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# Alignment of Strategy with Structure Using Management Control Systems

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## **Abstract**

Considerable experimentation in organizational form has focused executive attention on the design and use of management control systems (MCS) to align environmental context and corporate strategy with a variety of organizational structures. The paper explores how two multibusiness health care firms with a similar corporate strategy—but with different structures, centralized versus decentralized—design and use MCS. Strategy based contingency model is applied to examine the interrelationships among five constructs—environment, corporate strategy, organizational structure, MCS and performance. Results demonstrate the design and use of MCS are contingent on the extent of centralization between the corporate office and business units. In the decentralized firm, MCS consist of different mission statements, one discount rate, reports/measure to monitor and to set standards and a broad array of non-financial measures to improve competitive positioning of the different business units. In contrast, in the centralized firm MCS consists of one common mission statement, different discount rates and reports/measures to support efficient operations and to share overhead resources and capabilities across business units. Findings also suggest the role of structure and MCS are gaining increasing importance as business models of diversified health care firms are getting more complex by combining for-profit and nonprofit businesses.

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## **Key Words**

Corporate Strategy, Organizational Structure, MCS, Contingency Framework, Centralization/Decentralization, Health Care Strategy

## **INTRODUCTION**

Executives of multibusiness firms are increasingly using management control systems (MCS) to align corporate strategy with organizational structure to create synergies across business units. Senior managers find that it is no longer practical to expend vast resources to continually restructure their organizations in order to align with changes in strategy and environmental conditions (Luke, Walston and Plummer, 2004). Instead, more organizations are learning a far more effective approach—choose an organizational structure that works without major conflicts, and then design MCS to align that structure with strategy (Kaplan and Norton, 2006).

In the past few decades, numerous studies emerged relating strategy, structure and MCS (Langfield-Smith, 1997; Chenhall, 2003). But the research examining the direct relationship between business level strategy and MCS produced ambiguous findings (Dent, 1990; Goold and Quinn, 1990). Simons (1987), for example, in a study based on classification scheme of Miles and Snow (1978), showed how innovative companies in fast-growing industries (prospectors) closely monitored financial results. By contrast, Govindarajan (1988), who followed Porter's (1980) scheme of classification, demonstrated that financial results were less closely monitored at innovative companies (differentiators). Kald, Nilsson and Rapp (2000) argued the major reason for the ambiguous findings is that strategy has been operationalized using different classification schemes in different studies making it difficult to reconcile them.

Building on this research, Abernethy and Lillis (2001) also argued that inconsistent findings from prior empirical studies relating strategy with control systems arose because researchers did not consider the influence of organizational structure. To test this argument, they developed a statistical model that linked strategic choice in service innovation, structural autonomy and measurement systems. They found the relationship between strategic choice and measurement systems is not necessarily a direct one, but rather an indirect one that occurs via the organizational structure. Organizational structure was measured as the extent to which decisions were delegated to lower-level managers. They concluded that structure represented by the extent of decision-making autonomy and not strategy is the dominant imperative driving MCS design.

Kaplan and Norton (2006) contributed to this line of research by demonstrating that strategic MCS can be an effective means to align strategy with structure. The two authors work with multibusiness firms to apply the balanced scorecard, an advanced MCS tool, to align corporate and business unit strategies. In order to apply the tool, executives first articulate a theory of corporate synergy describing how headquarters creates value beyond what its individual business and support units generate on their own. Then the balanced scorecard is used both as a communication and control device to encourage business units to develop strategies that contribute to corporate level objectives while simultaneously addressing their local competitive situations. More importantly, executives used the balanced scorecard as a strategic MCS to align a variety of organizational structures to strategy without having to engage in expensive restructuring activities such as realigning authority, responsibility and decision rights.

This paper contributes to prior research in two important ways. First, corporate strategy is held constant to further examine the influence of different organizational structures on the design and use of MCS. Strategy is held constant by selecting two firms with a similar mission-based efficiency-oriented corporate strategy, but with very different organizational structures—centralized versus decentralized. Centralization and decentralization describe the extent to which firms delegate decision-making power and various activities to business units (Miller and Friesen, 1985). The extent of centralization is an important construct in organizational theory used in prior research to define structure (Chenhall, 2003). Therefore, centralization—decentralization construct is used to measure structure in order to explore the following two research questions: (1) *How does difference in organizational structure—centralized versus decentralized—influence the design and use of management control systems?* (2) *Is there a difference in performance between these two organizational forms attributed to the use of management control systems?*

The second contribution is the paper examines the interrelationships among strategy, structure and MCS at the corporate level of the firm. Collis and Montgomery (1998) note that a firm's control system plays an important role in corporate strategy. Specifically, they find that "without appropriate control systems, the corporate center can quickly lose its ability to determine strategic direction and influence performance in the individual business units." More importantly, they find that understanding what elements of control systems fit a company's strategy and structure is critical to creating corporate value. Yet, prior research relating corporate level strategy, structure and MCS is limited.

Therefore, the purpose of this paper is to fill this gap by empirically examining the interrelationships among corporate level strategy, structure and MCS. Since existing knowledge in this area is limited, the case study method is used to expand and generalize theory (Yin, 2003). The method of theoretical replication is applied to choose two multibusiness firms as case studies from the health care provider industry—one firm with a centralized structure and the other with a decentralized structure. Multibusiness health care firms provide an ideal empirical setting because of the diversity in structure among firms following similar corporate strategies (Bazzoli *et al.*, 1999). Porter (1987) also notes that in increasingly competitive sectors, such as healthcare, examining the interrelationships among business units is perhaps the central concern of corporate strategy.

Thus, the case study approach allows for an in-depth empirical exploration of two carefully selected health care firms. The information gathered in the exploration is used to develop a conceptual framework illustrating how structure influences the design and use of MCS. This article presents the research in five sections: (1) conceptual framework, (2) research methodology, (3) results, (4) alignment and (5) discussion. In the next section, on the conceptual framework, I build on prior literature to develop the contingency model that relates environment, corporate strategy, structure, MCS and performance.

## CONCEPTUAL FRAMEWORK

Much prior research has applied the contingency-based approach to search for systematic relationships among organizational variables such as environment, strategy, structure and management controls systems. In a review of empirical, contingency-based research since the 1980s, Chenhall (2003: 157) comments:

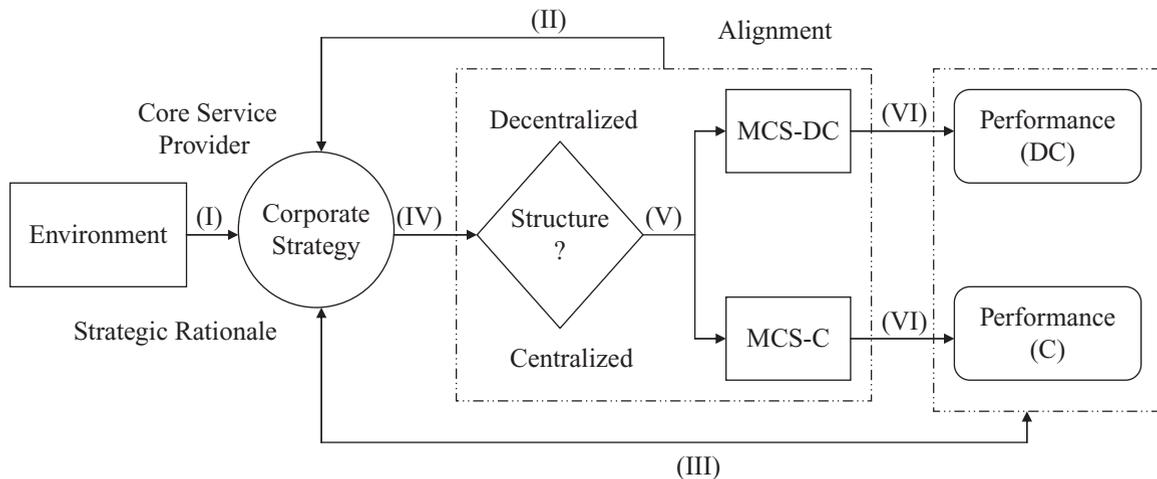
*'The term contingency means something is true under specified conditions. As such there is no 'contingency theory,' rather a variety of theories may be used to explain and predict conditions under which particular management control systems will be found or where they will be associated with enhanced performance. Contingency-based research has its foundation in organizational theory, which considers contextual variables only at the organizational level.'*

Contingency-based approach is often used in strategy research because of its fundamental assumption that no universal set of strategic choices exists that is optimal for all businesses in the same industry. Instead, multiple organizational configurations or strategic groups exist depending on environmental and organizational context (Ginsberg and Venkatraman, 1985).

Building on prior research, specifically on studies by Ginsberg and Venkatraman (1985) and Abernethy and Lillis (2001), the contingency model in Figure 1 was developed for empirical inquiry. The purpose of the model is to guide the empirical investigation on the use of MCS to align strategy with structure. As shown in Figure 1, the model consists of five constructs—environment, corporate strategy, organizational structure, management controls systems and performance—and six links, numbered from (I) to (VI), indicating the relationships among the constructs. The subsequent discussion elaborates on the constructs and each of the links in the model.

**Environment** is a contextual variable that is characterized in management research as the level of uncertainty, degree of competition, resource availability and bargaining power of suppliers and buyers (Lawrence and Lorsch, 1967; Porter, 1980; Shortell, Morrison and Friedman, 1992; Chenhall, 2003). In my empirical exploration of firms in the health care industry, environmental variables include the degree of demand uncertainty, resource availability, bargaining power of physicians and nurses (i.e., suppliers), bargaining power of payers (i.e., buyers), competitive intensity, reimbursement distribution (i.e., commercial insurance, managed care, Medicaid, Medicare) and regulatory stringency. In strategy adaptation research, environmental forces are recognized as directly impacting strategy formulation. Link (I) indicates the influence of environment on corporate strategy (Shortell *et al.*, 1992; Luke *et al.*, 2004).

**Corporate strategy** is defined as those key concepts and ideas that relate to the selection, structuring and integration of business units to gain sustainable competitive advantage from owning a combination of businesses (Luke *et al.*, 2004). Contingency research has primarily used typologies to conceptualize business level strategy such as those based on Miles and Snow’s (1978) organizational types (i.e., defenders, prospectors, analyzers and reactors), and Porter’s (1980) competitive positions (i.e., cost leadership, differentiation and focus). However, this study is at the corporate strategy level, therefore a taxonomy developed for health care multibusiness firms is used to conceptualize corporate level strategies (Inamdar, 2007). The taxonomy consists of



**Figure 1**  
**Contingency Model Relating Strategy, Structure and Control Systems**

five distinct corporate strategy types: (1) core service provider, (2) contractor, (3) mission driven, (4) health plan driven, and (5) entrepreneur. In order to isolate the effects of structure, two firms following a similar mission-based core service provider strategy were selected. Core service provider represents an efficiency oriented corporate strategy focused primarily on providing patient care services in the areas of ambulatory, acute care and subacute care. This corporate strategy type was selected because it has the least strategic complexity and the most stable performance among firms—thereby facilitating the desired uniformity in strategic orientation between firms.

The strategy construct has four important links in the model. Link (I) indicates that strategy formulation consists of patterned responses to the environment, while link (IV) illustrates that implementation of strategy is an important contingency for organizational structure. Link (II) signifies the influence of structure and MCS on the formulation of strategy, while link (III) designates the influence of performance on the formulation of strategy.

Next, although, the two firms follow a similar corporate strategy, the conceptual model is extended by proposing three different types of **strategic rationales** driving the decision to own multiple business units. First, health care firms may own a combination of businesses to reap scope/scale efficiencies and/or to gain market power against payers (Gaynor and Haas-Wilson, 1999). Second, according to the resource-based view (Wernerfelt, 1984), firms may attempt to reap synergies by leveraging distinctive resources and capabilities and/or focus to improve the competitive position of multiple businesses (Porter, 1980). Third, according to property rights theory, firms may own businesses and other non-human assets such as hospitals, technology and information systems in order to exert control over important human assets that cannot be owned, in this case, physicians (Hart, 1995). The case studies are used to explore the relationship between strategic rationale and structure in order to determine if particular rationales lead to a difference in structure.

**Organizational structure** is the formal specification of roles and responsibilities between the corporate office and its business units. Structure has been characterized in contingency-based empirical research as the extent of centralization/decentralization, standardization, formalization and configuration (Chenhall, 2003). This study utilizes the centralization/decentralization construct to represent structure because it indicates the extent to which the corporate office delegates decision-making power and various activities to its business units. The extent of delegation sets the level of autonomy and accountability of the business units. In the empirical exploration, the construct is measured in three ways: (1) the extent to which business activities are carried out at the corporate level, (2) the level of autonomy granted to each business to set its own strategic plan, budget and compensation systems and (3) the relative geographic dispersion of the different business units which affects how hospitals interrelate strategically and operationally. Centralization in relation to decentralization is associated with a greater number of business activities carried out at the corporate level, and lower levels of autonomy, and closer geographic proximity among the multiple business units.

To further characterize structure, Simons (2005) organizational spans of control, accountability and influence are applied. Span of control delineates the range of resources individuals are given control over to meet performance expectations. Span of accountability is defined as the range of trade-offs embedded in performance measures used to evaluate a manager's achievement in meeting specific performance targets. Span of influence describes how wide a net an individual

casts in collecting data, probing for new information, and attempting to influence the work of others. Influence can be exerted within the work unit, across business units and areas external to the company. The study examines if there are differences among the three spans that can be attributed to a difference in structure.

The structure construct has three links in the model. Link (IV) indicates Chandler's (1962) thesis that structure follows strategy, while link (II) demonstrates that over time structure through its effect on information flows influences future strategies (Burgelman, 1983; Simons, 2005). **Link (V), the primary concern of this study, denotes the impact structure has on the design and use of MCS.**

In his extensive review of MCS, Chenhall (2003: 129) observes, *'the definition of Management Control Systems has evolved over the years from one focusing on the provision of more formal, financially quantifiable information to one that embraces a much broader scope of information.'* MCS are conceptualized by referencing definitions from Simons (1995) and from Kaplan and Norton (2006). Simons (1995: 5) defines MCS as *'the formal, information-based routines and procedures managers use to maintain or alter patterns in organizational activities.'* This definition includes the following four levers of control: (1) beliefs systems that drive core values; (2) boundary systems that denote risks to be avoided; (3) diagnostic control systems that monitor critical performance measures; and (4) interactive control systems that stimulate learning under strategic uncertainties. Kaplan and Norton (2006:2) define MCS as the following:

*'MCS are a set of processes and practices used to align and control organizations. This definition includes the procedures for planning strategy and operations, for setting capital and operating budgets, for measuring and rewarding performance and for reporting progress and conducting meetings.'*

Incorporating both definitions, MCS are conceptualized in the study as consisting of the following five elements: mission statement, risks to be avoided, corporate level measures and reports, advanced management control practices and role of information systems in data management and reporting. These elements are described in detail in the results section of the paper.

To further elucidate the differences in MCS between centralized and decentralized structures, the effectiveness of MCS is evaluated in the following areas central to strategic planning: (1) formulating corporate strategy; (2) gaining consensus on strategy from business units; (3) aligning business units around the strategy; (4) enabling trade-offs of competing needs across business units; (5) implementing strategy; (6) linking compensation and incentive to strategy; (7) monitoring performance of strategic objectives; (8) engaging in learning and improvement; and (9) improving overall firm performance. The study also examines major barriers preventing firms from using their MCS more effectively. In sum, the definition, conceptualization and evaluation of MCS examine how control systems are designed and used to align strategy with different types of structures.

The MCS construct links with three other areas in the model. First, as mentioned under structure, link (V) illustrates the impact of structure on MCS. ***This link is the central concern of the paper which argues that the choice of different structures, centralized versus decentralized, can have a differential impact on MCS.*** Therefore, two branches lead away from the

structure decision point to MCS–DC and to MCS–C. Likewise, link (IV) in the model denotes that MCS–DC and MCS–C will influence performance differently. The third link (II) shows the influence MCS can have on the formulation of strategy. This link takes a more active view of MCS as providing executives with the information to proactively set strategic direction (Chenhall, 2003).

**Performance**, the final construct, is viewed from two different perspectives in the model. First, the two-way arrow link (III) denotes that the corporate strategy of owning multiple businesses directly impacts performance, while performance also influences the formulation of strategy. Health care strategy literature indicates that the strategy of owning multiple businesses can enhance performance through market power, efficiency gains, quality improvements and access to resources. These performance improvements in turn influence the formulation of strategy by allowing for a wider set of strategic options (Luke *et al.*, 2004). On the other hand, health care researchers also find that ownership of multiple businesses has lowered performance which in turn has limited strategic options and even led to business units being divested or closed (Friedman and Goes, 2001; Burns and Pauly, 2002). Second, link (VI) indicates the direct influence of MCS on performance. For example, the application of the balanced scorecard—an advanced MCS—in multibusiness health care firms improved performance in market position, profitability, patient satisfaction and productivity (Inamdar and Kaplan, 2002). Again, on the other hand, MCS can also negatively influence performance if the MCS is not aligned with the strategy or there is inappropriate application or gaming of the measures (Simons, 1995; Kaplan and Norton, 1996).

Implicit in the model is the ability of MCS to align the organization's structure to its strategy. Kaplan and Norton (2006) view Alignment as an explicit part of the management process consisting of strategic fit and organizational alignment. Strategic fit refers to the internal consistency among the environment, strategy, structure and MCS constructs. Organizational alignment describes how the various business units of the firm synchronize their activities to create integration and synergy. This study focuses on the difference in strategic fit between the centralized and decentralized firms.

In sum, the conceptual framework in Figure 1 has been developed from fundamental concepts in strategy, accounting and health care literatures. The contingency model relates environment, corporate strategy, structure, MCS and performance. The model guides the empirical inquiry of how MCS are used to align two different structural forms—centralized versus decentralized—with strategy. The next section covers the research design and methods used for the empirical inquiry of two multibusiness health care firms.

## RESEARCH DESIGN AND METHODS

The case study method (Yin, 2003) is used to conduct the empirical inquiry. Five reasons drive the selection of this method. First, the case study method is often used to conduct in-depth exploratory research of a contemporary phenomenon within a real-life context, especially in areas with limited prior investigation. As stated previously, there is limited prior knowledge on the relationship between organizational structure and corporate level control systems. Second, the case

study is the preferred method when “a ‘how’ research question is being asked about a contemporary phenomenon, over which the investigator has little or no control” (Yin, 2003). The first research question, specifically, asks how the difference in centralized versus decentralized organizational structure influences the design and use of MCS.

Third, the goal of the case study method is to extend theory through analytic generalization, in which a previously developed theory or conceptual framework is used as a template with which to compare the empirical results from the cases. In effect, the development of the theory or conceptual framework takes place prior to data collection. In this study, the contingency model is used to extend theory on how difference in structure can influence MCS. Then, as specified by the method, the contingency model is used to provide guidance on the unit of analysis, how to select the individual cases, what data to collect and the approach for analyzing the data. The unit of analysis is the multibusiness health care firm, following a core service provider strategy, which is defined as a *non-profit organization that owns two or more direct patient care businesses in two or more separate areas across the health care value chain, one of which is in acute care*.

Fourth, in addition to the contingency model, the case study method of theoretical replication is used as recommended by Yin (2003) to select individual cases for the study. Theoretical replication is when each case is carefully selected to predict contrasting results but for predictable reasons. In this study, two firms were chosen with different structures to predict contrasts in MCS. The two firms were selected from the HIMSS Analytics database (HIMSS Analytics Database—derived from the Dorenfest IHDS+Database). The database was used to group firms by similar size (i.e., annual revenues), corporate strategy classification, numbers and types of businesses owned, percentage of revenues from different reimbursement sources (i.e., commercial, Medicare, Medicaid and Managed Care). Two organizations were selected which met the criteria of having a similar strategy, reimbursement sources and types of businesses—yet, also having different organizational structures—centralized versus decentralized. In effect, the intent was to match two firms on characteristics other than organizational structure—in order to isolate the influence of structure on MCS. In the subsequent discussion refers to the centralized organization as firm C, and the decentralized organization as firm DC.

Finally, fifth, the case study method allows for the collection of multiple sources of data to facilitate triangulation of evidence. Data was collected on each firm through a variety of sources including: top management interviews, senior leadership meetings, strategic plan, financial reports and any additional documentation on corporate level management control practices. Before collecting the data, as recommended by Yin (2003), a case study protocol was developed for the two firms participating in the study. The protocol increased the reliability of the study by clearly delineating the following items: an overview of the case study project, field procedures, a structured case study questionnaire and a guide for the case study report. Executives of firms C and DC were provided a copy of the protocol along with a cover letter prior to the first site visit.

During the site visits in-depth interviews were conducted with top management including: the chief executive officer (CEO), vice president of strategic planning, chief financial officer (CFO), chief operating officer (COO), chief information systems officer (CIO), chief medical

officer (CMO) and presidents of the individual business units. Six executives were interviewed in firm C and six were also interviewed in firm DC for a total of 12 interviews for the study. The interviews were approximately two to three hours long with repeated follow-ups through phone-calls and e-mails to clarify and build on responses to the interview questions.

A structured questionnaire was developed for the interviews. The questionnaire was designed to evaluate the following constructs comprising the contingency model: (1) environmental conditions driving strategy, (2) details on each firm's corporate strategy, structure and MCS, (3) top managements' strategic rationale for owning multiple businesses and (4) senior executives' view of their performance from multiple perspectives (competitiveness, profitability, customer value, productivity). The questionnaire also asked interviewees to rate certain responses on a scale from 1 to 7, where 1 signifies the lowest rating and 7 the highest rating. A number of questions were referenced from prior research. New questions were developed using theories, ideas and concepts from the strategy, accounting and health care literatures. The reference section at the end of the questionnaire provides the sources used to formulate the questions.

In addition to the interviews, senior leadership meetings were observed. The meetings focused on discussing important environmental changes affecting the firm, formulating and/or implementing corporate and business level strategy and reviewing corporate level reports and measures to monitor and direct business unit activities. In effect, the corporate office uses formal meetings to communicate and interact with its business units. Also, documentation on the strategic plan, market analysis, financial reports and advanced management control practices were reviewed such as balanced scorecards, measurement dashboards, quality reports and portfolio analysis. These documents provided background information and expanded detail on the data collected from interviews and meetings.

The data analysis proceeded in four stages. The analysis focused on identifying substantive differences in constructs and strategic fit between firms C and DC. In the first stage, a large customized database was created summarizing the interview responses and ratings by construct. The database format allowed for pattern recognition of interrelationships among the constructs within each firm, while also enabling systematic comparisons of each construct between firms. In the second stage, the information gathered at the meetings was summarized, such as how the corporate and business unit leadership communicated and interacted with each other to meet organizational objectives. The third stage involved examining the company documentation to understand what types of strategic analysis, financial analysis, reports and measures were being regularly presented and used in the organization. Finally, in the fourth stage, the major findings were incorporated from the prior three stages into tables and contingency models to facilitate comparison between firms. The tables and models indicate key differences among the constructs between the two organizations, especially in the area of MCS. The models also provide insight on how the constructs interrelate within each firm to achieve strategic fit. As in previous case studies in the strategy literature, the use of tables and contingency models served to refine and deepen some of the ideas underlying the initial conceptual framework by Ginsberg and Venkatraman (1985).

## RESULTS

### ***Background and Strategic Orientation***

Firm DC, established in 1983, and firm C, incorporated in 1984 are both private, nonprofit, Catholic health care provider organizations located in the state of Massachusetts. A community of nuns founded each, Sisters of Charity for firm DC, and Sisters' of Providence for firm C. Both organizations have similar mission statements deeply grounded in the Catholic faith and committed to promoting healing. In addition to comparable mission statements, the two firms follow a similar mission-based efficiency oriented corporate strategy classified as Core Service Providers. The similarity can be observed by the types of businesses the two firms own, which include: ambulatory care, acute care, subacute care and home health. During the interviews, the CFO of firm DC characterized the businesses as '*plain-vanilla stable set of core services.*' The vice president of strategy of firm DC remarked, '*We want to excel in the core service areas, so we do our best to offer these services at an affordable cost and high quality.*' Executives, also, responded similarly to a question about the corporate value they add to their multiple business units. Senior leaders in both firms stated they provide value through access to resources (i.e., facilities, technology, physicians and capital), faith-based Catholic brand identity, oversight and control, and management expertise.

### ***Refined Conceptual Framework***

Although, the mission, strategy and corporate value-add are similar, significant differences were found in the constructs and in strategic fit between firms DC and C. **Table 1** highlights the differences in the constructs: environment, strategic rationale, structure, MCS and performance. The difference in strategic fit is illustrated in the contingency models in **Figure 2** for firm DC and **Figure 3** for firm C.

### ***Environment***

As seen in Table 1, the key differences in environment between firm DC and C is the extent of competition, bargaining power of payers, and the type of patient demand. The patient demand is represented by the distribution of reimbursement revenue (i.e., Medicaid, Medicare, Managed Care and Commercial Insurance). Firm C faces more competition than firm DC due to the presence of a large, powerful regional health care firm with a for-profit HMO. The HMO provides the lowest premiums to the commercial insurance market—thereby, blocking firm C's access to patients with the more profitable commercial insurance. Furthermore, the competitor uses its HMO to contract with everyone else in the area, except firm C. The large competitor also provides greater bargaining leverage for payers negotiating with firm C for health care services. This in turn causes firm C to obtain a less profitable mix of reimbursements with 10% more revenue from Medicaid than firm DC. In contrast, firm DC, usually the largest player in its markets, faces competition primarily from small niche players in different product markets such as outpatient surgical centers and home health agencies. Therefore, DC has considerably more bargaining leverage with payers and a more favorable mix of patients than firm C.

<b>Constructs</b>	<b>Decentralized Firm DC</b>	<b>Centralized Firm C</b>
<b>Environment</b>	Medium competitive intensity Medium payer power Reimbursements: Medicare and Medicaid 50% Managed Care 30% Commercial Insurance 20%	High competitive intensity High payer power Reimbursements: Medicare and Medicaid 60% Managed Care 20% Commercial Insurance 20%
<b>Strategic Rationale</b>	Competitive positioning Leverage access to capital Own physical assets to exert control Partner with physician group and over physicians	Operational Efficiency Leverage overhead functions use peers to monitor physicians
<b>Structure</b>	Wide geographic dispersion Decentralized overhead functions High level of business unit autonomy Greater accountability than control or influence	Narrow geographic dispersion Centralized overhead functions Medium level of business unit autonomy Greater control than accountability or influence
<b>Management Control Systems</b>		
<i>Mission and Values</i>	Different for each BU	Same for each BU
<i>Risk Management</i>	Discount rate 10%	Discount rate 12% - 20%
<i>Reports and Measures</i>	Financial reports with multiple ratios, Non financial reports with broad array of standardized measures: quality, wages and benefits	Financial reports focus on operating margin and cash flow, Nonfinancial reports with efficiency based measures to control costs and take prompt corrective action
<i>Advanced Practices</i>	Portfolio Analysis: dashboard including mission Integration, market share trends, human resources/leadership, quality and service, regulatory compliance	Mission critical: bi-weekly meetings to discuss, learn and respond to strategic uncertainties
<i>Information Technology</i>	Decentralized system: issues with data transfer across businesses	Centralized system: issues with customizing data for corporate decision-making
<i>Effectiveness of MCS</i>	Strategic planning, build consensus, alignment	Enable trade-offs, monitor performance
<i>Barriers to MCS</i>	Disagreement on measures	Internal competitiveness

Table 1. cont.

<b>Constructs</b>	<b>Decentralized Firm DC</b>	<b>Centralized Firm C</b>
<b>Performance</b>	A–bond rating Subacute business success Standardize wages/benefits and quality across BU Perception of strength with financial institutions	Cost reduction or avoidance Acute care business success Gain market share  Perception of strength in the community

**Table 1**  
***Differences in Contingency Model Constructs between Firms DC and C***

### ***Strategic Rationale***

The differences in environmental conditions between DC and C led to differences in strategic rationale for owning multiple businesses. Senior management in firm C remarked that the high competitive intensity required the firm to focus on efficiency so that it could serve a less profitable capitated patient mix. Capitated payments provide a fixed sum per patient per month, if the required health care services exceed this sum, the firm incurs a loss. To minimize losses, the firm increased efficiency by decreasing its operational costs 30% lower than the competitors. It lowered costs by leveraging overhead resources and capabilities across the business units such as information technology, finance, human resources, marketing and community relations. In contrast, firm DC facing medium competitive intensity from niche players in different markets, concentrates on enhancing the competitive positions of its geographically dispersed business units. Corporate headquarters allocates investment capital to its units, provides management expertise and corporate oversight, to increase market power in different local regions.

Another difference in strategic rationale is how the two firms direct and control physician behavior. Physicians are critical to the profitability, clinical quality, growth and reputation of multibusiness health care firms. They make the majority of resource allocation decision by the kinds of patients they refer, the treatments they administer and the medications they prescribe. Both firms use the ownership of facilities, technology and equipment to attract and retain physicians. However, to control physicians, Firm C uses a combination of a joint venture with a large for-profit physician group and individual physician contracts. The CMO uses a combination of peer control and contractual terms to motivate desired physician behavior. He comments: *'I don't own their souls, I only own their contracts.'* In contrast, firm DC with more favorable environmental conditions and competitive positioning has the power to direct physician behavior through specific physician activity and productivity measures. The physicians are expected to adhere to certain ranges in the measures, otherwise they forfeit compensation.

### ***Structure***

By study design, as seen on Table 1, the organizational structure differs in four key areas. The first difference is the extent of geographic dispersion of the business units and the corporate

office. In firm C, the acute care center, ambulatory care and subacute facilities are located in the same complex or within a short driving distance. In contrast, DC has its acute care, ambulatory services and subacute facilities in located different states: Massachusetts, New Hampshire, Maine, Pennsylvania and Vermont.

The second dissimilarity is the types of functions that are centralized and decentralized. Firm C because of its strategic rationale to leverage overhead resources and the geographic proximity of its businesses, centralizes all the staff functions in the corporate office. These functions include finance, human resources, information technology, marketing, purchasing, fund development and mission. On the other hand, firm DC does not centralize its staff functions due to geographic distance and to support local competitive positioning. Instead the corporate office undertakes responsibilities such as corporate finance, legal compliance, new business development and initiatives that apply across all business units such as quality and employee wages and benefits.

The third area of difference is the extent of autonomy each firm grants its business units to conduct important business activities. Firm DC gives units significantly more autonomy than firm C for formulating strategy, implementing strategy and designing and approving compensation plans. The president of one of the subacute care business in firm DC remarked, *'Our businesses are so far apart, we require freedom to set our strategy in order to expand and grow in our local markets. We need more control to compete and meet local conditions. Also, we don't have much synergy with the other businesses.'* On the other hand, the CEO of firm C comments, *'our focus is on developing a common culture in the firm. Therefore, I limit the autonomy of the businesses in order to establish common values and norms that everyone, especially senior leadership, must meet.'*

Finally, the fourth area examined the relationship among control, accountability and influence. Executives in firm C felt they had greater control (i.e., authority over resources) than accountability (i.e., responsibility to meet performance targets) and influence (i.e., within or across business units). The CEO of firm C remarked he was in the process of changing the culture by demanding more accountability from employees at all levels. Specifically, he states, *'The culture before I became the CEO was process oriented with limited accountability, now we are trying to instill accountability by becoming more outcome oriented.'* In contrast, executives in firm DC were convinced they had greater accountability than control and influence. The president of one of the business units remarked, *'We have no control over many forces in health care such as the nursing shortage and regulatory compliance laws—yet we have to meet our financial ratio targets. Also, given our wide geographic distribution, there really are not too many synergies. So, we don't exert as much influence across business units.'* Interestingly, according to Simons (2006), the differences in responses would suggest that firm DC executives are held accountable for measures that allow for more trade-offs than executives of firm C. This appears to be the case as discussed in the subsequent discussion on MCS.

### **Management Control Systems**

The different organizational structures between firm DC and firm C influence the design and use of MCS. Table 1 highlights the major differences in MCS between the two case studies.

*Mission and Values:* Previously mentioned in the conceptual framework section, Simons (1995) identifies beliefs systems as one of the four levers of MCS. Beliefs systems include mission statements which provide values, purpose and direction for the organization. There was a significant difference in the way the two CEOs instituted the mission statement in their firms. The CEO of firm C insisted on having a common mission statement for the entire organization:

*We have a common mission statement for all the businesses. Once in a while one business 'will want its own mission statement, and I might say you can have a charge, but we have one mission statement, and one set of core values. The values are dignity for patients, care for the poor, advocacy especially for the voiceless, justice and integrity. We have a high awareness of the values among the employees. Business units share corporate functions, and it is necessary to have a common set of values to support a culture of accountability.'*

In contrast, the CEO of firm DC remarked, *'The mission statements of our business lines are different because of geographic dispersion and the need to serve different markets. Also allowing each business to develop its own mission statement creates buy-in and commitment to the underlying values of each organization.'* Simons (1995) also notes the importance of the mission statement to increase commitment of employees to organizational goals.

To summarize, the centralized firm C partly based on geographic proximity and sharing of staff functions has one mission statement and a common set of values. The common mission statement fosters employee commitment by unifying the different business units to achieve firm wide goals. On the other hand, the decentralized firm due to its wide geographic dispersion and the need to serve local markets has multiple mission statements. The multiple mission statements encourage employee commitment by allowing each business unit the autonomy to develop values according to local standards and expectations. Therefore, it appears, the use of the mission statement to motivate employees is different based on the structure of the firm.

*Risk Management:* Boundary systems, the second lever of MCS, establish limits on business activities to prevent squandering of organizational resources (Simons, 1995). The discount rate is one such limit which sets the minimum rate that must be earned on any investment to generate sufficient return to pay capital providers (Simons, 2005). It is the firm's cost of borrowing money used to value investment projects. Firm C has three distinct discount rates of 12% (low risk, for existing equipment and upgrades), 15% (medium risk), 20% (high risk, new product lines) for different investment risk levels. The criteria used to evaluate the investments are newness of service, extent of competition and organizational experience. The chief financial officer of firm C commented the different discount rates and criteria for evaluation are necessary to objectively discriminate among the energetic demand for funding. The sense of objectivity and 'fairness' is central because business unit leaders are proximately located and observe each others' investment projects. During meetings, they carefully scrutinize, challenge and debate capital allocation decisions. In contrast, firm DC's discount rate of 10% is the same across all risk levels and business units. The CEO of firm DC provided the following reason for the consistent discount rate, *'We are conservative in our investments and we try to ensure fair treatment of all our business lines.'* The Vice President

of Strategy added, *'We are risk averse, our main criterion for evaluating investments is the type of people and management expertise behind the investment projects. We have done well when we select the right people. One example is our assisted living business; it is profitable and consistent with our mission.'*

The difference in valuing investment risk, between the two firms, is partly attributable to difference in structure. Firm C valuation involves considerable debate between proximately located corporate executives and business unit leaders on the criteria for determining the different discount rates. The debates ensure that the capital allocation process is perceived fairly, while the discount rates are used to select high return projects. Also, firm C under more competition, may have less capital to invest so uses a higher discount rate to ration available supply of risk capital. Firm DC has one standard discount rate and a careful evaluation of the people managing the projects. In this case, the standard discount rate provides protection from high risk investments while also ensuring the capital allocation process is perceived fairly. The focus on management expertise is a strong basis for selecting high return projects because corporate executives cannot observe daily activities of the business leaders and employees in distant locations. Simons (1995:62) also writes, *'When it is impossible to directly monitor either the work process or the outputs, selection and training of workers are the only viable means of control.'* Again, it seems to some extent, structure drives the differential use of discount rates to manage risk and to instill a sense of fairness in the resource allocation process.

*Reports and Measures:* Diagnostic control systems are the third lever of MCS. Simons (1995) identifies three features of diagnostic control systems: (1) the ability to measure the outputs, (2) the existence of predetermined standards against which actual results can be compared, and (3) the ability to correct deviations from standards. Both firms DC and C focus heavily on financial diagnostic reports and measures such as monthly actual/budget year-to-date revenue/cost reports, operating margin and cash-on-hand. However, they differ in the types of nonfinancial diagnostic reports and measures used to monitor and control the business units. Firm C executives place emphasis on efficiency oriented reports and measures such as: day tactical variance reports by business unit, employee productivity, daily volume of beds/discharged, occupancy rates, case mix index and FTE staffing levels. According to the chief medical officer of firm C, corporate level executives have the line of sight to frequently and closely monitor these measures because they are leading indicators of profitability. If the measures fall below a certain range, corporate executives and business leaders take action to correct the deviation.

Firm DC, on the other hand, concentrates on a broader array of reports and measures that set expectations and consistent standards across the decentralized businesses such as: market share, clinical quality, employee equal wages and benefits, relative value units for physician productivity, charity care and employee turn over rates. The CEO comments, *'We use these reports and measures as a communication tool to understand and set common expectations across our major business lines.'* The Vice President of Strategy further comments, *'Since we cannot be in multiple locations at one time to observe performance; we use high-level measures along with benchmarks to set overall goals. Then we allow each business the autonomy to achieve the goals.'* The Vice President of Mission working on a standard set of clinical quality and charity care measures

remarked, *'Our clinical quality report sets consistent standards across businesses to minimize clinical errors which can risk our reputation. Our charity care report demonstrates we are true to our mission and identity as a faith-based organization in all our business lines.'*

Structure appears to play a key role in the types of diagnostic reports and measures consistently used by corporate executives to monitor and control multiple businesses. In the centralized firm, the co-location of corporate executives and business leaders focused both groups on monitoring a common set of financial and efficiency oriented measures. Frequent face-to-face meetings appear to substitute for monitoring a broader array of non-financial measures. In the decentralized firm, the far distance between corporate executives and business leaders led to the development of standardized, high-level non-financial measure. Measures are consistently applied across all businesses and allow corporate executives to monitor and control business units over large geographic areas.

*Advanced Practices:* As the fourth lever of control, interactive control systems are used by firms to stimulate learning, growth and adaptation under conditions of strategic uncertainties (Simons, 1995). Both firms DC and C used various advanced management control practices to serve as interactive control systems. However, the type of advanced practices differed between firms. Firm C's primary advanced practice is known as the mission critical program. The program is described by the CEO as the following:

*'I see the health care markets changing quickly. I want a certain amount of capacity in the organization to respond quickly. So, we put together a program called mission critical. Mission critical is a set of tools and processes to change the culture from being process oriented to one that is more outcome oriented. We use mission critical to define expectations, time lines and achieve goals. We hold bi-weekly meetings to discuss deviations from expected performance and how we can get back on track. We also spend time on exploring areas of growth. The problem is a lot of our managers are not risk takers. So, I need to create a culture where it is ok to take certain risks, yet as a fragile organization we cannot take too big of a risk. I need to balance creativity and control, hence the mixed messages that are sometimes perceived.'*

Firm DC's main advanced practice is the Portfolio Analysis Metrics and Scoring Report. The report consists of a dashboard of measures with set targets and benchmarks in the following areas: financial strength (margin, ROA, debt, cash), market position, market share, customer satisfaction, clinical quality, regulatory accreditation and fulfilling the Catholic mission. The Vice President of Strategy commented, *'The purpose of the Portfolio Analysis Report is to develop jointly agreed upon firm-wide measures to evaluate and to improve performance in multiple areas that delivers synergistic benefits to the organization.'* This intent was clear during an all day senior management retreat at the Maine acute care facility. Senior managers from the different business units discussed how to use the Portfolio Analysis measures to standardize criteria for evaluation and invigorate cooperation to improve performance. One concern was how to identify new business opportunities for growth. During some back-and-forth negotiations on different ways

to measure, a Sister who served as the Vice President of Mission and Education asked the group of executives, *'what does it mean to be jointly successful, and how can we support that goal with this tool.'*

The difference in advanced practices, between firms DC and C, to some extent can be attributed to structure. The use of mission critical by firm C takes advantage of the close proximity of the corporate executives and business leaders to frequently meet and discuss strategic uncertainties and new growth opportunities. Again, the bi-weekly mission critical meetings appear to substitute for interactive control systems measures and reports. On the other hand, firm DC uses a broad spectrum of measures in the Portfolio Analysis Report to monitor strategic issues in different geographical areas. In effect, this report serves as an interactive control system at the corporate level in place of frequent face-to-face meetings and direct observation of performance as in firm C.

*Information Technology:* Structure appears to influence the way firms use information technology to support MCS. Executives were asked how effective their information systems are in collecting, analyzing and reporting data used by their MCS. The CEO of firm DC stated:

*'We have no centralized information systems capability. Every business unit has its own system to manage data. So, our data transfer across businesses occurs through e-mail. Long-term, I think we will move toward the Leap Frog model where we standardize our reporting and put it on the web. This way we don't have to standardize our systems.'*

Another executive stated the current information systems capabilities were *'not effective in supporting the MCS requirements because data transfer was not seamless across businesses.'*

Firm C, on the other hand, had a corporate-wide five-year initiative to set up a new centralized information technology infrastructure for the firm. The CEO was satisfied with the IS initiative, *'we have come a long way with our information systems. We can now customize reports and measures. So, we have more confidence in what we are doing.'* However, the CFO provided some opportunities for improvement in the area of customizing reports, *'we have lots of data, but little information. We need more horsepower to aggregate and customize the data into meaningful user friendly information.'* The COO further added, *'It is a very new system and no one knows how some of its special features work—for example, there is some confusion on how to map the financials to the correct activity center.'*

Partly attributed to its structure, firm DC has a decentralized information technology architecture. The primary MCS issue with the technology is data transfer across businesses. In contrast, firm C has centralized its information systems capabilities for both standard and customized reports and measures. The primary MCS issue is in the area of customizing the data into meaningful information for corporate decision making.

*Effectiveness of MCS:* During the interviews, senior managers were asked to comment on the effectiveness of their current management control practices. Firm C executives stated their MCS enable them to make informed resource allocation trade-offs among their business units. For example, one frequent trade-off involves investing in profitable acute care services versus funding

mission-based uncompensated care. Another area of MCS effectiveness involved being able to monitor performance and take corrective action when necessary. The CEO remarked, *'Our reports and measures provide information to monitor performance and gain more control over the variability.'* The COO succinctly said, *'monitor performance, this is it!'*

In addition to monitoring performance, firm DC executives felt their MCS are effective for learning, formulating corporate strategy, gaining consensus and aligning the organization to execute the strategy. The CEO remarked, *'our control systems help us to plan and gain consensus on the strategy by increasing communications and understanding common expectations.'* The COO of the DC firm commented:

*'We have come a long way with reliable, consistent information that can be compared across businesses. As a COO, this is very helpful for aligning the organization to execute the strategy. More importantly, we share information and learn from what is going on in the different businesses.'*

On learning, the CFO stated, "control systems helps us to detect and learn from key trends that are developing in the data. This allows us to take advantage of opportunities and corrective action. The Vice President of Strategy further added, *'Our reports and measures give us tons of shared learning!'*

*Barriers to MCS:* In the interviews, executives were also asked about the biggest barriers preventing the effective use of their control systems. In firm C, the biggest barrier appears to be internal competition among business units. The CEO comments, *'Our genesis is from a commonly controlled group of very competitive organizations. Sometimes we spend more energy on internal fighting than external concerns regarding the outside market and how we position ourselves.'* The COO of the subacute care business remarked, *'Senior business leaders are competitive and look out for their own interests—this is not good for the whole firm.'* The CMO further added, *'We have too much internal competition and not enough external focus.'*

Firm DC's barrier to the effective use of management control is lack of mutually acceptable firm-wide measures. For example, the measures in the aforementioned Portfolio Analysis Report were subject to some debate among the business leaders during the off-site retreat in Maine. The President of the acute care business explained, *'the lack of agreement is due to our different markets and geographic locations—it's difficult to find a set of measures to please everyone.'*

### **Performance**

Executives of both organizations stated they designed and used MCS to provide information that would improve performance. The central use of MCS for both firms was to monitor financial performance, especially operating margin. The CEO of firm C explained why he focuses on operating margin:

*'In the long term, we need 4% operating margin to be self sustaining. In the short term, we need a margin of 2% to be stable and the current year target is 0.5%.'*

*We are working towards achieving a 2% margin. So, we evaluate all our projects with this goal in mind, it moves us closer to becoming self sufficient.'*

According to the CFO, control systems are used to improve operating margin by reducing or avoiding costs through the combined use of efficiency-based measures and the mission critical meetings. The measures allow corporate management to detect problems and the meetings motivate business leaders to take corrective action. The improved performance has allowed firm C to support the Catholic mission. However this comes at a cost as the CEO remarks:

*'What makes us unique is that we did a community needs assessment and we respond to unmet needs—even though this has a negative impact on our margins—to the point where our competitors say we make bad decisions—but we say we make different decision for mission-based reasons.'*

The CIO of the firm adds, *'Our mission is to serve the poor which will soon be us, if we keep going down the road we are going.'*

To continue supporting the mission, yet not become destitute in the process, the CEO further states, *'we have to be incredibly profitable with our acute care, so we can cross subsidize our losses in mission oriented services. We use MCS to help us make our investments.'* Firm C uses customized MCS reports to evaluate investments in acute care. Many of these investments have increased firm C's market share in profitable service areas. In fact, the CEO commented, *'Our highest strategic priority now is top line growth in profitable acute care services. It funds everything else.'*

The use of MCS to support the mission and gain market share has enhanced firm C's brand image. According to the COO, the brand image has led to firm C being perceived as strong and viable in the community. The perception of strength in turn has increased performance by attracting insured patients and government funding for uncompensated charity care.

In contrast, firm DC uses a wider array of financial ratios to monitor and improve performance than firm C. The consistent improvement of these ratios (i.e., operating margin, days cash-on-hand, debt service coverage, debt to capitalization) over time has resulted in a high bond rating of A-. The high bond rating has provided firm DC access to capital at lower rates. The lower rates allow firm DC to support its Catholic mission to provide subacute care for the underserved senior population. Firm DC has developed an expertise in the design and use of its MCS to run subacute care profitably. The Vice President of Strategy of firm DC comments, *'We place emphasis on our long-term care business in order to fulfill our mission, and we are profitable doing this—something very few of our peers have been able to do.'*

As discussed earlier, another important role of MCS is instituting standards in clinical quality and employee wage and benefits across the geographically dispersed facilities. During the Senior Management Group (SMG) retreat, business leaders remarked the standardization increased morale and improved employee retention. Employee retention in turn increases performance with greater consistency in service and less use of resources to train new hires.

Another important use of MCS in firm DC, especially the financial ratios, has been to increase the perception of strength with the financial institutions that provide the bond ratings. Currently with a rating of A-, there was a brief discussion, during the retreat, on how to raise this to an A rating. Three actions were proposed to meet this objective: (1) continue to improve the financial ratios, (2) enhance the ability of management to make better business decision and (3) achieve strategic fit between future investments and the current strategic plan. Later, the Vice President of Strategy commented about the importance of alignment and strategic fit:

*'When we undertake any major investments we think it through on how the entire system will be affected...our goal is to keep the entire corporate firm strong...so we make trade-offs among our businesses...we also differentiate between local and regional issues with our businesses since they operate in different markets'.*

Senior management of both firms were asked what percentage of their time they spend on alignment activities. Table 2 provides the responses. Again, there appears to be differences between firms that can be attributed to structure. Executives in the decentralized firm spend significantly more time evaluating performance (12%) than the executives in the centralized firm (5%). Interviews indicate that in firm C due to geographic proximity, corporate executives were able to directly observe and informally meet with business unit leaders on a regular basis. Therefore, less formal time was dedicated to this activity. However, corporate executives in the centralized firm spent more time arbitrating disputes (8%) among business unit leaders than the decentralized firm DC (3%). The reason being, again due to geographic proximity, business units were often competing for the same resources including budget dollars and overhead services. One leader of the subacute care business remarked, *'Budget dollars and overhead services are primarily dedicated for acute care, we compete to get the leftovers.'* Firm DC decentralized the overhead services leaving less for business units to dispute over. In total, the executive in firm DC spent 76% of their time on alignment activities, while those in firm C spent 68% of their time on the same activities. The next section examines how executives of firm DC and C use this time to align their organizations and achieve strategic fit.

<b>Alignment Activity</b>	<b>Decentralized Firm DC</b>	<b>Centralized Firm C</b>
Formulating corporate strategy	11%	8%
Implementing corporate strategy	26%	28%
Forging links among individual business units	16%	14%
Arbitrating disputes among the individual business units	3%	8%
Trading off competing needs among the business units	8%	5%
Evaluating corporate and business unit performance	12%	5%

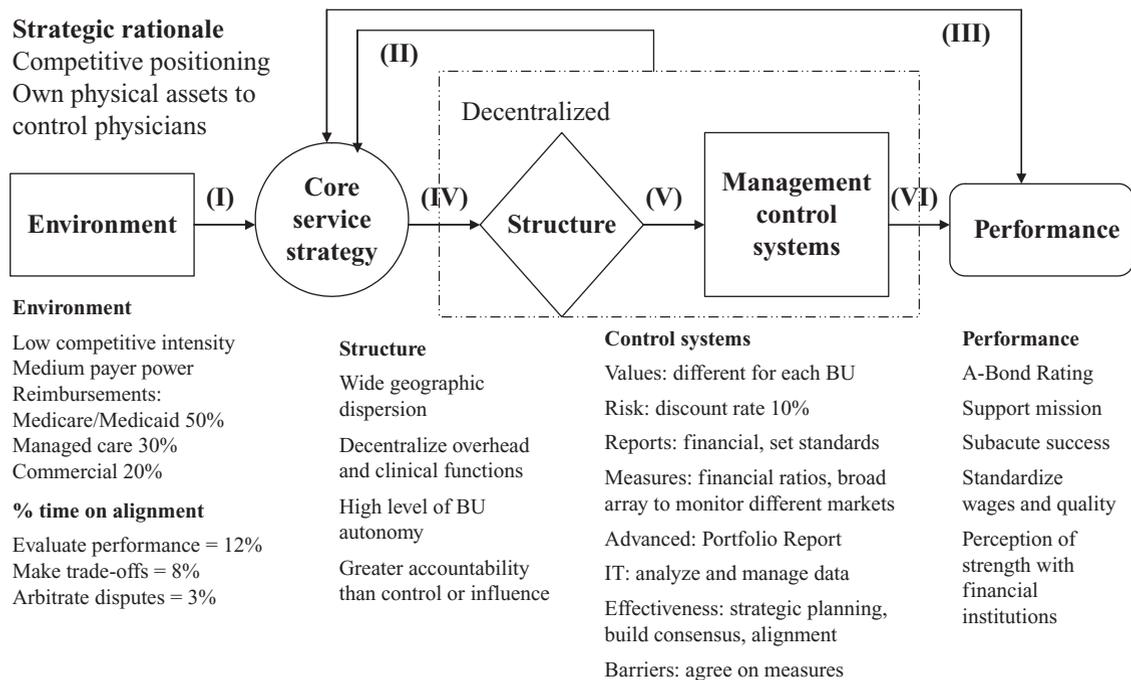
**Table 2**  
**Percentage of Time Spent by Executive Management on Alignment Activities**

**ALIGNMENT AND STRATEGIC FIT**

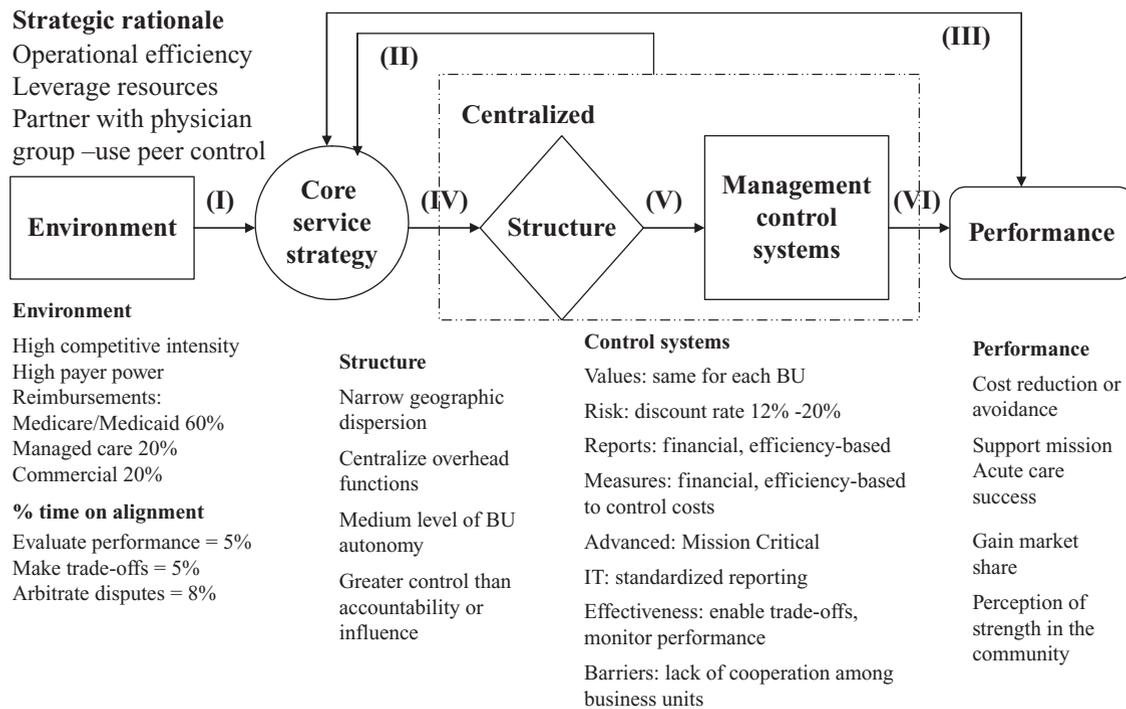
In the previous section, the results show major differences in the design and use of MCS between the centralized firm and the decentralized firm. The differences have theoretical implications for aligning strategy, structure and MCS to achieve strategic fit. The contingency models of firm DC in Figure 2 and of firm C in Figure 3 demonstrate the strategic fit between structure and MCS.

In the decentralized firm as shown in figure 2, MCS are designed and used to manage geographically dispersed business units with separate overhead functions and a high-level of decision making autonomy. MCS consists of different mission statements, one discount rate, reports/measures to monitor and to set standards (i.e., clinical quality, employee wage and benefits) and a broad array of non-financial measures to improve competitive positioning. Advanced MCS practice, the Portfolio Analysis Report, is a corporate level dashboard which monitors key strategic areas, identifies growth opportunities and enables learning. MCS are most effective for formulating strategy, aligning and building consensus among business unit leaders. The greatest barrier to the effective use of MCS is a lack of agreement on corporate-level measures attributed to the different markets, customers and regulations faced by geographically dispersed businesses.

In contrast, in the centralized firm as shown in Figure 3, MCS are designed and used to manage proximate business units with common overhead functions and a lower level of decision making autonomy than firm DC. In this case, MCS consists of one common mission statement,



**Figure 2**  
**Contingency Model of the Decentralized Firm DC**



**Figure 3**  
**Contingency Model of the Centralized Firm C**

different discount rates and reports/measures to support efficient operations and to share overhead functions across business units. Advanced MCS practice, the Mission Critical program, includes bi-weekly face-to-face meetings between corporate executives and business unit leaders to discuss budget variances, negotiate for resources and to gather non-financial information on key strategic issues. The meetings appear to substitute for the broad array of measures used in firm DC. MCS are most effective for enabling trade-offs of budget dollars and overhead resources among competing business units. The greatest barrier to the effective use of MCS is the lack of cooperation from business unit leaders who are resistant to sharing budget dollars and overhead resources.

In sum, although both firms participating in this study follow a mission-based efficiency-oriented corporate strategy, they chose to structure their organizations differently. In order to align strategy with the different structures the two firms designed and used their MCS differently to achieve strategic fit. The centralized corporate firm C designs and uses its MCS less formally than the decentralized firm DC. Instead, proximately located executives in firm C complement MCS with regular bi-weekly Mission Critical face-to-face meetings to negotiate with each other for overhead resources and to monitor performance. On the other hand, senior management in the decentralized firm DC design and use their MCS rigorously to set standards, monitor and control geographically dispersed business units—with a broader array of performance metrics.

## DISCUSSION

The contingency models in Figures 2 and 3 underscore the importance of using MCS to align strategy with different organizational structures. The results demonstrate structure plays a key role in the design and use of MCS. In effect, this study corroborates Abernethy and Lillis (2001) finding that structure and not strategy is the dominant imperative driving MCS design. In addition to corroborating prior research, this study makes two contributions to the field of strategic management. First, it provides a comprehensive empirical representation of organizational structure to include: geographic dispersion, corporate overhead functions, extent of autonomy granted to business units and comparison among spans of control, accountability and influence. This representation more precisely differentiates between firms with centralized versus decentralized structures. And the effect of structure on MCS is isolated by selecting firms following a similar core service corporate strategy. Interestingly, in comparison with prior research, the decentralized firm is similar to firms following the Prospectors strategy in Simons's research (1987, 1990). Simons finds these firms tend to be decentralized in order to respond to local market needs and tend to use a lot of forecast data, set tight budget goals, monitor outputs carefully, emphasize standardized reporting and use control systems to debate strategy and action plans. On the other hand, the centralized firm is similar to firms following the Defender strategy. Simons notes Defenders use control systems less intensively than the Prospectors. It is possible that Simons was not observing the direct influence of strategy on MCS, but rather the impact of the underlying structure, decentralized versus centralized, not included in his study.

For senior managers, the practical implication of this research is to match the extent of centralization with the appropriate design and use of MCS. Senior managers can effectively match structure with MCS by being attentive in two areas. First, management must strategically distribute attention among the various MCS elements such as the mission statement, financial reports and measures and advanced practices. Senior managers must also understand and leverage the way these elements are interrelated and can support each other synergistically. For example, executives of firm C established a common mission statement for the firm, set ambitious financial goals for each business unit and used the Mission Critical program to ensure goals were achieved. In contrast, the CEO of firm DC permitted multiple mission statements and used financial and non-financial reports and measures to more equitably monitor and control dispersed business units.

The second contribution is that each firm has distinct strategic rationale for owning multiple businesses. The rationale correlates with structure which in turn influences the design and use of MCS. In the centralized firm, where business units are proximately located, the rationale is to reap scale and scope efficiencies and share important resources and capabilities (i.e., information technology and overhead functions). In contrast, in the decentralized firm, with businesses located far apart, the rationale is competitive positioning of business units in their local markets.

Another key strategic rationale is the way firms choose to exert control over important human assets they do not own—in this case, physicians. The CEO, in the centralized firm, formed a joint venture agreement with a large local physician group and relied on contractual terms and peer control for directing individual physician behavior. In contrast, senior management of firm DC, contracted individually with physicians dispersed across numerous locations, relied on

physician productivity measures to direct individual physician behavior. Both methods appear to work equally well for the two different types of structures of multibusiness health care firms.

The choice of multibusiness health care firms as the empirical setting was based on the prevalence of organizations following a similar strategy—yet, having different organizational structures. This allowed for isolating the effect of structure from strategy. The decision to focus on one industry, health care, is based on Ginsburg and Venkatraman (1985: 429) suggestion, *'it is advisable for researchers investigating contingency perspectives of strategy first to examine contingency relationships in single industry contexts, prior to making generalizations across industries.'* Also, the business models of these organizations are becoming more complex as executives are combining nonprofit business units with for-profit ventures under the same corporate entity. Findings suggest executives are using structure and MCS to manage this complexity in a way that enhances performance.

The use of only health care firms can also be a limitation of the study. These organizations operate under constraints specific to the health services industry such as conflicting reimbursement incentives (i.e., commercial insurance versus global capitation), central role of the government as customer/regulator and other important non-financial performance criteria such as supporting the Catholic mission. The study is also limited by examining only two firms. It is possible the results are unique to the firms and do not generalize across firms with similar organizational structures.

Future research can address the first limitation by replicating this study using firms from other industries. The second limitation can be overcome by customizing the structured interview questionnaire using survey methods and sampling a large number of multibusiness health care firms or firms from other industries following the core service provider strategy. Depending upon the number of firms surveyed, this could also allow for multivariate statistical analysis of the links I to VI in the contingency model as shown in Figure 1.

To conclude, this study builds on prior research by applying the strategy based contingency model to show how executives of multibusiness firms are using MCS to align strategy with structure in order to monitor and improve performance. It was clear, the two firms participating in the study exerted tremendous effort in developing their MCS. When asked why? The general responses ranged from *'we were desperate for anything to work'* to *'we can now steer by the stars'*.

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