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The integration of balanced scorecard models

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Abstract

The entire focus of any balanced scorecard model (BSM) is to ensure that a wide range of events and outcomes are captured in ways useful to decision makers. An important question arises - which decision maker? And, equally important, must this decision maker be intimately familiar with a supposed organizational strategy in order to succeed? The answer to the first question helps us sort the BSMs into subgroups; the answer to the second question suggests that strategy may be as simple as the will of an organization and its members to survive to fight one more day. Building on the work of Lynch and Cross (1991) as well as the model developed by CAM-I, this integrated model combines traditional and modern perspectives on control, both top-down and bottom-up metrics, the internal versus external stakeholder perspective, and the relationship of locus of control (organizational role) with the types of incentives that companies have found to be most useful in creating sustainable performance improvements. It incorporates and remedies all of the identified weaknesses of each model and provides a comprehensive model of performance management that can be adapted to meet the needs of every organization. The Comprehensive Performance Management System (CPMS) is a complex model but one that can be easily translated into a more focused, less complex structure.

Keywords

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Disciplines

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THE INTEGRATION OF BALANCED SCORECARD MODELS

This article addresses the shortcomings in balanced scorecard models through the integration of perspectives, metrics, and terminology.

C.J. MCNAIR AND TED WATTS

The last twenty years have witnessed both an increased sophistication and application of measurement systems within organizations. One of the earliest of these new models was developed by Lynch and Cross, at Wang Corporation in the mid 1980s. Faced with the reality that traditional standard cost-based measurement models could reverse, even eradicate, the improvements gained from new management methods such as just-in-time manufacturing, Lynch and Cross set out on a path to develop a new approach to performance management—the "balanced scorecard."[1]

In its early stages of development, the emphasis of the balanced scorecard approach was on integrating financial and nonfinancial measurements.[2] Specifically, the concern focused on the need to have the financial metrics provide the same "signal" of performance as the nonfinancial metrics. If cycle time for a product was reduced, reducing the total labor hours required to meet a monthly production target, it was important that the accounting system not issue an "unfavorable" absorption variance. The result of Lynch and Cross' work was the recognition that the continuous improvement model would require a shift away from engineered standards to those based on a rolling average of actual performance and incorporating trend reporting.[3]

By 1996, when Kaplan and Norton introduced their version of the balanced scorecard,[4] there was recognition across the field that new management systems required new measurement methods and mentalities. This is where the agreement stopped. For while some models, such as that proposed by Kaplan and Norton, emphasized the need to tie measurements to a well-developed strategy resulting in a "top down" model of measurement and control, Lynch and Cross and others argued for the need to use a "bottom-up" methodology. To these experts, the goal was to create measurements that reflected strategy but emphasized operational performance.

Whether "top-down" or "bottom-up" in nature, these initiatives proved lacking in several ways:

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MEASUREMENTS THAT DO NOT INCLUDE SOME FORM OF INCENTIVE TO REINFORCE THEIR IMPORTANCE BECOME "INVISIBLE."

- The models often proved to be a poor fit for small and service organizations. In the former case, the fatal flaw in the balanced scorecard (BSC) approach was the explicit reliance on a well-developed corporate strategy for successful implementation. There is significant empirical proof that a defined strategy is not a given for a small business.[5]
- They failed to explicitly incorporate value creation in their system of metrics. While the customer domain was recognized as important, no direct external measure of the firm's performance *in the customer's eyes* was incorporated.
- They failed to explicitly define their linkages to other key concepts in performance measurement, such as critical success factors (CSFs) and key performance indicators (KPIs). This oversight unnecessarily created a perception that the BSC was unique, or divorced from, these prior concepts.[6]
- They did not explicitly tie in performance rewards to the overall measurement model. Since it has long been recognized that "you get what you measure and reward," this oversight created unsustainable models that often fell into disuse as soon as the "Hawthorne effect" evaporated.

In the pages that follow these shortcomings in the BSC models will be addressed through the integration of perspectives, metrics, and terminology.

The language of measurement

Measurements have played a vital role in the development of controls systems since the early work by Anthony and others. In 1964, in a seminal work in management control, edited by Bonini et al., it was noted that:[7]

> Every organization is a control system. Each has a direction and objectives, whether explicit or implied.[8]

In fact, many articles in Bonini's edition made and remade the point that, by definition, to use the term "organization" implies some form of management control, whether the focus is results, action, or personnel-based.[9] Peter Drucker's article in this same monograph is perhaps the most memorable. He carefully unfolds an argument, which, simply stated, notes that more "controls" do not equate to more "control." Noting the disparity in meaning, he comments:[10]

> Controls deal with facts, that is, the events of the past. Control deals with expectations, that is, with the future. Controls are analytical and operational, concerned with what was and what is. Control is normative, concerned with what ought to be, with significance rather than meaning.

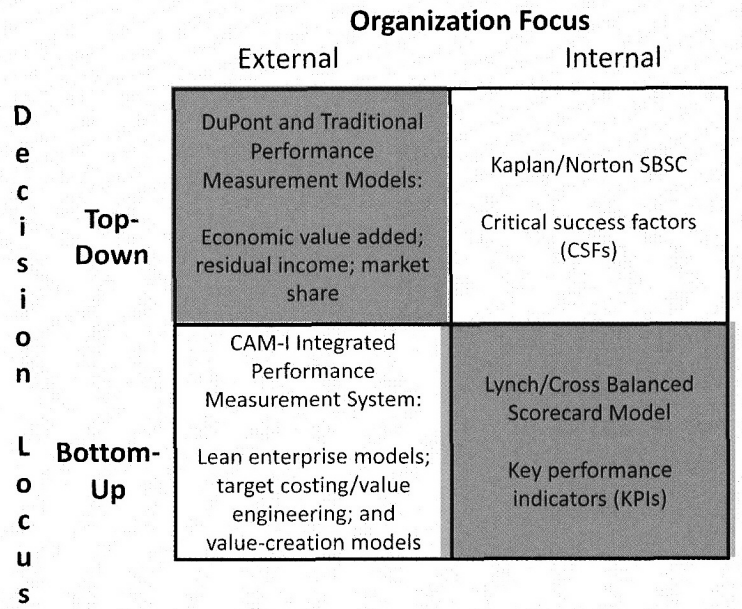
Continuing with this logic, Drucker suggests that there are four characteristics of controls in business organizations:[11]

1. In business...measurement...is subjective and necessity-biased. It changes both the event and the observer if it does not altogether create his perceptions.
2. Because controls have such an impact it is vitally important that we select the right ones. To enable controls to give right vision and to become the ground for effective action, the measurements must also be appropriate.
3. Business is an institution of society. It exists to contribute to economy, society, and individual. In consequence, results in business exist only on the outside—in economy, in society, and with the customer. It is the customer only who creates a "profit." Everything inside business only creates costs...Results are always entrepreneurial.
4. Finally...(B)usiness is the only system we know which has both quantifiable and non-quantifiable results and events, each equally important.

What do these principles suggest for the design of an effective control system? First and foremost it is critical to consider the behavioral impact of controls. Measurements that do not include some form of incentive to reinforce their importance become "invisible"—they fail to generate action in a reliable, sustainable way. Additionally, what is measured changes events—measurements shift attention to certain aspects of performance, overlooking others.

The entire focus of any balanced scorecard model (BSM) is to ensure that a

Exhibit 1 Measurement Models



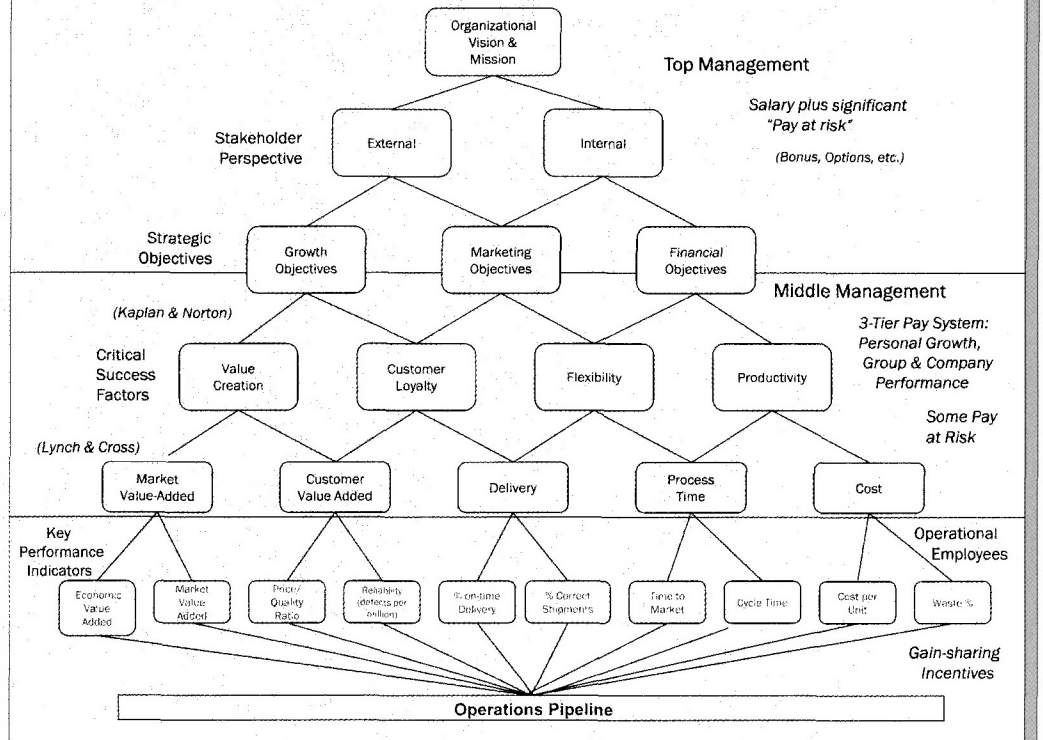
wide range of events and outcomes are captured in ways useful to decision makers. That being said, an important question arises...which decision maker? And, equally important, must this decision maker be intimately familiar with a supposed organizational strategy in order to succeed? The answer to the first question helps us sort the BSMs into subgroups; the answer to the second question suggests that strategy may be as simple as the will of an organization and its members to survive to fight one more day.

As suggested by Exhibit 1, the extant literature on balanced scorecards can be viewed from a simple two-by-two decision perspective. Specifically, the models can be sorted based on whether they focus on external or internal indicators of success as well as whether they emphasize top-down or bottom-up decision loci.

It is also interesting to overlay some of the traditional language of control on these various models. The Norton-Kaplan model, for example, correlates most closely to the traditional concept of "critical success factors." Rooted in strategy, CSFs target the critical dimensions of performance as defined by the firm's strategy. Unfortunately, the same CSFs can often leave the customer perspective out of the equation, relying instead on internally defined market metrics that may or may not capture the value-creation process. Similarly, Lynch and Cross's balanced scorecard, which is one of the earliest such models,[12] emphasizes internally defined metrics of performance but relies heavily on a "bottom-up" or process focus in defining its measurements and their relationships.

As attention shifts to the external environment and its definition of success, we encounter both the traditional world of shareholder value measurements and the modern focus on externally driven performance. The DuPont *economic value-added* (EVA) and *market value-added* (MVA) models of performance measurement place their emphasis on the factors that affect external stakeholders' wealth. They are, by definition, top-down in nature as they deal with the *gestalt*, or the entirety of organizational performance as boiled down into a few key financial metrics. In sharp contrast, the modern world of lean management and process improvement, as embodied in the CAM-I Integrated Performance Management models, place the customer

Exhibit 2 Comprehensive Performance Management System (CPMS)



inside the organization in terms of calling the shots and defining success.

Four measurement models, four unique perspectives on the concept of "success," and four forms of control, seeming in juxtaposition and contrast rather than blending into one unified whole. If there are four unique models, then a manager must decide which set of assumptions and methods most adequately capture his or her world of work—which will most likely lead to sustainable superior performance. Each model and each proponent will forcefully argue that their approach will result in success, leaving the practitioner with little more to go on than sales pitches and "gut-fact"... entrepreneurial instinct and common sense.

Integrating perspectives: one model—many users

Are the various control models actually mutually exclusive, or can they be reduced to one unified model that keeps management's eyes and those of the workers who create the value that customers expect on the same prize? As suggested by Exhibit 2, these seemingly different models of control can, in reality, be reduced to one overarching model. Building on the work of Lynch and Cross (1991) as well as the model developed by CAM-I, this integrated model combines traditional and modern perspectives on control, both top-down and bottom-up metrics, the internal versus external stakeholder perspective, and the relationship of locus of control (organizational role) with the types of incentives that companies have found to be most useful in creating sustainable performance improvements. It incorporates and remedies all of the identified weaknesses of each model and provides a comprehensive model of performance management that can be adapted to meet the needs of every organization.

Walking through the key components of the model, the traditional emphasis on vision, mission, strategy, critical success factors (CSF), and key performance

indicators (KPI) can be found on the left side of the diagram. Each row of measurement detail incorporates a different level of analysis. Inserted between these traditional measurement constructs are references to Lynch/ Cross and Kaplan/ Norton models. Lynch and Cross built their model at the KPI level, emphasizing process improvements and metrics that would resonate with operational employees. Their four key dimensions of performance were quality, productivity, delivery, and cost. The diagram expands these 1980s-based concepts to include more recent work in customer- and market-value added measurements.

Kaplan and Norton emphasize metrics at the CSF level. With a clear linkage to strategy, it is easy to see that their concern is with providing a top-down set of metrics that can be deployed by top management to guide middle management decisions and actions, where their four dimensions of performance are innovation/growth, customer, financial, and operational. Once again, the external stakeholder perspective is ignored, creating a critical weakness in the competitive arena. If Drucker is right, this is a fatal flaw in that the only place an organization exists is "on the outside." The model in Exhibit 2 adds value creation to the CSFs, by definition creating a linkage to external stakeholders.

On the right side of the diagram the emphasis shifts away from abstract measurement concepts to the organizational structure and related incentive systems. As illustrated, the integrated model can be broken into three "chunks" or subgroups, those controlled by top management, those under the purview of middle management, and those that only operational managers and employees can affect. As was the case in traditional models, these three divisions neatly coincide with strategy, critical success factors, and key performance indicators.

Added to the measurement and structure logic is a reflection of the most effective forms of incentives. As noted by Stonich:[13]

> ...(in many control systems) the necessary performance measurement and reward system that completes the control cycle is often missing... These measurements and rewards should reflect the firm's strategy, but this is not enough, the system must also be consistent with or specifically designed to help modify certain of the firm's internal characteristics.

In other words, the systems must be designed to ensure continual growth, innovation, and improvement. This need is reflected in Exhibit 2 by adding a growth objective in addition to the marketing and financial objectives that underlie the CAM-I Integrated Performance Measurement system. Arrow, writing one of his many seminal pieces on management and control systems in 1964, goes on to note:[14]

> Control in the large is concerned with organizational issues and transfer pricing... Control in the small is a question of incentives... rewards should be determined by the amount of gain to the company and nothing else, otherwise it creates an incentive for distortion.

Based on the early works of the pioneers in organizational control, a failure to include incentives that complete the "control loop" can lead to dysfunctional consequences and poor performance. At the bottom of the organization, these incentives and metrics are best incorporated in a gain-sharing program where workers receive a bonus based on the overall improvement in process performance. By sharing in the gain, line workers are far less likely to become disenchanted with lean or six sigma initiatives.

As one works up the corporate ladder to middle management, it becomes important to capture key elements of the work performed by these individuals: 1) they need to be continuously improving their own skills, 2) they have to be able to effectively work with individuals from across the organization, and 3) they have to be reminded that only when the organization "wins" do they truly meet their goals. By delineating the key metrics used to make the translations between financial and operational goals, the comprehensive model in Exhibit 2 helps eliminate the need for the "omniscient" hinge manager who has in the past been critical to the linkage of strategic to operational goals.[15] By tying incentives to corporate performance, at least some part of the middle manager's compensation should become "pay at risk."

CONTROL SYSTEMS MUST BE DESIGNED TO ENSURE CONTINUAL GROWTH, INNOVATION, AND IMPROVEMENT.

CONTROL IN THE SMALL ORGANIZATION IS ONE OF PERSPECTIVE, NOT PURPOSE, EXISTENCE, NOT EXPLICITNESS.

Finally, at the top level of the organization, the emphasis shifts away from internal operations to attaining strategic objectives and meeting external stakeholder expectations. It is now critical that a major proportion of the executive's compensation consist of "pay at risk" if Arrow's concerns with control in the small organization are to be addressed. Recent events in the economy, such as the bankruptcies and bailouts of major financial and manufacturing organizations drive home the need to link top managers' pay to the actual performance of the firm. How can a bonus be justified if the company paying it is about to fail? Closing the control loop at the top level of the organization has to explicitly include external stakeholder needs if it is to be effective.

Control in the very small: the case of small business

The Comprehensive Performance Management System (CPMS) is a complex model but one that can be easily translated into a more focused, less complex structure. Since Drucker has noted that all results are, by definition, entrepreneurial in nature,[16] it is very important to consider the last item on the list of weaknesses identified in the beginning of this article: addressing the needs of small business.

One easy way to describe the translation of the model from large to small organizations would be to simply collapse the middle and top layers of the diagram, thereby recognizing that one individual, or a very small team of individuals, are dealing with all of these issues. It is the essence of effective entrepreneurialism that one individual develops a vision, a mode to reach that vision (strategies), and sets operational objectives for their employees. But if the model exists, why do small businesses consistently appear to lack the very rudiments of formal control? This is the point at which it is important to recognize the fact that controls can be described in terms of results, action, or personnel.

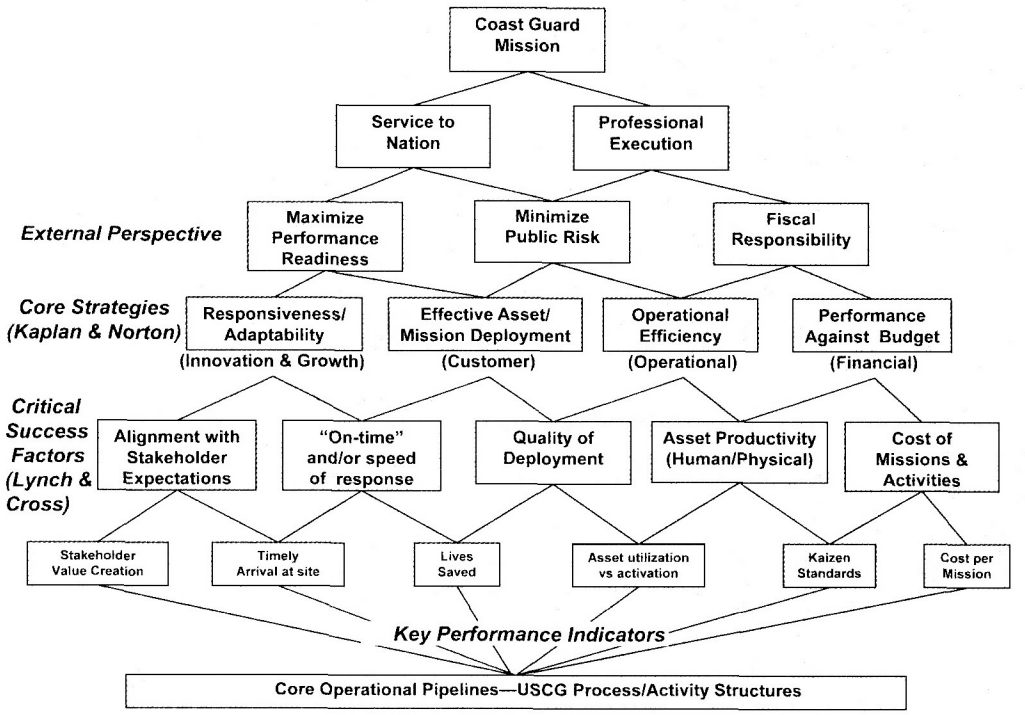
When most individuals speak of control, they are thinking of formal results controls or the highly specified procedures that make up action controls. In small business, however, this level of formality is seldom needed. The informal control system, shaped by the personality and drive of the entrepreneur, is all that is needed as long as there is mutual trust and respect. By definition, personnel control is implicit and informal, but that does not diminish in any way its power to shape behavior. In a small business, the only metrics needed by the entrepreneur are the key performance indicators that most clearly reflect the basic health and functioning of the organization. KPIs help the entrepreneur clearly define goals for the organization and provide the means to use the gain-sharing incentive systems that have proven so powerful in motivating operational performance.

Control in the small organization consequently becomes one and the same with an effective operational control system with complementary incentives to help individual workers make the decisions and take the actions that will lead to sustainable growth for the organization. Control in the small organization is one of perspective, not purpose, existence, not explicitness.

The service organization

The final, and increasingly major, organizational segment is the service organization. Exhibit 3 provides an example of the CPMS that is under development at the US Coast Guard. The purpose of the Coast Guard is that of all organizations—to serve external stakeholders. It differs, clearly, in that the work it performs takes place in the public arena and is both response- and mission-based. Its primary objectives are to sustain high levels of performance readiness and flawless mission deployment. Where a manufacturing company might focus on productivity and efficiency, the primary goals of the Coast Guard are effectiveness (lives saved) and fiscal responsibility—they attempt to do the most they can with the resources provided by the public. Recent events such as Hurricane Katrina suggest that it is an organization that excels at its primary missions.

Exhibit 3 US Coast Guard Performance Management—An Integrated View



That being said, where is the role for incentives in the Coast Guard model? It is in this area that response organizations differ from other entities. For the most part, individuals in these services know and pursue organizational objectives and goals because they are one and the same with their own personal morals. Add to this fact the very strong culture and interpersonal network that constantly reinforces the "right" behavior and you get an organization that runs not with formal controls but informal, personnel-based incentives. Unique yet typical of response organizations, if the CPMS appears to fit this setting it should logically be able to be adapted to any setting.

Communicating control

The objective of this discussion has been to address the four weaknesses of existing performance measurement systems by developing a comprehensive system that explicitly incorporates the many concerns of existing models and management systems to create one model of control that can be adapted to any organization, large or small, manufacturing or service-oriented. One final issue requires attention. Specifically, should such systems be "bottom-up" or "top-down" in nature?

To answer this final question it is important to think through the dynamics and purpose of control systems. Control systems exist first and foremost to direct behavior, secondly to evaluate and reward the results of these actions. Hence while all action needs to be directed to some end, the second element of control systems provides the answer to this controversial issue. Specifically, John Dearden notes that:[17]

> Management control is a process by which a manager ascertains that his subordinates are efficiently and effectively accomplishing the organization's objectives...Time span is the length of time that will elapse before a superior can evaluate the discretion used by a subordinate...Different jobs have different time spans...the longer the time span the more important the job.

Thinking through this comment, it becomes clear that control must be "bottom up" if it is to properly incorporate the "time span" of control. Only by adding this last dimension to the discussion can a final answer be obtained—control exists to direct behavior. Behavior is directed both through the establishment of performance expectations and the *feedback* that is given on actual performance. Performance measurement as control is present-oriented and upward-integrating. Without some vision of where performance is leading, any measure and any output is equally defensible. When *planning* is done, which is future-oriented, these organizational concerns must be addressed. As suggested by Drucker:[18]

> "Controls" in a social institution...are both goal setting and value setting. They are not objective...They are of necessity moral. The only way to avoid this is to flood the executive with so many "controls" that the entire system becomes meaningless, becomes mere noise.

Using a top-down planning approach and a bottom-up control system helps unravel the final knot that has always existed in control systems—the *control paradox*. If individuals set their own goals (e.g., perform the planning activity) they will necessarily be focused not only on tomorrow's plan but also on today's capability—they have an incentive to low-ball their goals. If goals are set with some input but not directly by an individual it is possible to sidestep the paradox created when an individual is expected to truthfully report potential performance when doing so may lead to downstream performance shortfalls. Performance measures for planning purposes start at the top while measurements for control must, by definition, start from the bottom of the organization.

Interestingly, the development of this synthetic performance management model emphasizes the "old" writings of the pioneers of control—the final message implicit in this discussion: pioneers are often the ones who have to deal with both the short-term and long-term implications of their viewpoints and suggestions. The wisdom and experience they bring to a topic is never out of date. Rejecting anything "old" as useless indicates not only overconfidence, but also recklessness. Integrating past and current perspectives means more than bridging the gaps. It means spanning the life of the underlying theories and practices to ensure that learning moves forward, not backward. It means seeking out the most elegant of designs, ones that integrate theory with reality and realistically separate planning from control. ■

NOTES

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17 Dearden, J., "Time-Span in Management Control," in *Readings in Cost Accounting, Budgeting and Control,* 7th edition, W. Thomas, editor, Cincinnati, OH: Southwestern Publishing, 1988, pp. 370-371.

18 Drucker, P,, op cit., pp. 289.