

Journal of Management

<http://jom.sagepub.com/>

Does Decentralization Make a Difference for the Organization? An Examination of the Boundary Conditions Circumscribing Decentralized Decision-Making and Organizational Financial Performance

Hettie A. Richardson, Robert J. Vandenberg, Terry C. Blum and Paul M. Roman

Journal of Management 2002 28: 217

DOI: 10.1177/014920630202800205

The online version of this article can be found at:

<http://jom.sagepub.com/content/28/2/217>

Published by:



<http://www.sagepublications.com>

On behalf of:



Southern Management Association

Additional services and information for *Journal of Management* can be found at:

Email Alerts: <http://jom.sagepub.com/cgi/alerts>

Subscriptions: <http://jom.sagepub.com/subscriptions>

Reprints: <http://www.sagepub.com/journalsReprints.nav>

Permissions: <http://www.sagepub.com/journalsPermissions.nav>

Citations: <http://jom.sagepub.com/content/28/2/217.refs.html>

>> [Version of Record](#) - Apr 1, 2002

[What is This?](#)



Pergamon

Journal of Management 2002 28(2) 217–244

**JOURNAL OF
MANAGEMENT**

Does Decentralization Make a Difference for the Organization? An Examination of the Boundary Conditions Circumscribing Decentralized Decision-Making and Organizational Financial Performance[☆]

Hettie A. Richardson*

Department of Management, Louisiana State University, Baton Rouge, LA 70803, USA

Robert J. Vandenberg

Department of Management, The University of Georgia, Athens, GA 30602, USA

Terry C. Blum

The Dupree Center for Entrepreneurship, Georgia Institute of Technology, Atlanta, GA 30332, USA

Paul M. Roman

Center for Research on Deviance and Behavioral Health, The University of Georgia, Athens, GA 30602, USA

Received 5 April 2000; received in revised form 19 January 2001; accepted 14 May 2001

Recently, there has been increased interest in the organizational gains that can be achieved by decentralizing decision-making authority to lower level employees. Yet, literature examining the relationship of decentralization to organizational performance is both scarce and equivocal. The current study examines decentralization's influence on financial performance in a sample of behavioral healthcare treatment centers. As expected, the decentralization–financial performance relationship is moderated by key organizational characteristics. Implications of the findings are presented. © 2002 Elsevier Science Inc. All rights reserved.

Contemporary practitioners and researchers are increasingly interested in the competitive advantages that can be achieved by leveraging the value of human resources (Becker &

[☆] A version of this paper was presented in the Health Care Management Division of the 1998 Academy of Management meetings in San Diego, CA.

* Corresponding author. Present address: Department of Management, Ourso College of Business Administration, Louisiana State University, CEBA Building Room 3158, Baton Rouge, LA 70803, USA.
Tel.: +1-225-578-6146; fax: +1-225-578-6140.

E-mail address: hricha4@Isu.edu (H.A. Richardson).

Huselid, 1998; Lawler, Mohrman & Ledford, 1995; Vandenberg, Richardson & Eastman, 1999). This interest is largely due to increasing evidence that human capital can have a major impact on firm performance. For instance, Arthur (1994) found that between 42 and 65% of the variability in organizational performance (i.e., labor hours and scrap rate) is due to the use of “high commitment” human resource practices. Over the years, a number of approaches to managing human capital have developed, all of which are predicated on the value of human resources. Examples of these approaches include high involvement work processes (Lawler, 1996), participative decision-making (Locke & Schweiger, 1979), empowerment (Spreitzer, 1995), delegation (Leana, 1986), and self-managed teams (Cohen, Ledford & Spreitzer, 1996).

While each approach differs with respect to the processes and practices for leveraging value from an organization’s human capital, a common element among them is the expectation that organizational gains can be achieved by providing employees with greater access to decision-making authority (Aiken & Hage, 1966; Knoke, 1981; Pugh, Hickson, Hinings, MacDonald, Turner & Lupton, 1963). That is, each of these approaches shares the theoretical premise that, contrary to authoritarian and bureaucratic methods of organizational control, methods and structures which promote social control through employee autonomy and authority link workers’ self-interests with those of the organization in order to facilitate higher quality decisions and the achievement of organizational goals (Ashmos, McDaniel & Duchon, 1990; Wooldridge & Floyd, 1990). At the organizational level, social control is represented by structural characteristics such as an overall decentralization of decision-making authority to lower organizational levels (Aiken & Hage, 1966; Pugh, Hickson, Hinings & Turner, 1968).

While decentralization may reside at the core of many contemporary practices and research, the extent to which organizational-level performance gains are actually achieved *via* decentralized decision-making authority remains unclear. As early as 1965, Porter and Lawler concluded that research on organizational decentralization has provided little unequivocal support for the positive influence of decentralization on performance outcomes, such as financial gain and improvements in organizational output. Though some researchers have empirically related decentralization to positive attitudinal and employee morale outcomes (i.e., subjective outcomes; Hodson, 1985; Knoke, 1981), evidence of positive influences on more objective indices (e.g., financial performance) has been much harder to obtain (Wagner, 1994; Wagner, Leana, Locke & Schweiger, 1997).

Because of the equivocal results regarding its influence on organizational outcomes, some have argued that the primary benefit of decentralization and its related practices is not organizational but attitudinal and, as such, have come to question its practical benefits (Knoke, 1981; Wagner, 1994). In other words, decentralization may primarily serve to make employees feel good about their jobs, selves, and organizations, but do little to enhance the financial position of an organization. It is possible, though, that the relationship of decentralization to organizational outcomes is more complex than has typically been portrayed in the literature.

Much research has treated decentralization—in any of its forms—as a “best practice,” uniformly expected to result in positive effects (e.g., Aiken & Hage, 1966; Cohen et al., 1996; Morse & Reimer, 1956; Ouchi, 1977). Though the notion of “best practices” is appealing in its parsimony, it is yet to receive blanket support in any domain of the organizational

sciences. That is, the value of most approaches to managerial control is circumscribed by various boundary conditions that either enhance or limit their effectiveness. Perhaps more importantly, the theoretical literature also suggests that decentralized decision making authority, especially at the organizational level, is not likely to be a panacea for improved performance.

Drawing on the Pfeffer and Salancik (1978, p. 1) argument that “organizations are inescapably bound up with the conditions of their environments,” Ranson, Hinings and Greenwood (1980) use contingency theory rationale to assert that the design of an effective organization must be adapted to deal with the circumstances of its internal and external environment. More recently, Wagner et al. (1997, pp. 57–59) suggested that the findings casting doubt upon the practical efficacy of certain forms of decentralized decision-making perhaps stemmed from past researchers’ failure to consider the favorableness of the context in which decentralization was implemented. Also using a contingency rationale, Wagner et al. (1997) challenged future researchers to seek out conditions in which decentralized decision-making may be embedded and which act to support or undermine decentralization’s influence upon outcomes, particularly objective ones such as those describing organizational performance.

We interpret this challenge as positing that direct effects upon objective indices of organizational performance may be too simplistic—masking the reality that decentralization may only exert influences under certain conditions and may actually have a negative impact under other circumstances. Thus, we examine whether the relationship between decentralization and organizational outcomes is contingent on contextual organizational characteristics.

We begin with an overview of the conceptual premises underlying decentralization. We then examine financial performance and develop hypotheses regarding the impact of decentralization on this outcome. The goal is to show that only examining the direct effects of decentralization may result in misleading conclusions and that sound reasons exist to postulate a moderated influence of decentralization upon objective indices of short-term financial performance. We examine these expectations in a sample of behavioral health treatment centers. Treatment centers as the units of analysis are particularly apt in this role. In response to turbulent and uncertain environmental conditions and the increasingly scarce resources associated with them (D’Aunno & Sutton, 1992), many treatment centers face growing pressures to more effectively use their human capital (Blum, 1998), and healthcare researchers have begun advocating that centers do so by moving toward decentralized decision-making (Ashmos et al., 1990). Continued public concern about the quality of healthcare also requires these organizations to perform more effectively overall (Scheid & Greenley, 1997).

Decentralization and Effectiveness

Over the years, many related methods have been proposed for providing employees with greater decision-making authority. While distinctions between these methods can be made, their common foundation (i.e., the belief that greater employee decision-making authority is associated with performance outcomes) has resulted in confusion about how they differ (Glew, O’Leary-Kelly, Griffin & Van Fleet, 1995; Leana, 1986). As Leana points out, each of these methods can be located on a continuum of processes by which employees can be involved in decision-making. This continuum ranges from completely autocratic

decision-making to processes that provide employees with maximum authority, such as the complete delegation of decisions to employees. Falling between these two extremes are processes such as participation and decentralization. Whereas participation is commonly defined as joint decision-making between supervisors and subordinates (Locke & Schweiger, 1979), decentralization can be broadly defined as “a dynamic participative philosophy of organizational management that involves selective delegation of authority to the operational level” (Przechrzelski, 1987).

Our focus is on the general notion of employees’ access to decision-making at the organizational level, which we broadly refer to and measure as internal structural decentralization. We specifically examine Aiken and Hage’s (1966) hierarchy of authority dimension of decentralization. According to these authors, this dimension of decentralization is the “extent to which members are assigned tasks and then provided with the freedom to implement them without interruption from supervisors” (Aiken & Hage, 1966, p. 498). Because of the existing confusion in the literature, similar concepts have been referred to as both participation and delegation in other work (Glew et al., 1995; Locke & Schweiger, 1979). As such, we draw on the participation, delegation, and decentralization literatures.

For decades, the primary expectation has been that decentralization will positively influence organizational functioning as indicated through both subjective (e.g., collective satisfaction) and objective (e.g., organizational financial) indices (Aiken & Hage, 1966; Morse & Reimer, 1956; Ouchi, 1977). The reasoning behind this expectation is the premise that, “The properties of structural frameworks have important consequences for the organization’s effectiveness: the extent of . . . centralization . . . will influence the effectiveness of control (cf. Ouchi, 1977), adaptability, and member motivation . . .” (Ranson et al., 1980). In terms of objective outcomes, decentralization is treated as “a means for realizing the larger goals of the organization and its management” (Leana & Florkowski, 1992, p. 245) and assumes that employees have information managers lack (Miller & Monge, 1986). In complex, dynamic environments—such as the health care environment—upper-level managers may be faced with more information than they are capable of processing on their own (Ashmos et al., 1990; Wooldridge & Floyd, 1990). Thus, decentralization allows organizations to reap benefits by taking advantage of the capabilities of lower-level employees whose contributions are often overlooked in more autocratic, centralized decision environments (Ashmos et al., 1990; Locke & Schweiger, 1979; Miller & Monge, 1986).

Despite expectations for relationships with objective outcomes, most existing decentralization research has focused on only two issues: (a) the factors resulting in decentralization or the relationship of decentralization to other structural characteristics (e.g., Aiken & Hage, 1968; Pugh et al., 1968; Pugh, Hickson & Hinings, 1969), and (b) the influence of decentralization on subjective outcomes (e.g., employee attitudes; Hodson, 1985; Knoke, 1981). The small cadre of empirical work that does consider objective outcomes generally has examined (a) related practices (e.g., participative decision making, PDM) and their influence on individual-level outcomes or (b) how involving middle-level managers in strategic decision-making influences organizational-level performance. Research in the former category has not been very encouraging. Meta-analytic reviews of the studies linking PDM to performance outcomes have shown that such links tend to be small or non-existent (Wagner, 1994; Wagner et al., 1997), leading researchers to call for future work examining the conditions that may support or undermine decentralization’s influence on performance.

Research considering the decentralization of strategic decision-making to middle managers has been much more encouraging. Floyd and Wooldridge (1992, 1997) and Wooldridge & Floyd (1990) conducted a series of studies examining the influence of middle managers on organizational performance, and their findings indicate that this form of decentralization can impact the quality of decisions made and, thus, organizational outcomes such as overall financial performance, return on assets, and growth rate. Wooldridge and Floyd (1990) also point out, though, that decentralization may not be desirable in all situations. For instance, when rapid response is required, the time and energy associated with decentralization to middle managers may outweigh potential benefits. As such, these authors encourage future researchers to seek out the internal and external environmental conditions that intensify the need for involvement.

We interpret the results of these two streams of research (PDM and the work of Floyd and Wooldridge) as indicating that decentralization can positively influence organizational performance outcomes, but that the relationship between decentralization and objective performance might be dependent upon contextual contingencies that determine the variability of organizational outcomes (Ranson et al., 1980). Interestingly, much of the initial writing on decentralization is based on the idea that organizational characteristics interact with one another to influence the organization (Hickson et al., 1971; Perrow, 1967). Perrow (1967), for example, suggests that decentralization represents choices among many means, and the consequences of such choices should not directly influence organizational goals but rather should indirectly influence goals dependent upon other organizational and environmental characteristics.

What, then, are the contextual constraints that might circumscribe the decentralization–performance relationship? Most possible contingencies fall into two broad categories: organizational characteristics and environmental characteristics. The problem is that researchers can and have suggested almost an infinite variety of organizational and environmental factors that may serve as moderators or contingency factors, and there is no one overarching theory from which a clear set of contingencies or boundary conditions can be derived. For example, the initial writings of Pugh, Hickson, Hinings and colleagues discuss how organizational characteristics such as decentralization should fit with other structural characteristics such as formalization, and research has been done in this area. Yet these authors and others (e.g., work by Aiken and Hage, also Floyd and Wooldridge) also suggest that there may be many other factors that could be taken into consideration when examining fit and the influence of fit on outcomes.

The boundary conditions we consider are derived from multiple theoretical literatures. Specifically, the conditions we examine are (1) the degree of decentralization between a center and its parent organization; (2) the condition of the center in terms of growth, stability, or shrinkage; (3) the percentage of professionals employed by the center; (4) the amount of competition the center faces; and (5) the performance aspirations of the center. Each of these is associated with key conditions to which modern healthcare organizations must respond. For example, healthcare organizations must learn to operate in complex environments due to increased vertical and horizontal integration and competition (Conrad & Shortell, 1996). Many healthcare centers are entering and leaving the field or changing their own services in reaction to these changes (Blum, 1998). Likewise, pressure to perform at lower costs is often forcing these organizations to become more financially oriented and operate effectively with

reduced resources (D'Aunno & Sutton, 1992). The following paragraphs introduce the five conditions, the rationale underlying their inclusion as constraints, and related hypotheses.

Parent–center decentralization

The boundary condition of parent–center decentralization parallels the contingency factor that Pugh et al. (1969) refer to as dependence on a parent organization. Aiken and Hage (1966, 1968) distinguish this factor from an organization's internal decentralization (i.e., decentralized decision-making authority within a given treatment center) in terms of the autonomy the organization has from other organizations. Modern healthcare organizations face increased complexity due to horizontal integration among hospitals and independent centers, vertical integration of treatment providers with HMOs, and strategic interorganizational alliances among a variety of healthcare providers (Conrad & Shortell, 1996). These conditions suggest that many treatment centers may find themselves in relationships with larger parent organizations that constrain the centers' ability to pursue various management styles or develop certain organizational structures. Thus, it is reasonable to consider the authority given to a center as a whole by the parent organization, or parent–center decentralization, as distinct from the authority the center gives to its own internal employees (i.e., the primary decentralization construct of this study, internal decentralization).

The concept of coupling (Weick, 1976) suggests that some degree of simultaneous centralization–decentralization among organizations and their parents may be desirable. Centralization between a center and its larger parent organization can serve to buffer the center from environmental turbulence, enabling the center to achieve dependability and avoid excessive internal disorder. At the same time, the turbulent environment in which centers operate necessitates some degree of decentralization in order to achieve flexibility and adaptability. Research (Jansen & Chandler, 1994) supporting this notion suggests that tightly coupling centers with their parent organizations (e.g., centralization; providing a center with little general autonomy in terms of making decisions about how it is run) may serve to buffer the centers from the environment, creating reliable administrative and structural order. Concurrently providing the employees throughout a center with the authority to take independent action within the order created by parent–center centralization may result in responsiveness and flexibility at the point of service delivery without unnecessary irregularity (Jansen & Chandler, 1994; Lawler, 1996).

Work by Brown and Eisenhardt (1998) also supports the concept of simultaneous decentralization and centralization at different levels of an organization. According to these authors, the most successful organizations should be those that are neither so *structured* and rigid as to encourage little to no action, nor so *unstructured* as to prevent purposive action. The reason behind this logic is that, without any structure, there are too many possible actions and inaction is likely. Yet, with too much structure, action becomes less effective and organizations lose their ability to be flexible and to adapt to the changing demands of competition. Thus, the optimal situation would be one in which there is more structure in at least one level of the organization, but less structure at other levels. Therefore, our first hypothesis is:

Hypothesis 1: Parent–center decentralization will moderate the relationship between internal decentralization and center financial performance such that for centralized

parent–center relationships the internal decentralization–financial performance relationship will be positive and for decentralized parent–center relationships the internal decentralization–financial performance relationship will be negative.

Organizational Condition

Pugh et al. (1969) point out that an organization's historical condition, which may manifest itself in terms of changes in the range of products and services offered, is an important contextual characteristic to consider when also considering aspects of an organization's structure. As such, we suggest that the success of internal decentralization may also depend on whether the treatment center is in a period of growth, shrinkage, or stability (Lawler, 1996). Researchers (e.g., Ashmos, Duchon, Hauge & McDaniel, 1996; D'Aunno & Sutton, 1992) suggest that organizational reductions in staff and services lead to increased disorder—making it increasingly important for remaining staff to broaden their roles and to innovatively provide competitive services with reduced resources. Supporting the need for decentralized decision-making during difficult organizational times, Ashmos, Duchon and McDaniel (1998) found hospitals with poorer past performance tended to bring more people into decision situations and use them in more decision situations.

Additionally, D'Aunno and Sutton (1992) described leaders facing shrinkage as experiencing high levels of personal anxiety, with greater anxiety limiting the leaders' abilities to process the vast amounts of ambiguous information on which key organizational decisions and activities are often based. As mentioned, the expectation for decentralization's influence on organizational outcomes is based on the assumption that, in turbulent environments, better decisions will be made when decisions are made by those most capable of making them rather than only by top managers (Ashmos et al., 1990; Floyd & Wooldridge, 1992, 1997). Work by Floyd and Wooldridge (1992, 1997) and Wooldridge & Floyd (1990) provides some support for this assumption. For example, their 1990 study shows that performance improves when lower-level managers are involved in strategic decision-making and that the benefits of decentralized decision making stem from the complexity of current business environments.

By implication, these findings and existing theory suggest that, in less complex or dynamic environments, decentralized decision-making may be less crucial. It follows, then, that decentralization might actually have proportionally greater positive impact on organizational outcomes in shrinking firms than in firms where organizational effectiveness is inherently augmented by other key factors (e.g., robust growth or a strong, stable market position) and where the time and effort associated with decentralized decision-making might outweigh the additional benefits that decentralization can bring to an organization already performing well. For these reasons, the following is hypothesized:

Hypothesis 2: Organizational condition will moderate the relationship between internal decentralization and financial performance such that for shrinking organizations the internal decentralization–financial performance relationship will be positive and strong, while for growing organizations the internal decentralization–financial performance relationship will be positive and weak.

Workforce Characteristics

A basic premise of decentralized authority is that benefits can be gained from providing employees with greater opportunities to make quality decisions on behalf of their organizations (Floyd & Wooldridge, 1997; Locke & Schweiger, 1979; Miller & Monge, 1986). For instance, decentralization is intended to increase decision-making authority among employees who would typically not be given such authority under more bureaucratic structures, but who may have a great deal to contribute to certain decisions.

Historically, organizations such as treatment centers have been considered what Pugh et al. (1969) referred to as “personnel bureaucracies.” They were organizations staffed by large numbers of professional employees that were characterized by high concentration of authority, but low structuring of work centers. Professional employees in these organizations were generally hired because their knowledge and training allowed them to effectively work with relative autonomy at the operational level. This was particularly true in the treatment industry, where skilled professionals such as nurses and licensed counselors were largely responsible for service delivery. The importance of providing these professionals with authority over work tasks is often considered a necessity because they are the employees with treatment expertise. Research by Ashmos et al. (1998) also indicates that involving professionals in strategic, as opposed to only bureaucratic, decisions can positively influence hospital performance.

Recently, however, pressures to reduce costs have led many centers to increasingly rely on non-professional employees (e.g., unlicensed counselors, clinical technicians) for service delivery. Logically, though still knowledgeable, these employees should not have the need for autonomy or expertise that professionals do. While decentralization may still be useful in organizations employing a low percentage of professionals, it may be less necessary and valuable to those organizations. Based on the arguments, our third hypothesis is as follows:

Hypothesis 3: The proportion of professional workers (i.e., nurses and licensed counselors) employed by a center will moderate the relationship between decentralization and financial performance such that for organizations with a low proportion of professionals the internal decentralization–financial performance relationship will be positive and weak, while for organizations with a high proportion of professionals the internal decentralization–financial performance relationship will be positive and strong.

Competitive environment

Individual centers experience varying degrees of competition from other centers or treatment providers. A common argument found in some decentralization literature is that the highly competitive nature of the modern marketplace requires successful organizations to develop human resources who are proactively involved in the organization and who are capable of moving beyond the boundaries and tasks of traditionally defined jobs (Koch & McGrath, 1996; Lawler, 1996). Theory also suggests that decisions in predictable, stable (e.g., less competitive) environments should also be predictable and stable (Mintzberg & Waters, 1985). This proposition led Wooldridge and Floyd (1990) to suggest that decentralization should be deliberately pre-empted in such conditions in order to avoid potentially

negative consequences. It follows that, in highly competitive environments, centers adopting decentralization should perform more successfully than those that do not. Under conditions of low competition, the greater workforce utilization associated with decentralization would be unnecessary and provide no discernable advantages for a center. The cost and effort of establishing decentralization under conditions of low competition may negatively impact a center's performance. Therefore, the fourth hypothesis is as follows:

Hypothesis 4: The nature of the competitive environment in which a center operates will moderate the relationship between internal decentralization and financial performance such that for centers in highly competitive environments the internal decentralization–performance relationship will be positive, while for centers in relatively non-competitive environments the internal decentralization–performance relationship will be negative.

Performance Aspirations

It has been argued that organizational performance and initiatives intended to improve performance can only be realistically considered in the context of organizational objectives (Rogers & Wright, 1998). The focal point of the present study is the relationship between decentralization and organizational *financial* effectiveness, and it is believed that decentralization can positively influence organizational effectiveness when used within certain boundary conditions. Thus, this study relies heavily on the assumption that improved financial effectiveness is an important goal or objective for treatment centers.

Strong financial performance aspirations, however, are not necessarily characteristic of all treatment centers. For instance, the primary performance aspiration for some centers might be outstanding customer service or mere survival. Among centers that do not emphasize financial effectiveness as an organizational objective, there may be little value in extensively pursuing an initiative like decentralization that is intended to improve financial performance. Similar to the argument for competitive environment, the effort and expense of decentralization in an organization that is not pursuing financial performance may not be worthwhile and may even be detrimental. Accordingly, our final hypothesis is as follows:

Hypothesis 5: A treatment center's performance aspirations will moderate the relationship between internal decentralization and financial performance such that for centers with strong financial performance aspirations, the decentralization–financial performance relationship will be positive, while for centers with low financial aspirations the decentralization–financial performance relationship will be negative.

Method

Sample

Data for this study were collected at two time periods. Time 1 data were gathered in 1995 and 1996 as the first phase of the "National Treatment Center Study." Time 2 data, from

which the follow-up financial performance measure was derived, were collected in 1997 (for those centers where Time 1 data were collected in 1995) and 1998 (for those centers where Time 1 data were collected in 1996). The centers represented a national sample of private-sector behavioral healthcare treatment programs. Centers were drawn from a stratified random sample of geographic areas throughout the United States, and the data constituted a random sample of for- and not-for-profit behavioral healthcare and substance abuse treatment centers. Overall, 450 centers participated in the study, resulting in an 89% response rate for Time 1.

For each participating center at Time 1, the program administrator (i.e., the top position in the center) was identified as the primary respondent and on-site interviews were conducted with him/her by one of a team of full-time interviewers. The average administrator respondent was white (87.9%), was male (57%), was between the ages of 40 and 49 (45%), and held at least a master's degree (64%). Fifty-five percent had been educated either in social work, medicine (including nursing), psychology, or counseling, while 14% had been educated in business and 8% held degrees in multiple fields. Fifty-nine percent of the administrators were clinically licensed. Average center tenure was about 7 years and average position tenure was 5 years.

In addition to the on-site interviews, questionnaires were left with the administrators to be completed and returned *via* mail. The response rate for the questionnaires was 89% ($n = 401$) of the respondents at the 450 participating centers. Of these centers, 383 agreed to participate at Time 2, resulting in an 85% response rate. Time 2 data were also collected *via* on-site interviews with the administrators. Listwise deletion of cases with missing data on the variables included in the analyses resulted in a maximum usable sample of 280 centers at Time 1. At Time 2, listwise deletion of data resulted in a maximum usable sample size of 211.

Because the usable samples represented little more than half of the original sample, we conducted mean difference tests between the included centers and the excluded centers on both the dependent and independent variables. There was no significant mean difference on the financial performance index at Time 1 ($F[1, 314] = .05$; n.s.) or at Time 2 ($F[1, 236] = .93$; n.s.). The only significant differences among the independent variables excluded for missing financial performance data at Time 1 were for centers located in hospitals or on hospital campuses and for parent–center decentralization. The usable centers were slightly less likely to be located in a hospital ($F[1, 449] = 15.28$; $p < .001$; μ for included centers = .67; μ for excluded centers = .80) and reported slightly higher levels of parent–center decentralization ($F[1, 361] = .01$; $p < .05$; μ for included centers = 4.71; μ for excluded centers = 4.50). For centers excluded for missing financial performance data at Time 2, there were also two significant differences. Excluded centers were slightly more likely to be non-profit ($F[1, 449] = 8.53$; $p < .01$; μ for included centers = .30; μ for excluded centers = .42) and reported slightly higher levels of competition ($F[1, 435] = 5.53$; $p < .05$; μ for included centers = 6.01; μ for excluded centers = 6.63). In order to maximize our usable sample, we used mean replacement with the regression imputation technique recommended by MacDonald, Thurston and Nelson (2000) on those independent variables for which there were greater than 50 cases missing. Replacement was used on internal decentralization (85 cases), parent–center decentralization (87 cases), and performance aspirations (86 cases).

Measures

The constructs operationalized in the current study were internal decentralization, parent–center decentralization, organizational condition, percentage of professionals, competition, performance aspirations, financial performance, and a number of control variables. All measures except financial performance were administered either during the Time 1 on-site interviews with administrators or in the Time 1 administrator questionnaires. Financial performance data were derived from organizational records at both Times 1 and 2.

Internal decentralization. *Internal decentralization* was measured using a 5-item subset of Aiken and Hage's (1966) centralization scale completed as part of the administrator questionnaire. Originally developed and used in a sample of social welfare and healthcare organizations (see Aiken & Hage, 1966, 1968), this measure has been found to be reliable and valid at the organizational level (Dewar, Whetten & Boje, 1980). Items had an organizational frame of reference and asked center administrators to assess *what it is generally like for employees to work at their centers* by rating five statements according to how reflective each was of working at their centers. The five statements were: (1) there can be little action taken until a supervisor approves a decision; (2) people who want to make their own decisions would be quickly discouraged; (3) even small matters must be referred to someone higher up for approval; (4) employees must ask their supervisors before doing almost anything; and (5) any decisions employees make must have their bosses' approval. Responses were on a 7-point Likert scale ranging from "not at all true" to "definitely true" and were coded such that higher scores represented greater decentralization. The average across items was used in the analyses. The internal reliability coefficient was .87.

Boundary conditions. It was necessary to operationalize five boundary conditions or moderators of the decentralization–effectiveness relationship. The first condition was *parent–center decentralization*. One way of conceptualizing parent–center decentralization is as the amount of authority given to center leadership by the parent organization or, as Aiken and Hage (1968) refer to it, organizational autonomy. Parent–center decentralization was measured using a scale derived from Khandwalla (1977). Each administrator was asked *how much autonomy his/her center's on-site administration is given by the parent organization to make decisions* regarding raising capital for new investments; determining the center's operating budget; developing, marketing, and pricing treatment services; hiring, firing, and disciplining senior personnel; allocating excess revenue; opening/closing satellite facilities; and setting compensation policies. Thus, while the internal decentralization items emphasized decentralization as it is applied to employees throughout a center, this measure emphasized decentralization as it is applied to a center's top management by a larger parent organization. All responses were on a 7-point Likert scale anchored on one end with "no authority" and the other with "complete authority." The mean of these items was used to create the decentralization construct. Higher scores represented greater parent–center decentralization, while lower scores represented greater parent–center centralization. The internal reliability coefficient for the measure was .92.

The second boundary condition, *organizational condition*, was operationalized through two interview items asking administrators if there were imminent or in-progress plans for

their centers to either expand or decrease staff, services, or the number of clients treated. Responses to these questions were coded to create a variable where growth (1); stability (0); shrinkage (−1). Growth indicated those centers planning expansion but not planning any decreases. Shrinking centers were those centers planning reductions but no expansion. Stable centers were those planning (a) neither expansion nor reduction ($n = 161$) and (b) those planning expansions in some areas but reductions in others ($n = 19$).

The third boundary condition, *proportion of professional workers*, was operationalized as the total number of nurses and licensed counselors divided by the total number of center employees. This proportion ranged from .00 to 1.00 with an average proportion of .47. The fourth condition, *competitive environment*, was operationalized with a single question asking respondents how much overall competition their centers faced at that time of the interview. Responses for this item ranged from 1 (no competition) to 10 (intense competition), with a mean response of 6.35. The final boundary condition, *performance aspirations*, was measured as the mean of five items taken from the administrator questionnaire and adapted from Khandwalla (1977). These items asked respondents the degree to which their organizations focused on generating average revenues, maintaining below average operating costs, maintaining high rates of growth, and securing high, above average financial strength as primary goals for their organizations. Again, items were on a 7-point agree–disagree format. Items were averaged to create the scale and coded such that higher responses represented greater financial performance aspirations. Internal reliability for this scale was .74.

Financial performance. Organizational effectiveness refers to an absolute level of performance assessed by the degree to which an organization achieves certain goals (Ostroff & Schmitt, 1993). It is difficult to obtain financial performance data standardized for an entire sample of behavioral healthcare treatment centers. The primary reason is that smaller centers often feel vulnerable and are reluctant to provide hard financial data (Kamalesh, Subramanian & Yauger, 1997). To initiate control and standardization on our measure of financial performance, we asked administrators during the Times 1 and 2 on-site interviews to provide total center revenues and total center expenses from the most recent fiscal year. We used the information to create a measure of *gross total margin* at both time periods by subtracting expenses from revenues, then dividing the resulting number (net income_{T_i}) by revenues, i.e. $(\text{revenues}_{T_i} - \text{expenses}_{T_i}) / \text{revenues}_{T_i}$ (Tennyson & Fottler, 1997).¹ Clement, D’Aunno and Poyzer (1993) have argued that margin is an excellent indicator of short-term financial performance in healthcare organizations. While the length of time between Time 1 and 2 is probably too long to be considered purely “short-term,” looking at Time 2 margin allows us to add a longitudinal dimension to the study that would be missed if we focused only on Time 1. Because neither the Time 1 nor 2 margin was normally distributed, both were transformed by taking their natural logs. This transformation reduced margin skewness from −3.22 to −.95 for Time 1 and from −2.58 to −.68 for Time 2. In both cases, greater logged margin represented greater performance.

Control variables. It is to be expected that variations in financial performance may be due in part to differences in centers’ sizes, ages in years, profit status, and whether they are located in or on hospital campuses. Thus, measures of the latter conditions were included

as control variables. Organizational size and age have both been hypothesized to influence various organizational outcomes. Size is often associated with increased standardization and formalization (Scott, 1987), making organizational initiatives more standardized, as well, and less likely to have a large impact on organizations. Large organizations are also more likely to report stronger financial results in terms of raw numbers than are smaller organizations. Similarly, older organizations are also likely to be standardized and routinized (Scott, 1987), again making their performance generally stable and less susceptible to a liability of newness. For this study, *size* was measured as the total number of FTE employees working for a center in the year immediately prior to the on-site interview. *Age* was measured as the year of the interview minus the year of a center's founding. Analyses indicated that size and age were not normally distributed, so these variables were transformed by taking their natural logs. The log transformation reduced skewness from 3.83 to $-.07$ for size and from 3.24 to $-.94$ for age.

Profit status and whether the center was hospital-based were also used as controls. Though for-profit and non-profit organizations both face the need to perform well (Dees, 1998), for-profit organizations might face greater pressures for achieving higher profit margins than non-profit organizations. While some argue that a shared interest in the bottom-line and increased competition have narrowed the differences between profit and non-profit healthcare providers (Flower, 1997; Dees, 1998), we felt it would be safest to control for status. *Profit status* was measured with a single question asking administrators whether their centers were organized as for- or not-for-profit under the guidelines provided by the U.S. Department of Treasury, Internal Revenue Service. For profit centers were coded 1, while not-for-profit centers were coded 0. Research has also shown that when larger corporations form subsidiaries there is a positive effect on financial performance (e.g., Clement et al., 1993). Further, profit margin may benefit from resource exchanges (e.g., client referrals) in units that are on larger organizational campuses. Thus, a single item assessing *center setting* was included as a control. Centers located on a hospital campus or located in a hospital setting were coded 1, while centers neither owned by hospitals nor located in hospitals were coded 0.

Analytical Procedures

Hierarchical moderated regression was used to test the hypotheses. Testing each hypothesis required forming the interaction between internal decentralization and a given boundary condition. In all cases, the multiplicative term was used to represent the interaction in the analyses. Two regression equations were tested: one with Time 1 margin as the dependent variable and one with Time 2 margin as the dependent variable. In both, the independent variables were entered in three steps. The control variables were entered first, followed by the main effects for decentralization and all of the boundary conditions. The final step entered all of the two-way interaction terms. Decentralization and all of the boundary condition variables were centered about their respective means (Cohen & Cohen, 1983). Moderation existed if an interaction term was significant and if the block of interaction terms accounted for significant residual variance in the dependent variable after the inclusion of the control variables and main effects. Observed significant interactions were plotted graphically (Cohen & Cohen, 1983).

Table 1
Descriptive statistics

Variables	Mean	S.D.	N	1	2	3	4	5	6	7	8	9	10	11
Margin at Time 1	.17	.38	316											
Margin at Time 2	.19	.35	238	.30***										
Size	47.74	59.51	450	-.01	-.02									
Age	14.46	11.17	450	-.05	-.16*	.26***								
Profit status	.37	.48	450	.02	.15*	.06	-.14**							
Hospital based	.72	.45	450	.23***	.18**	-.16***	-.12**	-.35***						
Internal decentralization	5.23	1.12	450	.03	-.07	.01	.08	-.04	-.04					
Parent–center decentralization	4.69	1.22	450	-.01	-.08	.17***	.01	.24***	-.33***	.17***				
Condition	.51	.57	429	.09	-.05	.08	-.12*	.05	.05	.01	.11*			
Professionals (%)	.47	.22	425	.26***	.01	-.30***	-.11*	-.19***	.35***	.08	-.12**	-.01		
Competition	6.35	2.58	437	-.13*	.01	.09	.10*	.04	-.02	-.01	.00	.04	-.03	
Performance aspirations	4.80	1.09	450	.12*	.14*	.14**	-.03	.21***	.00	-.15**	-.01	.6	-.06	.02

* $p < .05$.

** $p < .01$.

*** $p < .001$.

Results

Correlations, means, and standard deviations are presented in Table 1. Results from the regression analyses are presented in Tables 2 and 3, and the plots of observed interactions are presented in Figures 1 and 2. Time 1 analyses demonstrated support for most of our hypotheses. As shown in Table 2, the controls (5%), main effects (8%), and interaction effects (5%) explained 18% of the total variance in performance ($p < .001$). The main effect of internal decentralization by itself was not significantly associated with Time 1 performance ($\beta = -.03$; n.s.). There were, however, statistically significant main effects for condition ($\beta = .11$; $p < .05$), percentage of professionals ($\beta = .21$; $p < .001$), competition ($\beta = -.12$; $p < .05$), and performance aspirations ($\beta = .16$; $p < .01$). Most important, though, the adjusted R^2 increased from 13 to 18% when the set of interaction terms was entered into the equation. Thus, as expected, boundary conditions play a major role in explaining the relationship of decentralization to Time 1 performance.

Specifically, expectations from Hypothesis 1 were that internal decentralization would interact with parent–center decentralization to influence the internal decentralization–performance relationship. As indicated in Table 2 and seen in Figure 1, this hypothesis was supported. Centers experiencing more centralized relationships with their parent

Table 2
Regression results with Time 1 margin as the dependent variable

	Step 1	Step 2	Step 3
Size	.07	.10	.06
Age	.00	.05	.04
Profit status	.13	.13*	.07
Hospital based	.28***	.22**	.16*
Internal decentralization		.04	-.03
Parent–center decentralization		.02	.00
Condition		.10 ⁺	.11*
Percentage professionals		.22***	.21***
Competition		-.16**	-.12*
Performance aspirations		.13*	.16**
Internal decentralization × parent–center decentralization			-.16*
Internal decentralization × condition			-.12**
Internal decentralization × professionals			-.08
Internal decentralization × competition			-.05
Internal decentralization × performance aspirations			.13*
Adjusted R^2	.05	.13	.18
F	4.83***	4.98***	5.00***
F -change, $N = 280$		4.81***	4.41***

⁺ $p < .10$.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

Table 3
Regression results with Time 2 margin as the dependent variable

	Step 1	Step 2	Step 3
Size	.07	.05	.07
Age	-.06	-.06	-.03
Profit status	.29***	.25***	.30***
Hospital based	.28***	.28***	.31***
Internal decentralization		.02	.04
Parent–center decentralization		-.05	-.06
Condition		-.06	-.06
Percentage professionals		-.07	-.09
Competition		.01	-.02
Performance aspirations		.13 ⁺	.13 ⁺
Internal decentralization × parent–center decentralization			.07
Internal decentralization × condition			.19*
Internal decentralization × professionals			.14*
Internal decentralization × competition			.07
Internal decentralization × performance aspirations			.08
Adjusted R^2	.10	.10	.13
F	6.72***	3.23***	3.15***
F -change, $N = 211$.91	2.71*

⁺ $p < .10$.

* $p < .05$.

*** $p < .001$.

organizations exhibited stronger margins when they also had high internal decentralization. Centers with high internal decentralization and low parent–center decentralization exhibited much stronger margins than internally decentralized centers with high parent–center decentralization.

Hypothesis 2, which stated that the effects of decentralization on organizational financial performance would be greatest in shrinking centers, was partially supported. Looking at Time 1 margin in Table 2, the interaction was statistically significant ($\beta = -.12$; $p < .01$). However, as seen in Figure 1, while organizations that were shrinking exhibited slightly higher margins when they also reported high levels of decentralization, growing organizations with high levels of decentralization reported lower levels of performance than did growing centers with low levels of decentralization. In fact, high decentralization in growing organizations was associated with about the same level of performance as shrinking organizations with high decentralization. Thus, decentralization appeared to be an enhancer for shrinking organizations, yet detrimental in growing organizations at Time 1.

Hypothesis 3 stated that the decentralization–financial performance relationship would be strongest for centers with many professional employees. This expectation was not supported in that the interaction between decentralization and percentage of professionals was not significantly associated with Time 1 margin ($\beta = -.08$; n.s.). Hypothesis 4 was not supported either. The interaction between decentralization and competition was not statistically

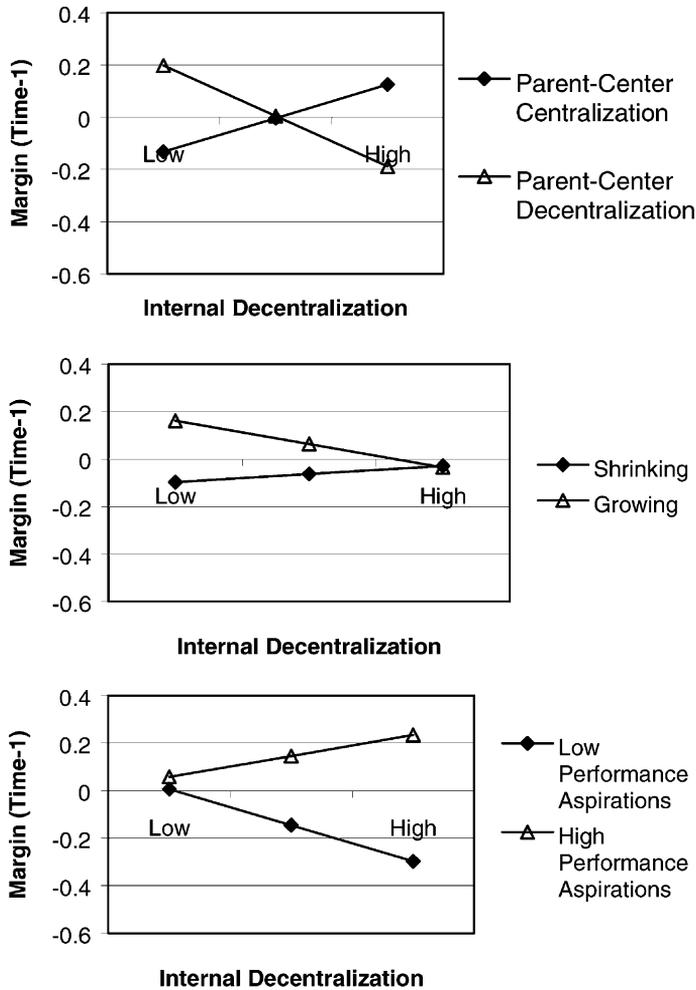


Figure 1. Plots of significant interactions with margin at Time 1.

significant ($\beta = -.05$; n.s.). Thus, neither percentage of professionals nor competitive environment served as boundary conditions for decentralization’s relationship with Time 1 financial performance in the current sample.

Finally, Hypothesis 5 stated that the impact of high competition on the decentralization–performance relationship would be positive and the impact of low competition would be negative. As expected, the interaction between decentralization and aspirations was significantly associated with performance ($\beta = .13$; $p < .05$). The plot of the interaction (Figure 1) indicated that centers with high financial performance aspirations exhibited much higher Time 1 margins when they also reported high levels of decentralization, while low aspiration centers with high decentralization performed relatively worse.

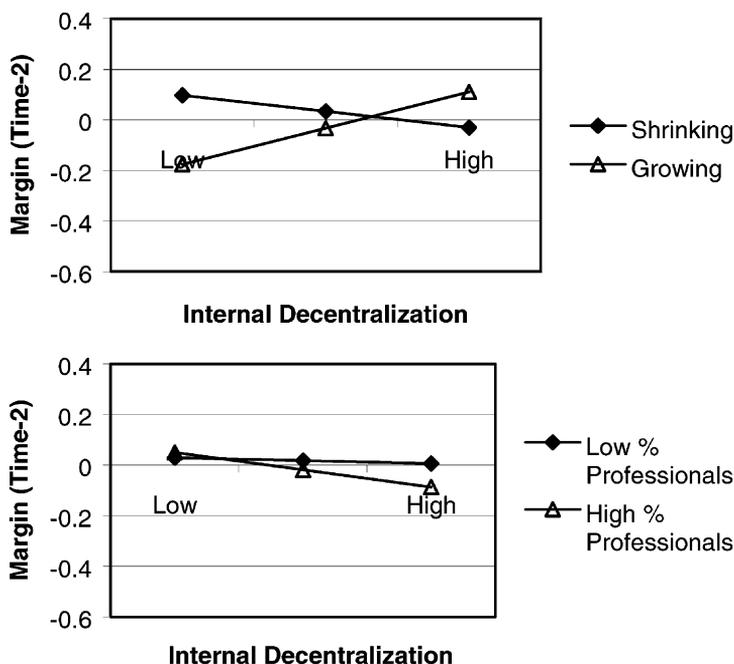


Figure 2. Plots of significant interactions with margin at Time 2.

Results for Time 2 margin were not as strong as those for Time 1, but nonetheless are interesting—especially given that Time 2 margin information was collected 2 years after that of Time 1 margin. Among the interaction terms, those with condition and percentage of professionals were both significant. This time, results for condition ($\beta = .19$; $p < .05$) were contrary to those with Time 1 margin as the dependent variable and Hypothesis 1. As shown in Figure 2, growing centers performed better at Time 2 when they had high rather than low decentralization. Likewise, shrinking centers performed better at Time 2 when they had low rather than high decentralization. Though, the results for percentage of professionals were not significant at Time 1, they were significant at Time 2 ($\beta = .14$; $p < .05$). These results were also contrary to Hypothesis 2. Over time, organizations with a high percentage of professionals performed slightly worse with high internal decentralization than with low internal decentralization. Much as was argued for parent–center decentralization, it is possible that a high percentage of professionals *and* decentralization is simply too much freedom without a buffer.

Because decentralization is most commonly associated with employee attitudes, as *post hoc* analyses, we also examined how the five boundary conditions influenced the relationship of internal decentralization with employees' perceptions of organizational commitment and job satisfaction. These two attitude variables were collected *via* questionnaires from a sample of counselors at each center at Time 2. Commitment was measured using the 7-item version of the organizational commitment questionnaire from Porter, Steers, Mowday and Boulian (1974). Job satisfaction was measured with three items from Hackman

and Oldham’s measure of general job satisfaction. Responses for both constructs were on a 7-point Likert scale ranging from “strongly agree” to “strongly disagree,” and items for both were averaged so that higher scores represented greater organizational commitment and job satisfaction, respectively.² Internal reliability for organizational commitment was .80. For job satisfaction it was .92. Commitment and satisfaction were regressed onto the controls, main effects, and interaction terms using the same procedures used for margin.

Results for the two regression equations with the attitudes are presented in Table 4 and Figure 3. Beginning with the results for organizational commitment, Table 4 shows that, unlike the results for margin, the main effect for internal decentralization was positively associated with employees’ organizational commitment ($\beta = .15; p < .05$). Three of the interaction terms were worth discussing. The strongest of the interactions was between internal decentralization and percentage of professionals ($\beta = .15; p < .05$). The interactions with condition ($\beta = -.13; p < .10$) and performance aspirations ($\beta = -.13; p < .10$) were both marginally significant. As shown in the plots in Figure 3, high decentralization was associated with better organizational commitment for all three boundary conditions. However, the relationship of decentralization to commitment was enhanced under conditions of shrinkage, high percentage of professionals, and low performance aspirations.

Table 4
Regression results with Time 2 attitudes as the dependent variables

	Organizational commitment			Job satisfaction		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
Size	-.18**	-.18*	-.17*	-.10	-.09	-.12
Age	.00	.01	.04	-.02	-.02	.02
Profit status	-.17*	-.15 ⁺	-.16*	-.09	-.06	-.08
Hospital based	-.23**	-.21**	-.21**	-.18*	-.16*	-.16*
Internal decentralization		.09	.15*		.05	.10
Parent–center decentralization		.00	-.03		.03	.01
Condition		-.04	-.04		-.08	-.08
Percentage professionals		.03	.01		.06	.02
Competition		-.14*	-.14*		-.05	-.06
Performance aspirations		-.01	.06		-.05	.00
Internal decentralization × parent–center decentralization			-.02			-.03
Internal decentralization × condition			-.13 ⁺			-.10
Internal decentralization × professionals			.15*			.17*
Internal decentralization × competition			.01			.13 ⁺
Internal decentralization × performance aspirations			-.13 ⁺			-.08
Adjusted-R ²	.05	.06	.09	.01	.00	.04
F	4.13**	2.32**	2.39**	1.70	1.06	1.58 ⁺
F-change, N = 221		1.10	2.38*		.65	2.54*

⁺ $p < .10$.
^{*} $p < .05$.
^{**} $p < .01$.

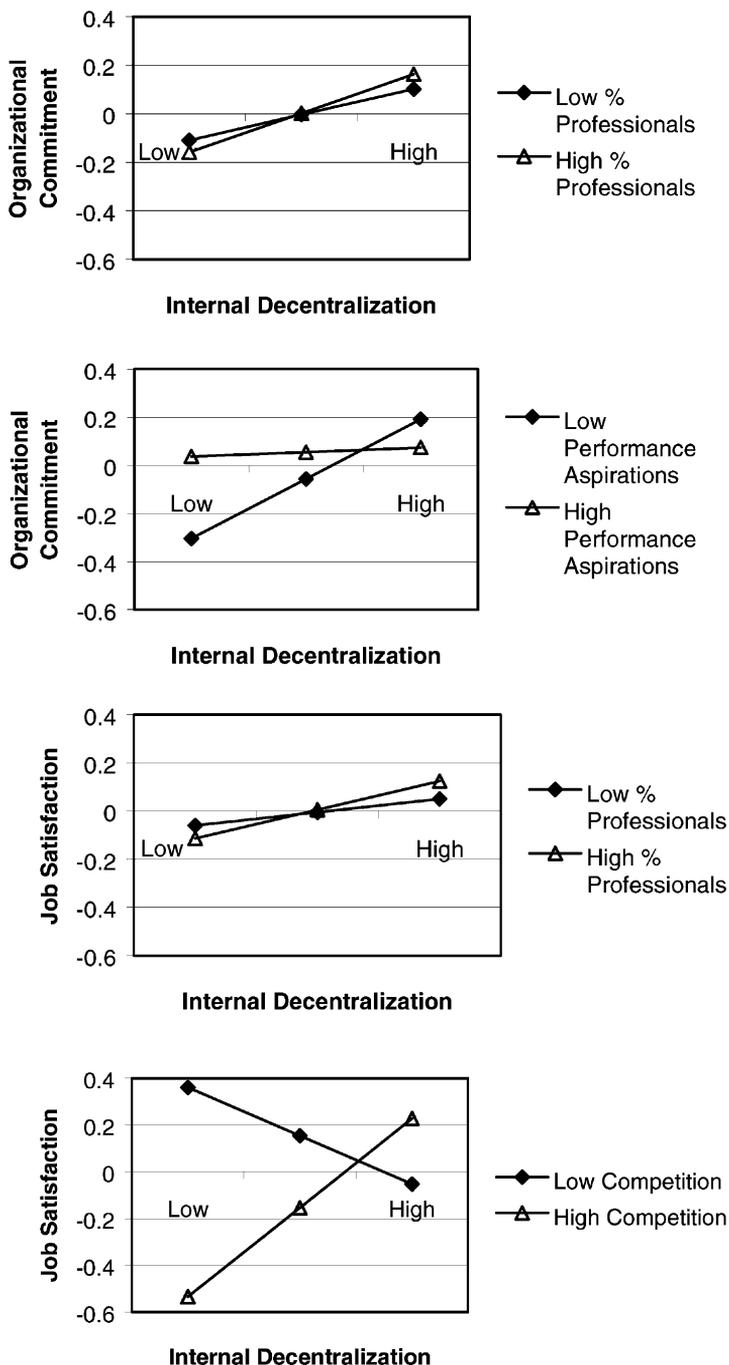


Figure 3. Plots of significant interactions with organizational commitment and job satisfaction at Time 2.

Results for job satisfaction were somewhat different. The main effect of decentralization on satisfaction was not significant ($\beta = .10$; n.s.); however, the interaction between decentralization and professionals was significant ($\beta = .17$; $p < .05$). Satisfaction was strongest for high, as opposed to low, decentralization for both low and high percentages of professionals, but the benefit of high decentralization was slightly greater for organizations with a high percentage of professionals. The interaction between decentralization and competition was marginally significant ($\beta = .13$; $p < .10$). Figure 3 indicates that, in terms of satisfaction, high decentralization was particularly beneficial in organizations with strong competition. The overall equation was only marginally significant ($F = 1.58$; $p < .10$).

Discussion

This study examined the boundary conditions that circumscribe decentralization's relationship with financial performance. Consistent with expectations, the relationship of decentralization with both Time 1 and Time 2 financial performance was moderated by multiple key organizational and environmental variables, indicating that the relationship between decentralization and outcomes is not the same in all situations. In the present sample, the high performing organizations at Time 1 included those with simultaneous decentralization and centralization at two levels of the organization. Findings indicated that high internal decentralization was associated with lower concurrent financial performance for treatment centers that were decentralized from their parent organizations. As such, the findings were congruent with the loose–tight coupling notion that there is no single appropriate approach for organizations in turbulent environments, and such organizations can benefit from simultaneous centralization and decentralization across different levels of the organization (Brown & Eisenhardt, 1998; Jansen & Chandler, 1994; Weick, 1976). That is, decentralizing decisions can be important in achieving immediate gains, but organizations also need buffering from the environment to achieve some level of order (Jansen & Chandler, 1994).

It is important to point out, though, that because Time 1 data were cross-sectional, an alternative explanation for the moderating effect of parent–center decentralization is *post hoc* rationalization by respondents. Financial performance could have caused decentralization or how respondents perceived decentralization. When current financial performance was high, administrators may have taken credit by claiming more parent–center decentralization and less internal decentralization (i.e., performance was due to my great decisions). Similarly, when current financial performance was low, administrators may have shifted blame elsewhere by claiming high parent–center centralization or high decentralization to subordinates (i.e., performance was due to the poor decisions of others). Because the interaction between internal decentralization and parent–center decentralization was not significant at Time 2, it was impossible to determine whether the buffering explanation or the rationalization explanation was correct.

In terms of organizational condition, the highest level of concurrent financial performance was achieved for growing centers with *low* decentralization, whereas *high* decentralization in growing organizations was associated with lower concurrent financial performance. For shrinking centers, concurrent performance was worst for those with low decentralization, but

high decentralization was associated with only slightly better Time 1 performance. Again, the causal relationship between decentralization and performance, as moderated by center condition, could be interpreted two ways. It could be, for example, that low decentralization resulted in greater financial performance for growing centers. Alternately, it could be that administrators in high-performing, growing organizations were more likely to attribute performance to themselves (low decentralization) than to others (high decentralization).

Interestingly, Time 2 financial performance results for organizational condition countered the *post hoc* rationalization explanation and suggested that decentralization may have caused financial performance. In this case, decentralization had a slight detrimental effect for shrinking centers, while growing, high-decentralization centers exhibited much stronger margins at Time 2 than did growing, low-decentralization centers. As shown in Figure 2, though, the direction of this significant moderation was opposite from both Time 1 and the hypothesized direction. So why was high decentralization associated with lower, rather than higher, margin for shrinking centers at Time 2? One explanation is that decentralized decision-making requires a great deal of both resources and effort (Floyd & Wooldridge, 1997), simply making it too costly for shrinking organizations to pursue. Similarly, while decentralization may be appealing to leaders who need to alleviate immediate anxiety and decision-making overload (Ashmos et al., 1998), it may also add additional turbulence and too much complexity to the internal environment, making the effects of decentralization across time negative in shrinking centers. For these centers, it may be better to expend more effort on immediate, pressing issues (e.g., fiscal concerns) rather than devoting resources to managerial issues such as decentralized decision-making.

While the percentage of professionals did not moderate the relationship between decentralization and Time 1 financial performance, it did for the relationship between decentralization and margin at Time 2. However, much like the results with condition, the effect of the percentage of professionals employed was somewhat different than we anticipated. While centers with a high percentage of professionals reported slightly worse financial performance with high decentralization than with low decentralization, centers with a low percentage of professionals performed similarly at Time 2 regardless of their decentralization. It seems decentralization did little to offset the possible negative performance effects associated with hiring small numbers of professional clinical staff in a healthcare setting.

Finally, decentralization interacted positively with performance aspirations to influence the decentralization–financial performance relationship. Once again, though, because the moderator was only significant at Time 1, little can be inferred about the causal direction of this relationship. Whether organizations with high decentralization and low performance aspirations tend to perform more poorly or whether poorly performing organizations with high decentralization are more likely to claim low performance aspirations remains unclear.

Overall, what do the different findings at Time 1 and Time 2 tell us about the relationship between decentralization and financial performance? At the very least, the results from Time 1 give an idea of what types of organizations may use or claim to use decentralization. In particular, organizations with high internal decentralization were those with high financial performance, with high parent–center centralization, that were shrinking, and that reported high performance aspirations. Organizations with high internal decentralization were also those that exhibited poorer financial performance, reported high parent–center decentralization, were growing, and had low financial performance aspirations.

The results from Time 2, on the other hand, indicated that the equivocal impact of decentralization often reported in the decentralization literature (e.g., Porter & Lawler, 1965; Wagner, 1994; Wagner et al., 1997) may have been a function of previous research approaching decentralization's relationship to outcomes from too simplistic and narrow a perspective. The Time 2 results clearly indicated that decentralization could improve organizational financial performance but only under certain conditions. That is, depending on the boundary conditions in place, high levels of performance could be achieved under both low and high decentralization conditions. Decentralization specifically was associated with relatively stronger Time 2 performance when organizations were growing and when they employed a low proportion of professionals. Time 2 results also indicated that the relationship between decentralization and employee attitudes varied according to an organization's boundary conditions. In this case, percentage of professionals, performance aspirations, and competitive environment had the effect of enhancing or detracting from decentralization's relationship to satisfaction and commitment.

It is clear that the relationship of decentralization to a variety of outcomes is much more complex than typically hypothesized, and this study raises many additional questions. The present results, however, must be considered in light of the study's limitations. First, we only had one measure of performance and were only able to obtain data for this measure at one point in time *after* we collected the data regarding decentralization. It will be very important for researchers to explore the bounded relationship of decentralization with multiple indices of organizational performance (Rogers & Wright, 1998) over time and also to consider changes in decentralization and boundary conditions over time.

Another limitation was that our measure of decentralization reflected the perceptions of each center's highest employee—the center administrator. We chose this measure because we were surveying top managers and attempting to capture an overall measure of decentralization throughout each organization. Though the instructions asked administrators to consider their centers as a whole (rather than their own jobs), it is possible the administrators' perceptions of decentralization were not representative of the perceptions of lower-level employees. We believe several factors mitigate this limitation, however. First, the average size of the centers in our sample was relatively small (48 full-time equivalent employees). As such, administrators in these organizations may have had better perceptions of their employees' beliefs than top managers in larger organizations. Additionally, the majority of the administrators ($n = 308$) in our sample had education and continued experience in behavioral healthcare provision (e.g., as social workers, psychologists, counselors), also suggesting they may have been more in-touch with their employees' perceptions than the average top manager.³

While it is true that administrators may perceive their centers partly as a function of their roles and, thus, be more likely to perceive decentralization when in fact little or none exists in the minds of employees, a recent study found that the various subgroups within healthcare organizations tend to agree about *who* participates in the decision-making process in their organizations (Ashmos et al., 1990). Likewise, the self-fulfilling prophecy (SFP) literature argues that managers' perceptions influence how they treat their subordinates and, ultimately, the performance of those subordinates (Eden, 1990). While most of the support for this argument has occurred at the individual level, Eden (1990) proposes that the processes by which manager perceptions influence performance can occur at the organizational-level.

It will be extremely valuable for future research to simultaneously consider decentralization from the perspectives of top managers, middle managers, and operational-level employees (Ashmos et al., 1990; Floyd & Wooldridge, 1997). Finally, because our sample was limited to organizations in a single industry our results may not generalize to organizations in all industries. While they may be inappropriate for more traditional manufacturing organizations, however, the results should generalize to the larger healthcare industry and to other service organizations.

To conclude, the results indicate a pattern in which decentralization is not universally beneficial and in which it tends to be most positively related to financial performance when used in organizations with certain attributes. At the same time, the results suggest that decentralization can be very detrimental to organizations with other characteristics. Given that high levels of performance are also associated with low decentralization under certain conditions, organizations wanting to improve their performance have many options. Because of the notorious difficulty of achieving large-scale cultural change (Schein, 1992), some alternatives to decentralization may be easier to achieve than successful decentralization.

Does this mean it would be best and easiest for all managers to avoid decentralized decision-making? We argue the answer to this question is “No.” Managers and researchers alike must recognize that decentralization (and likely its related practices), is a very complex phenomenon (Ashmos et al., 1990). When used in conjunction with organizational characteristics that enhance its effects, decentralization can be quite beneficial to an organization. However, these benefits may not immediately materialize and the effects of decentralization can be negative as well. Thus, simply not pursuing decentralization does not guarantee acceptable performance either, for the benefits of low decentralization are also dependent upon organizational and environmental conditions.

Further, for almost all organizations, decentralization can be a positive influence on employee attitudes. This influence is most pronounced for shrinking organizations, those with a high percentage of professionals, those with low performance aspirations, and those experiencing high competition. Using these results as our guide, we suggest that, before attempting to implement a decentralized organizational structure and related management practices, an organization should carefully consider its most important long- and short-term goals, its other characteristics, and how these goals and characteristics are likely to change in the future.

Our results indicate that there was a strong need in the literature to examine decentralization at both the organization level and in terms of the boundary conditions in which it may be embedded. Prior research, which addressed decentralization more narrowly, presented only a partial picture of the decentralization–outcome relationship and may have led some researchers and practitioners to prematurely “close the book” on decentralization as a means of achieving performance gains as well as to overlook the conditions under which decentralization can be both beneficial *and* detrimental. The research presented here, however, indicates that the impact of decentralization on organizational outcomes can be fairly strong—in both a positive and a negative sense. Indeed, the relationship of decentralization to financial performance appears to be much more complex than has been traditionally conceived. The present study contributes to our understanding of decentralization by beginning to define the general context for which confident conclusions regarding the effects of decentralization can be made.

Notes

1. Where net income_{T_i} represents net income at Time *i*; revenues_{T_i} represents revenues at Time *i*, and expenses_{T_i} represents expenses at Time *i*.
2. In order to bring these individual attitudes to the organizational-level, it was necessary to aggregate organizational commitment and job satisfaction across counselors within each center. ICC(2) was calculated as the reliability of means at the aggregate level (Ostroff & Schmitt, 1993), ICC(2) scores for organizational commitment ranged from 0.90 to 0.92, and for job satisfaction they ranged from 0.57 to 0.82.
3. As a further test of the possibility that our results were a function of *who* our respondents were (as opposed to actual decentralization), we examined the influences of administrators' individual differences on our results. All regression equations were rerun controlling for administrators' level and field of education, position tenure, center tenure, previous administration experience, age, and gender. No significant results were found for any of these variables, and including them did not change the pattern of findings.

Acknowledgments

Support for this research was provided in part by grants from the National Institute on Alcohol Abuse and Alcoholism to Drs. Blum and Roman (R01 AA 10130 and T32 AA 07473). We thank Ann Buchholtz, Allen Amason, Soumen Ghosh, and three anonymous reviewers for their assistance with this manuscript.

References

- Aiken, M., & Hage, J. 1966. Organizational alienation: A comparative analysis. *American Sociological Review*, 31: 497–507.
- Aiken, M., & Hage, J. 1968. Organizational interdependence and intra-organizational structure. *American Sociological Review*, 33: 912–930.
- Arthur, J. B. 1994. Effects of human resource systems on manufacturing performance and turnover. *Academy of Management Journal*, 37: 670–687.
- Ashmos, D. P., Duchon, D., Hauge, F. E., & McDaniel, R. R., Jr. 1996. Internal complexity and environmental sensitivity in hospitals. *Hospital & Health Services Administration*, 41: 535–555.
- Ashmos, D. P., Duchon, D., & McDaniel, R. R., Jr. 1998. Participation in strategic decision making: The role of organizational predisposition and issue interpretation. *Decision Sciences*, 29: 25–51.
- Ashmos, D. P., McDaniel, R. R., Jr., & Duchon, D. 1990. Differences in perception of strategic decision-making processes: The case of physicians and administrators. *Journal of Applied Behavioral Science*, 26: 201–218.
- Becker, B. E., & Huselid, M. A. 1998. High performance work systems and firm performance: A synthesis of research and managerial implications. *Research in Personnel and Human Resources Management*, 16: 53–101.
- Blum, T. C. 1998. Optimal staffing for drug abuse treatment services. *Issue Paper*. Washington DC: NIDA Resource Center for Health Services Research.
- Brown, S. L., & Eisenhardt, K. M. 1998. *Competing on the edge*. Boston, MA: Harvard Business School Press.
- Clement, J. P., D'Annunzio, T., & Poyzer, L. M. 1993. The financial performance of diversified hospital subsidiaries. *Health Services Research*, 27: 741–763.
- Cohen, J., & Cohen, P. 1983. *Applied multiple regression/correlation analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates.

- Cohen, S. G., Ledford, G. E., Jr., & Spreitzer, G. M. 1996. A predictive model of self-managing work team effectiveness. *Human Relations*, 49: 643–676.
- Conrad, D. A., & Shortell, S. M. 1996. Integrated health systems: Promise and performance. *Frontiers of Health Services Management*, 13: 3–40.
- D'Aunno, T., & Sutton, R. I. 1992. The responses of drug abuse treatment organizations to financial adversity: A partial test of the threat-rigidity thesis. *Journal of Management*, 18: 117–131.
- Dees, G. J. 1998. Enterprising nonprofits. *Harvard Business Review*, 76(1): 55–67.
- Dewar, R. D., Whetten, D. A., & Boje, D. 1980. Examination of the reliability and validity of the Aiken and Hage scales of centralization. *Administrative Science Quarterly*, 25: 120–128.
- Eden, D. 1990. *Pygmalion in management: Productivity as a self-fulfilling prophecy*. Lexington, MA: Lexington Books.
- Flower, J. 1997. Is the war between investor-owned institutions and not-for-profits over? *Healthcare Forum Journal*, 40(5): 59–64.
- Floyd, S. W., & Wooldridge, B. 1992. Middle management involvement in strategy and its association with strategic type. *Strategic Management Journal*, 13: 153–167.
- Floyd, S. W., & Wooldridge, B. 1997. Middle management's strategic influence and organizational performance. *Journal of Management Studies*, 34: 465–483.
- Glew, D. J., O'Leary-Kelly, A. M., Griffin, R. W., & Van Fleet, D. D. 1995. Participation in organizations: A preview of the issues and proposed framework for future analysis. *Journal of Management*, 23: 395–421.
- Hickson, D. J., Hinings, C. R., Lee, C. A., Schneck, R. E., & Pennings, J. M. 1971. Strategic contingencies theory of intraorganizational power. *Administrative Science Quarterly*, 16: 216–229.
- Hodson, R. 1985. Corporate structure and job-satisfaction: A focus on employer characteristics. *Sociology and Social Research*, 69: 22–49.
- Jansen, E., & Chandler, G. N. 1994. Innovation and restrictive conformity among hospital employees: Individual outcomes and organizational considerations. *Hospital & Health Services Administration*, 39: 63–80.
- Kamalesh, K., Subramanian, R., & Yauger, C. 1997. Performance-oriented: Toward a successful strategy. *Marketing Health Services*, 17: 10–20.
- Khandwalla, P. N. 1977. *The design of organizations*. New York: Harcourt Brace Jovanovich.
- Knoke, D. 1981. Commitment and detachment in voluntary associations. *American Sociological Review*, 46: 141–158.
- Koch, M. J., & McGrath, R. G. 1996. Improving labor productivity: Human resource management policies do matter. *Strategic Management Journal*, 17: 335–354.
- Lawler, E. E., III 1996. *From the ground up: Six principles for building the new logic corporation*. San Francisco: Jossey-Bass.
- Lawler, E. E., III, Mohrman, S. A., & Ledford, G. E. 1995. *Creating high performance organizations*. San Francisco: Jossey-Bass.
- Leana, C. R. 1986. Predictors and consequences of delegation. *Academy of Management Journal*, 29: 754–774.
- Leana, C. R., & Florkowski, G. W. 1992. Employee involvement programs: Integrating psychological theory and management practice. *Research in Personnel and Human Resources Management*, 10: 233–270.
- Locke, E. A., & Schweiger, D. M. 1979. Participation in decision-making: One more look. In B. Staw & L. L. Cummings (Eds.), *The innovative organization: productivity programs in practice*: 265–339. Greenwich, CT: JAI Press.
- MacDonald, R. A., Thurston, P. W., & Nelson, M. R. 2000. A Monte Carlo study of missing item methods. *Organizational Research Methods*, 3: 70–91.
- Miller, K. I., & Monge, P. R. 1986. Participation, satisfaction, and productivity: A meta-analytic review. *Academy of Management Journal*, 29: 727–753.
- Mintzberg, H., & Waters, J. 1985. Of strategies deliberate and emergent. *Strategic Management Journal*, 6: 257–272.
- Morse, N. C., & Reimer, E. 1956. The experimental change of a major organization variable. *Journal of Abnormal Psychology*, 52: 120–129.
- Ostroff, C., & Schmitt, N. 1993. Configurations of organizational effectiveness and efficiency. *Academy of Management Journal*, 36: 1345–1361.
- Ouchi, W. G. 1977. The relationship between organizational structure and organizational control. *Administrative Science Quarterly*, 22: 95–113.

- Perrow, C. 1967. A framework for the comparative analysis of organizations. *American Sociological Review*, 32: 194–208.
- Pfeffer, J., & Salancik, G. 1978. *The external control of organizations*. New York: Harper & Row.
- Porter, L. W., & Lawler, E. E., III. 1965. Properties of organizational structure in relation to job attitudes and job behavior. *Psychological Bulletin*, 64: 23–51.
- Porter, L. W., Steers, R. M., Mowday, R. T., & Boulian, P. V. 1974. Organizational commitment, job satisfaction, and turnover among psychiatric technicians. *Journal of Applied Psychology*, 59: 603–609.
- Przestrzelski, D. 1987. Decentralization: Are nurses satisfied? *Journal of Nursing Administration*, 19: 23–28.
- Pugh, D. S., Hickson, D. J., & Hinings, C. R. 1969. An empirical taxonomy of work organization structures. *Administrative Science Quarterly*, 14: 115–126.
- Pugh, D. S., Hickson, D. J., Hinings, C. R., & Turner, C. 1968. Dimensions of organization structure. *Administrative Science Quarterly*, 13: 65–105.
- Pugh, D. S., Hickson, D. J., Hinings, C. R., Turner, C., & Lupton, T. 1963. A conceptual scheme for organizational analysis. *Administrative Science Quarterly*, 8: 289–315.
- Ranson, S., Hinings, B., & Greenwood, R. 1980. The structuring of organizational structures. *Administrative Science Quarterly*, 25: 1–17.
- Rogers, E. W., & Wright, P. M. 1998. Measuring organizational performance in strategic human resource management: Problems, prospects, and performance information markets. *Human Resource Management Review*, 8: 311–331.
- Scheid, T. L., & Greenley, J. R. 1997. Evaluations of organizational effectiveness in mental health programs. *Journal of Health and Social Behavior*, 38: 403–426.
- Schein, E. H. 1992. *Organizational culture and leadership*. San Francisco: Jossey-Bass.
- Scott, W. R. 1987. *Organizations: Rational, natural, and open systems*. Englewood Cliffs, NJ: Prentice-Hall.
- Spreitzer, G. M. 1995. Psychological empowerment in the workplace: Dimensions, measurement, and validation. *Academy of Management Journal*, 38: 1442–1465.
- Tennyson, D. H., & Fottler, M. D. 1997. Does system membership enhance financial performance in hospitals? In L. N. Dosier & J. B. Keys (Eds.), *Academy of management best paper proceedings*: 123–127. Georgia: Office of Publications and Faculty Research Services, College of Business Administration, Georgia Southern University.
- Vandenberg, R. J., Richardson, H. A., & Eastman, L. J. 1999. The impact of high involvement work processes upon organizational effectiveness: A 2nd-order latent variable approach. *Group and Organization Management*, 24: 300–339.
- Wagner, J. A., III. 1994. Participation's effects on performance and satisfaction: A reconsideration of research evidence. *Academy of Management Journal*, 19: 312–330.
- Wagner, J. A., III, Leana, C. R., Locke, E. A., & Schweiger, D. M. 1997. Cognitive and motivational frameworks in U.S. research on participation: A meta-analysis of primary effects. *Journal of Organizational Behavior*, 18: 49–65.
- Weick, K. E. 1976. Educational organizations as loosely coupled systems. *Administrative Science Quarterly*, 21: 1–19.
- Wooldridge, B., & Floyd, S. W. 1990. The strategy process, middle management involvement, and organizational performance. *Strategic Management Journal*, 11: 231–241.

Hettie A. Richardson is an Assistant Professor of management at the E.J. Ourso College of Business Administration, Louisiana State University. She received her Ph.D. from the University of Georgia. Her current research interests include high involvement work processes, strategic human resource management, and group-level self-fulfilling prophecy.

Robert J. Vandenberg is a Professor of management at the University of Georgia. His research interests include high involvement work process, measurement invariance processes and organizational commitment. He serves on the editorial boards of *Organizational and Human Decision Process*, *Journal of Applied Psychology* and *Organizational Research Methods*.

Terry C. Blum is the Tedd Munchak Chair and Dean of the DuPree College of Management at Georgia Institute of Technology. She received her Ph.D. from Columbia University and is interested in the start up and growth of technology commercialization projects from universities, diversity, and creativity supportive work environments. She leads a NIH supported research program in the organization and management of behavioral health service organizations.

Paul M. Roman is Distinguished Research Professor of sociology at the University of Georgia where he also serves as Director of the Center for Research on Behavioral Health and Human Services Delivery. Since 1994 he has been Principal Investigator for the National Treatment Center Study, a longitudinal on-site data collection from a representative sample of privately funded substance abuse treatment programs. Roman (Ph.D., Cornell, 1968) previously held the Favrot Chair of Human Relations at Tulane University.