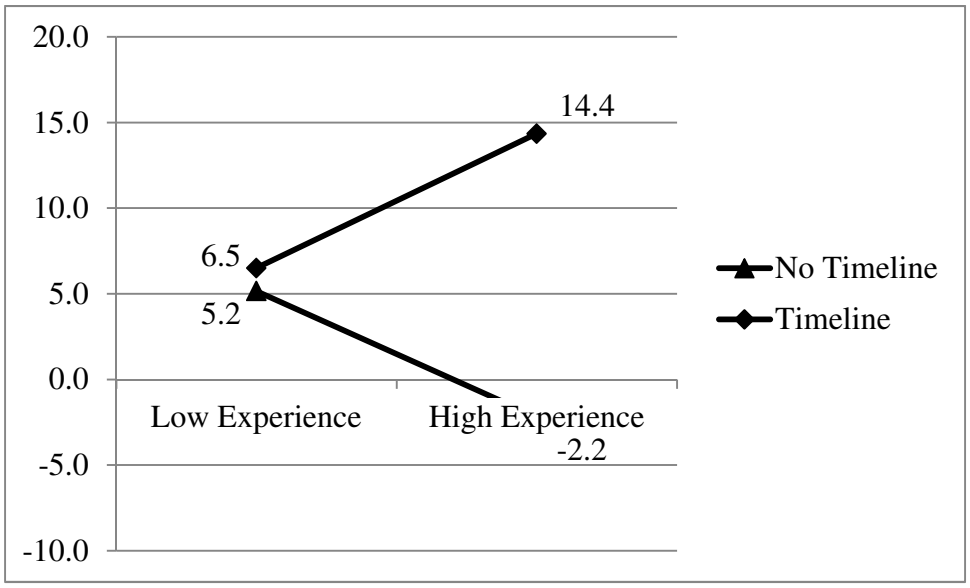


Figure 6. Bonus Allocation Difference (North Store – South Store): Timeline and Years of Professional Experience (in $1,000s).

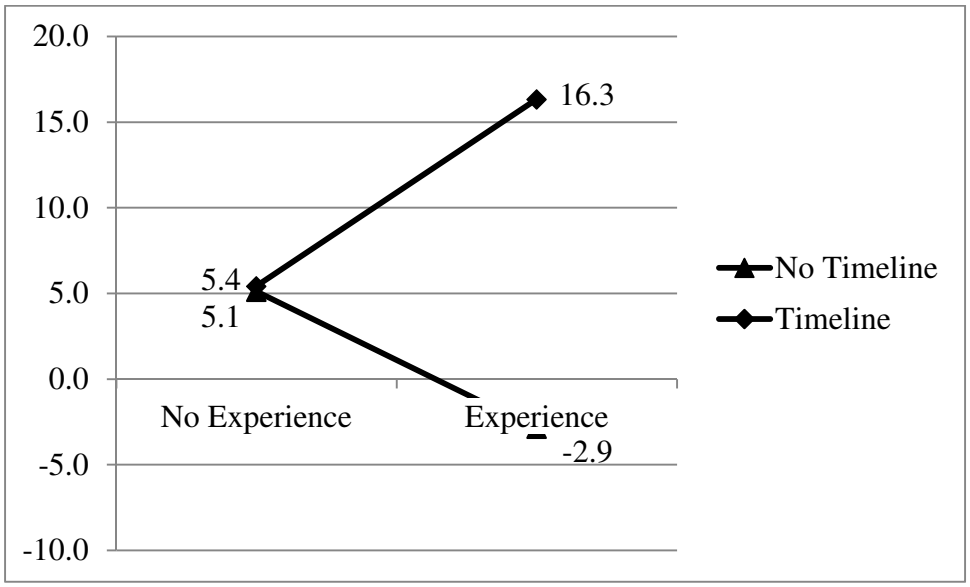


Figure 7. Bonus Allocation Difference (North Store – South Store): Timeline and Multidimensional Performance Evaluation System Experience (in $1,000s).

Table 1

Effects of Strategy Implementation Timeline, Strategy Buy-in, and Years of Professional Experience on Performance Evaluation Judgments (Controlling for Positive and Negative Affect)

Panel A: *Analysis of Covariance*

Dependent Variable: Performance Evaluation Difference (North Store – South Store)

R Squared = 0.281 (Adjusted R Squared = 0.177)

Source	**Mean Square**	**F**	**p-Value**
POSITIVE AFFECT	42.937	7.253	0.009
NEGATIVE AFFECT	24.326	4.109	0.047
TIMELINE (TL)	33.581	5.672	0.020
BUY-IN (BI)	0.217	0.037	0.849
EXPERIENCE (EXP)	15.905	2.687	0.106
TL * BI	6.585	1.112	0.296
TL * EXP	23.711	4.005	0.050
BI * EXP	8.309	1.403	0.241
TL * BI * EXP	0.012	0.002	0.964

Panel B: *Main Effect Cell Means for TIMELINE*

(*Cell means with standard errors in parentheses and number of subjects*)

No Timeline	Timeline
0.591	1.998
(0.400)	(0.429)
38	33

Panel C: *Main Effect Cell Means for BUY-IN*

(*Cell means with standard errors in parentheses and number of subjects*)

Low Buy-in	High Buy-in
1.350	1.238
(0.434)	(0.392)
33	38

(Continued from Table 1)

Panel D: *Simple Effect Means for TIMELINE * EXPERIENCE*

(*Cell means with standard errors in parentheses and number of subjects*)

	Low Experience	High Experience
No Timeline	0.704 (0.595) 19	0.478 (0.533) 19
Timeline	0.929 (0.564) 18	3.066 (0.647) 15

Table 2

Effects of Strategy Implementation Timeline, Strategy Buy-in, and Multidimensional Performance Evaluation System Experience on Performance Evaluation Judgments (Controlling for Positive and Negative Affect)

Panel A: *Analysis of Covariance*

Dependent Variable: Performance Evaluation Difference (North Store – South Store)

R Squared = 0.298 (Adjusted R Squared = 0.194)

Source	**Mean Square**	**F**	**p-Value**
POSITIVE AFFECT	85.642	14.870	0.000
NEGATIVE AFFECT	1.908	0.331	0.567
TIMELINE (TL)	37.620	6.532	0.013
BUY-IN (BI)	1.308	0.227	0.635
EXPERIENCE (EXP)	5.241	0.910	0.344
TL * BI	0.701	0.122	0.728
TL * EXP	41.480	7.202	0.009
BI * EXP	1.626	0.282	0.597
TL * BI * EXP	0.271	0.047	0.829

Panel B: *Main Effect Cell Means for TIMELINE*

(*Cell means with standard errors in parentheses and number of subjects*)

No Timeline	Timeline
0.568	2.065
(0.392)	(0.429)
38	33

Panel C: *Main Effect Cell Means for BUY-IN*

(*Cell means with standard errors in parentheses and number of subjects*)

Low Buy-in	High Buy-in
1.178	1.456
(0.423)	(0.397)
33	38

(Continued from Table 2)

Panel D: *Simple Effect Means for TIMELINE * EXPERIENCE*

(*Cell means with standard errors in parentheses and number of subjects*)

	No Experience	Experience
No Timeline	1.095 (0.561) 19	0.042 (0.557) 19
Timeline	0.980 (0.586) 18	3.150 (0.641) 15

Table 3

Effects of Strategy Implementation Timeline, Strategy Buy-in, and Years of Professional Experience on Bonus Allocation Decisions (Controlling for Positive and Negative Affect)

Panel A: *Analysis of Covariance*

Dependent Variable: Bonus Allocation Difference (North Store – South Store)

R Squared = 0.288 (Adjusted R Squared = 0.184)

Source	**Mean Square**	**F**	**p-Value**
POSITIVE AFFECT	264.820	1.386	0.244
NEGATIVE AFFECT	2150.871	11.256	0.001
TIMELINE (TL)	1358.028	7.107	0.010
BUY-IN (BI)	6.902	0.036	0.850
EXPERIENCE (EXP)	1.089	0.006	0.940
TL * BI	265.022	1.387	0.243
TL * EXP	979.683	5.127	0.027
BI * EXP	289.889	1.517	0.223
TL * BI * EXP	5.683	0.030	0.864

Panel B: *Main Effect Cell Means for TIMELINE* ($1,000s)

(*Cell means with standard errors in parentheses and number of subjects*)

No Timeline	Timeline
1.486	10.433
(2.273)	(2.437)
38	33

Panel C: *Main Effect Cell Means for BUY-IN* ($1,000s)

(*Cell means with standard errors in parentheses and number of subjects*)

Low Buy-in	High Buy-in
5.643	6.276
(2.463)	(2.228)
33	38

(Continued from Table 3)

Panel D: *Simple Effect Means for TIMELINE * EXPERIENCE* ($1,000s)

(*Cell means with standard errors in parentheses and number of subjects*)

	Low Experience	High Experience
No Timeline	5.157	-2.186
	(3.383)	(3.029)
	19	19
Timeline	6.512	14.355
	(3.207)	(3.678)
	18	15

Table 4

Effects of Strategy Implementation Timeline, Strategy Buy-in, and Multidimensional Performance Evaluation System Experience on Bonus Allocation Decisions (Controlling for Positive and Negative Affect)

Panel A: *Analysis of Covariance*

Dependent Variable: Bonus Allocation Difference (North Store – South Store)

R Squared = 0.323 (Adjusted R Squared = 0.224)

Source	**Mean Square**	**F**	**p-Value**
POSITIVE AFFECT	969.374	5.331	0.024
NEGATIVE AFFECT	732.331	4.027	0.049
TIMELINE (TL)	1606.373	8.834	0.004
BUY-IN (BI)	103.464	0.569	0.454
EXPERIENCE (EXP)	35.443	0.195	0.660
TL * BI	69.509	0.382	0.539
TL * EXP	1430.076	7.864	0.007
BI * EXP	313.203	1.722	0.194
TL * BI * EXP	62.639	0.344	0.559

Panel B: *Main Effect Cell Means for TIMELINE* ($1,000s)

(*Cell means with standard errors in parentheses and number of subjects*)

No Timeline	Timeline
1.104	10.883
(2.204)	(2.411)
38	33

Panel C: *Main Effect Cell Means for BUY-IN* ($1,000s)

(*Cell means with standard errors in parentheses and number of subjects*)

Low Buy-in	High Buy-in
4.757	7.230
(2.376)	(2.232)
33	38

(Continued from Table 4)

Panel D: *Simple Effect Means for TIMELINE * EXPERIENCE* ($1,000s)

(*Cell means with standard errors in parentheses and number of subjects*)

	No Experience	Experience
No Timeline	5.108	-2.900
	(3.150)	(3.131)
	19	19
Timeline	5.426	16.339
	(3.291)	(3.603)
	18	15

Table 5

Factor Analysis of PANAS Questionnaire

FACTOR 1		FACTOR 2		FACTOR 3		FACTOR 4		FACTOR 5	
Enthusiastic	0.875	Upset	0.829	Guilty	0.883	Alert	0.750	Jittery	0.838
Excited	0.832	Irritable	0.797	Ashamed	0.865	Attentive	0.735	Nervous	0.778
Proud	0.820	Distressed	0.768	Scared	0.661	Active	0.535		
Inspired	0.805	Afraid	0.564						
Determined	0.796								
Strong	0.742								

Table 6

Correlations – Affect

Pearson Correlation and *p*-value									
	Factor 1		Factor 2		Factor 3		Factor 4		Factor 5	
North Evaluation	-.063		.009		-.152		-.263	**	-.024	
	.597		.938		.196		.023		.840	
South Evaluation	.129		-.040		.187		.284	**	.130	
	.279		.735		.111		.014		.270	
Evaluation Difference	-.123		.032		-.215	*	-.348	***	-.097	
	.305		.785		.066		.002		.410	
North Bonus	-.099		-.152		-.308	***	-.198	*	-.189	
	.410		.200		.008		.097		.108	
South Bonus	.080		.157		.313	***	.202	*	.198	*
	.505		.185		.007		.084		.091	
Bonus Difference	-.089		-.155		-.312	***	-.200	*	-.194	*
	.455		.192		.007		.087		.098	

$n = 71$

*** Significant at α = 0.01 (2-tailed)

** Significant at α = 0.05 (2-tailed)

* Significant at α = 0.10 (2-tailed)

APPENDIX B

EXPERIMENT APPROVAL FROM OFFICE OF RESEARCH INTEGRITY AND ASSURANCE

ASU Knowledge Enterprise Development

Office of Research Integrity and Assurance

To:	Philip Reckers BA
From:	Mark Roosa, Chair Soc Beh IRB
Date:	08/30/2011
Committee Action:	Exemption Granted
IRB Action Date:	08/30/2011
IRB Protocol #:	1108006764
Study Title:	The Effects of a Strategy Implementation Timeline, Strategy Buy-In and Experience on Balanced Scorecard Based Performance Evaluations

The above-referenced protocol is considered exempt after review by the Institutional Review Board pursuant to Federal regulations, 45 CFR Part 46.101(b)(2) .

This part of the federal regulations requires that the information be recorded by investigators in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects. It is necessary that the information obtained not be such that if disclosed outside the research, it could reasonably place the subjects at risk of criminal or civil liability, or be damaging to the subjects' financial standing, employability, or reputation.

You should retain a copy of this letter for your records.

APPENDIX C

EXPERIMENTAL INSTRUMENT

eXclusivity is a luxury specialty retail department store operated by the Exclusive Group in the United States. The company is headquartered in Chicago. *eXclusivity* focuses on meeting the needs of society's most affluent consumers by offering premier luxury items. They operate twenty-nine stores spread across the United States' largest metropolitan areas, with some larger cities having two or more stores.

Approximately ten years ago *eXclusivity* began experiencing a sharp increase in competition and, as a result, a steady decline in two key metrics of this industry – *same-store sales* and *net sales margin* (analysts in this industry rely heavily on these metrics when making stock recommendations). Consequently, management felt the need to take corrective action. Six years ago the **corporate executive team formulated a new strategy**. It was hoped that this new strategy would help *eXclusivity* reverse the declining trend in *same-store sales* and *net sales margin*. The Chief Executive Officer of *eXclusivity*, Michael Reynolds, required the focus of the strategy to be on long-term value creation for shareholders. Thus, he desired that the strategy incorporate a multidimensional approach which would help *eXclusivity* achieve and *maintain* a position as industry leader in *same-store sales* and *net sales margin*.

Insert Buy-in Manipulation

The *eXclusivity* "Corporate Strategy Map" is provided on the following page. All of the *eXclusivity* store managers are **evaluated on measures congruent with the corporate strategy**.

Low Buy-in Manipulation

The strategy was pilot-tested at four Mid-west stores over a period of three years. The results of the pilot-test were mixed. Two of the four stores were able achieve the financial performance targets set at the corporate level and two were not. The two stores that were successful found that it took an average of **2-3 years (average 30 months)** after the strategy's implementation for them to increase *same-store sales* and *net sales margin* to the goal levels.[12] The **corporate executive team made some revisions to the strategy** which they hoped would result in a better success rate.

[12] This timing information was omitted in the "no timeline" condition.

Since the end of pilot-testing three years ago *eXclusivity* has been rolling out the strategy in its other stores; starting on the East Coast and working west. The results have continued to be mixed. Specifically, approximately **12 of 20 stores (60-percent)** have achieved the target financial performance objectives set at the corporate level while the remaining stores have fallen short. The stores that were successful found it took **2-3 years (average of 30 months)** for the strategy to work.[13]

Eighteen months ago *eXclusivity* began implementing the strategy at two well established stores in the largest Western metropolitan area. One store is on the North side of this metropolitan area and the other is on the South side. Both stores are located in nearly identical socio-economic areas and cater to clientele that are demographically similar.

When eXclusivity began rolling out the new strategy a memo was sent out to all employees stating what the strategy was and when each store would begin implementing it. When the stores you oversee began implementing the new strategy 18 months ago you received an additional memo which contained the strategy and Balanced Scorecard. The memo requested that you review the strategy with store managers you oversee and that they, in turn, review the strategy with their employees.

High Buy-in Manipulation

The corporate executive team used causal business modeling to develop a strategy that would link those measures most highly correlated with *same-store sales* and *net sales margin*. The strategy was pilot-tested at four Mid-west stores over a period of three years. The pilot-test results demonstrated that the strategy was indeed successful in helping *eXclusivity* to align its strategic objectives. The results found that it took **2-3 years (average 30 months)** after the strategy's implementation for these stores to achieve the target financial performance objectives set at the corporate level.

Since the end of pilot-testing three years ago *eXclusivity* has been rolling out the strategy in its other stores; starting on the East Coast and working west. Of the stores that have implemented the strategy **19 of 20 (95-percent)** have had

[13] This timing information was omitted in the "no timeline" condition.

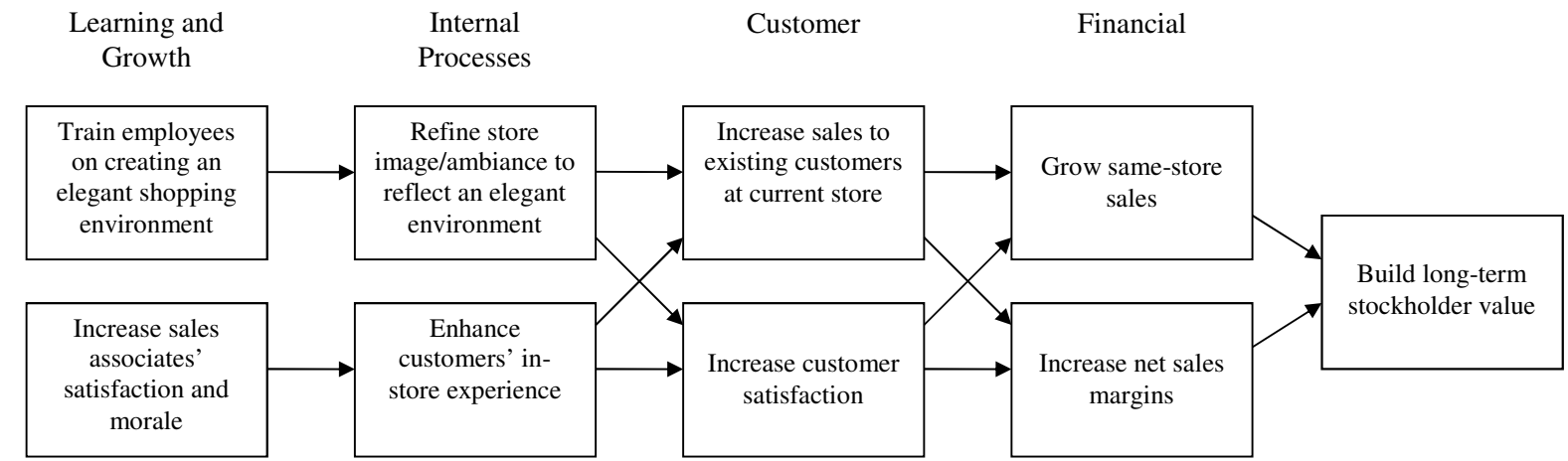
success similar to that of the pilot-tested stores and in a similar time frame **(2-3 years (average 30 months))**.

CEO Reynolds is a strong proponent of the new corporate strategy and accompanying Balanced Scorecard. In an effort to show his support for the new strategy and to maximize its potential effectiveness, he has taken the following steps:

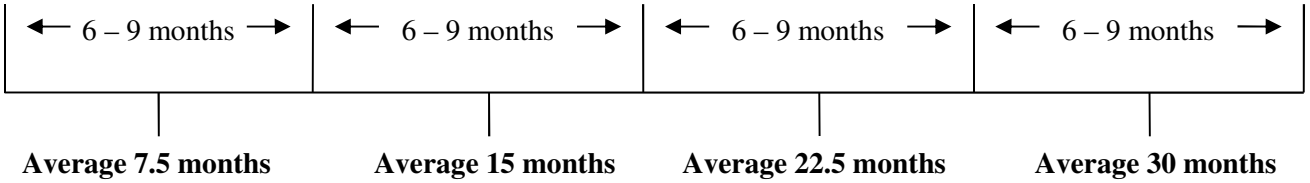
- He has had various members of the corporate executive team that developed the Balanced Scorecard visit every store prior to implementing the strategy. These executives hold meetings with all employees of the implementing store, fully explain the strategy and Balanced Scorecard to the employees, and hand out brochures that describe the strategic objectives and how they will be measured. They also answer any questions the employees may have.
- He assigned Brandon Lewis, a business performance analyst at eXclusivity, to oversee the deployment of the Balanced Scorecard full-time.
- He has required the Balanced Scorecard to be made highly visible to all employees by having it posted in all break rooms, employee manuals, and on the company's intranet.
- He also required that the company's intranet have voice and video segments of the corporate executive team describing the overall strategy and explanations for individual objectives, measures, targets, and initiatives.
- He has made the strategy and Balanced Scorecard an integral part of the orientation process for all new employees.
- He requires the company's newsletter to provide periodic reports on stores that have implemented the Balanced Scorecard and share success stories from top-performing managers.

Eighteen months ago *eXclusivity* began implementing the strategy at two well established stores in the largest Western metropolitan area. One store is on the North side of this metropolitan area and the other is on the South side. Both stores are located in nearly identical socio-economic areas and cater to clientele that are demographically similar.

eXclusivity Corporate Strategy Map



STRATEGY IMPLEMENTATION TIMELINE



(Continued from previous page)

According to the *eXclusivity* CORPORATE STRATEGY stores will first focus on training employees on creating an elegant shopping environment and on increasing the satisfaction and morale of the sales associates. Better trained employees will lead to the image and ambiance of the store being refined to reflect an environment of elegance. More satisfied sales associates will embrace new customer focused processes and will be more able and motivated to enhance customer's in-store experience. This, in turn, will lead to higher customer satisfaction and an increase in sales to existing customers at the current store, which will lead to same-store sales growth and higher net sales margins.

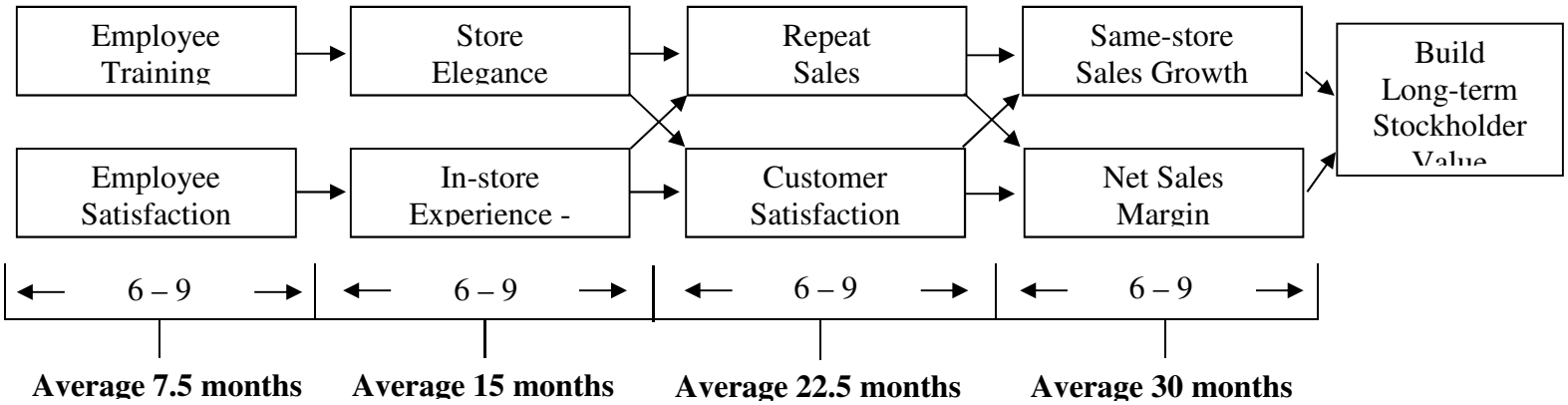
Please assume you are a divisional manager for *eXclusivity* in the largest Western metropolitan area and oversee the North and South Stores.

Eighteen months ago two assistant managers were promoted to the position of store manager in your area and charged with implementing the new *eXclusivity* corporate strategy. Alex Kluger, of the Portland, Oregon Store was promoted to store manager of the North Store and Kurt Holmgren, of the Seattle, Washington Store was promoted to store manager of the South Store.

The corporate information system has reported recent results for both stores. This information is displayed for both stores on the following page.

Balanced Scorecard recent results:		Alex Kluger, North Store		Kurt Holmgren, South Store	
Measure	**Target**	**Actual**	**% Over / (Under) Target**	**Actual**	**% Over / (Under) Target**
Financial perspective:					
1. *Net sales margin*	50%	47.35%	(5.3%)	53.35%	6.7%
2. Market share relative to retail space	$70	$74.00	5.7%	$68.00	(2.9%)
3. Inventory Turnover	6	6.40	6.7%	5.43	(9.5%)
4. *Same-store sales growth*	14%	13.00%	(7.1%)	14.80%	5.7%
Customer perspective:					
1. Customer returns as a % of sales	3.5%	3.60%	(2.9%)	3.44%	1.7%
2. *Repeat sales*	75%	77.00%	2.7%	73.40%	(2.1%)
3. *Customer satisfaction rating*	90%	92.00%	2.2%	87.50%	(2.8%)
4. Out-of-stock items	5%	5.10%	(2.0%)	4.84%	3.2%
Internal Processes perspective:					
1. Vendor rating	85%	77.60%	(8.7%)	90.5%	6.5%
2. Returns to supplier	5%	5.40%	(8.0%)	4.49%	10.2%
3. *"Mystery Shopper" audit rating*	90%	97.00%	7.8%	83.10%	(7.7%)
4. *Store "elegance" rating*	90%	98.00%	8.9%	81.90%	(9.0%)
Learning and Growth perspective:					
1. Average tenure of sales personnel	4	3.56	(11.0%)	4.41	10.1%
2. *Employee satisfaction rating*	85%	93.50%	10.0%	69.80%	(17.9%)
3. Employee suggestions per employee / year	3	2.43	(19.0%)	3.60	19.8%
4. *Hours of training per employee / year*	30	36.00	20.0%	26.35	(12.2%)

(Continued from previous page)



1. As <u>divisional manager</u>, please indicate, on the following scale, your evaluation of the performance of the **North** Store manager, Alex Kluger, over the **<u>past eighteen months</u>**:

0	1	2	3	4	5	6	7	8	9	10
Extremely Poor		Poor		Satisfactory			Good			Excellent

2. As <u>divisional manager</u>, please indicate, on the following scale, your evaluation of the performance of the **South** Store manager, Kurt Holmgren, over the **<u>past eighteen months</u>**:

0	1	2	3	4	5	6	7	8	9	10
Extremely Poor		Poor		Satisfactory			Good			Excellent

3. As divisional manager you are responsible for not only evaluating the managers under your supervision, but also for allocating their bonuses from a pool. You have a pool of $50,000 to allocate between Alex Kluger (North Store manager) and Kurt Holmgren (South Store manager). Please allocate the $50,000 between these two managers by writing their bonus amounts in the space provided:

Alex Kluger (**North** Store Manager)	Kurt Holmgren (**South** Store Manager)
_____	_____

4. Without looking back at any prior information, please use the following scale to indicate how successful you believe the new *eXclusivity* corporate strategy will be in meeting competitive challenges. That is, please indicate the degree to which you feel that by following the corporate strategy

eXclusivity stores will be able to *grow same-store sales* and *net sales margins* (to what degree do you "buy-in" to the corporate strategy?).

0	1	2	3	4	5	6	7	8	9	10
Very Unlikely			Possible				Probable			Very Likely

Without looking back at any prior information, please respond to the following question:

5. I was provided an explicit detailed timeline which showed how long it should take for the *eXclusivity* corporate strategy to play out as well as how long it should take for improvement in one category to lead to improvement in the subsequent category. (Please circle)

True False

Without looking back at any prior information, please respond to the following questions:

6. How long has Alex Kluger been manager of the **North** Store? (Please circle)

6 months 18 months 30 months

7. How long has Kurt Holmgren been manager of the **South** Store? (Please circle)

6 months 18 months 30 months

8.

A. Age: _____

B. Gender: Female Male

C. Experience:

a. Full-time professional work experience (years): _____

b. Experience working with the Balanced Scorecard in practice (years): _____

c. Have you evaluated subordinates on both financial and nonfinancial measures in the past? YES NO

i. If "YES", what was the proportion of weight placed on:

Financial measures? _____

Nonfinancial measures? _____

d. Are you evaluated on both financial and nonfinancial measures in your own personal performance evaluations? YES NO

i. If "YES," what proportion of weight is placed on:

Financial measures? _____

Nonfinancial measures? _____

D. Did you find the case realistic? YES NO

E. Did you understand the case? YES NO

F. How difficult did you find the case requirements?

Very Easy	Moderately Easy	Slightly Easy	Average	Slightly Difficult	Moderately Difficult	Very Difficult

G. What is your emphasis in the MBA program?

a. Finance
b. General Management
c. Marketing
d. Supply Chain
e. Other: _____

9. Using the table below, please indicate how you feel **right now**. Please read each item and then **CIRCLE** the appropriate answer using the following scale:

(1) Very slightly or not at all (2) A little (3) Moderately
(4) Quite a bit (5) Extremely

		Very slightly or not at all	A little	Moderately	Quite a bit	Extremely
1.	Interested	1	2	3	4	5
2.	Distressed	1	2	3	4	5
3.	Excited	1	2	3	4	5
4.	Upset	1	2	3	4	5
5.	Strong	1	2	3	4	5
6.	Guilty	1	2	3	4	5
7.	Scared	1	2	3	4	5
8.	Hostile	1	2	3	4	5
9.	Enthusiastic	1	2	3	4	5
10.	Proud	1	2	3	4	5
11.	Irritable	1	2	3	4	5
12.	Alert	1	2	3	4	5
13.	Ashamed	1	2	3	4	5
14.	Inspired	1	2	3	4	5
15.	Nervous	1	2	3	4	5
16.	Determined	1	2	3	4	5
17.	Attentive	1	2	3	4	5
18.	Jittery	1	2	3	4	5
19.	Active	1	2	3	4	5
20.	Afraid	1	2	3	4	5

THANK YOU FOR YOUR PARTICIPATION!

This document was generated using the Graduate College Format Advising tool.
Please turn a copy of this page in when you submit your document to Graduate