Management Controls, Role Stress, and Retail Store Manager Performance

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Although it is commonly assumed that informal and formal management controls are linked to retail manager performance, virtually no empirical work has examined this fundamental control relationship. To investigate this linkage, we rely upon a survey of retail store managers and superior ratings of store manager performance. Interestingly, none of the three control mechanisms investigated in this research have a direct effect on manager performance, however, the findings indicate that the two informal controls (i.e., self and social) have an indirect effect on manager performance through their effects on role stress. In contrast, the formal control mechanism (i.e., output control) has no indirect effect. Finally, role stress is directly linked to store manager performance. Managerial implications and directions for future research in retailing are discussed.

INTRODUCTION

Retail control has been a topic of continuing concern (Lusch 1990) for retail executives as they attempt to keep their organizations on the path of achieving high performance results.

The job of keeping a retail store on its path toward targeted performance presents special control problems. Largely this is because in retail organizations no measurable output is created until a transaction with a customer occurs—and the customer resides in the external environment, which is largely uncontrollable. Also retail control is difficult because there is not a well-defined production function where a given set of known inputs can be expected to yield predictable output. We believe because of

these special control problems retailers can benefit from better understanding the management control literature, especially the literature that addresses formal and informal controls.

From the earliest writings on management control systems, researchers have assumed that there is a direct link between the management control system-in-use and managerial performance (see Giglioni and Bedian 1974 review). Surprisingly, however, a literature review identified only a handful of empirical studies that investigated this relationship (see Merchant 1981; Futrell, Swan and Todd 1976). Although these studies purported to establish a causal relationship, problems in measure development (i.e., Merchant 1981; Futrell et al. 1976) and exclusive use of self-report data (i.e., Merchant 1981) limit their validity and generalizability.

The purpose of this paper is to examine the direct and mediating links of management controls on managerial performance in retail organizations. In this regard, the focus of this paper is on managers' perceptions of management controls. This paper not only sheds light on the proper types of controls to use in retail organizations, but also overcomes three significant problems associated with previous research. First, the study uses two mutually exclusive, independent data bases. Extent of reliance on various controls and role stress data were collected from the store manager and ratings of store manager performance were collected from his/her immediate superior. This overcomes the problem of exclusively relying upon self-report performance data (e.g., Merchant 1981). Second, previous work was not as sensitive to the measurement properties of key constructs. Although Merchant (1981) departs from accounting convention by using several multi-item scales, many of his scales are single-item measures. Also, while Futrell et al. (1976) uses multi-item scales, it is questionable whether their measures describe the control system-in-use or consequences of various controls.

Third, the study extends control system work by focusing on both formal and informal controls. As Jaworski (1988) notes, virtually all research to date has examined the effects of a single type of control. However, if one subscribes to the position that both formal and informal controls are always present in organizations (see Anthony 1952; Dalton 1971; Hopwood 1974) but that they vary in their degree and quality of use, then it follows that research should focus on both formal and informal controls.

In order to develop these ideas in a systematic fashion, the paper has been organized in five sections. In the first section we introduce the types of controls-in-use in retail settings. This discussion blends research on both informal and formal controls in arguing that several control types can be expected in retail settings. In the second section, we discuss the theory and

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associated research hypotheses to be tested. In the third section, we discuss the research design including data collection and measurement. The final two sections present the results and discussion.

TYPES OF CONTROLS-IN-USE IN RETAIL SETTINGS

In order to understand the system of control that has evolved in retail settings, it is first necessary to consider what management desires and expects from retail store managers. Although retail performance evaluations may consider the "people" talents of managers and their leadership abilities (see Davidson, Sweeney and Stampfl 1988), management tends to have an overriding concern with bottom-line performance measures (Lusch and Harvey 1983; McCammon and Hammer 1974). Indeed, much of the jargon in the retail area reflects this output-oriented concern. Terms such as sales-per-square-foot, sales-per-dollar of inventory invested, sales-per-employee-hour, and total daily sales are not atypical for performance reports (Lusch and Dunne 1990). Thus, output control—defined as the setting of performance standards, monitoring, and standard evaluation—is widespread in retail settings (see Table 1 for definitions). In this research we address the first phase of output control—the feedback and corrective step that completes the control cycle—and thus our reliance on the perceptions of output control seems appropriate.

An overall "output-orientation" is not surprising. To use Ouchi's (1979) management control system framework, we can expect management to use more results-oriented measures as it becomes easier to identify desirable output indicators (see Ouchi and Maguire 1975; Rockness and Shields 1984 for empirical support). In a retail sales context, such results or output indicators are easy to identify and used widely in practice. Key output indicators include dollar sales volume, units sold, and gross profit (Ingene and Lusch 1981). This is not to say that these are the only indicators or even the highest quality indicators. Rather they represent industry agreed upon indicators of output or results for the store manager. Relatedly, using commonly agreed upon output measures also facilitates the comparability of store managers across retail settings. Hence, promotions and raises can be tied directly to company-wide competition. Indeed, the corporate office often reminds store managers where they rate relative to other stores by disseminating company-wide reports (Lusch and Dunne, 1990). Nonetheless, perhaps the most important feature of output control is the feedback that is given to managers when performance is poor or inadequate.

Although this drive for results characterizes the retail store managers'

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evaluation system, it does not provide any indication of formal and/or informal resources that may be accessed by store managers to attain those goals. Here is where the retail store controls-in-use departs from conventional theory. Although Ouchi's (1979) contingency framework acknowledges the presence of multiple controls, it is restrictive since it focuses attention on "one-best" or "one-dominant" control for various organizational contexts. For example, he would expect "output controls" to be dominant when measurement of output is feasible, "behavioral controls" to be dominant when the means to achieve results is well known, and "clan controls" to be in use under conditions of low measurability/low process knowledge (see Hopwood 1974; Merchant 1985 for similar conceptualizations). No discussion is provided as to the likely levels of the other controls when one form dominates (e.g., are output controls ever used in conjunction with self or clan controls?).

The retail setting provides some clues as to controls-in-use for the store manager. We begin with the assumption that the *process* to achieve store objectives is not known with certainty. This assumption does not mean that retail organizations ignore standard operating procedures for store managers. Rather, procedures can be used to provide approximate guidelines concerning how to deal with various situations. While store managers do have general sets of procedures to follow (i.e., how to deal with customer complaints) this does not mean that the outcome (i.e., high customer satisfaction) will be known with certainty.

Perhaps the most obvious control device is the manager's own desire or motivation to achieve goals. Within the control literature, the manager's intrinsic motivation is intimately linked to the notion of self-control (Miner 1975). Self-control has been defined as the establishment of personal objectives, and monitoring of their attainment and adjustment if off-course (see Hopwood 1974; Lawler 1976). It is important to stress that self-control should not be equated with no control. Rather, though evidence is mixed, self-control can eliminate many of the problems associated with reliance only on formal controls (Lawler 1976). More recently, Kerr and Slocum (1981) concluded that although self-control has led to positive organizational outcomes, other (organizational) incentives normally must be present for the desired behaviors to be performed.

The idea of self-control can be traced principally to intrinsic motivation and, to a lesser extent, the organizational commitment literature. Intrinsic motivation has been defined as the degree to which an employee is motivated to perform because of subjective rewards or feelings he or she expects as a result of performing well (Lawler 1969). Viewed from this perspective, intrinsic motivation is the force or causal agent that drives

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self-control. In a similar vein, organizational commitment has been defined as a person's affective reaction to characteristics of his/her employing organization (Cook and Wall 1980). Principally, it concerns the feelings of attachment to the goals of the organization for its own sake rather than for instrumental reasons (Buchanan 1974). As such, high commitment would lead to both positive individual and organizational outcomes. Relatedly, given the ambiguity concerning the means to attain the targeted ends, we expect the social environment of the organization to play an important role in influencing the choices and ultimate performance of store managers. Social control has been defined as the work unit's (i.e., management team in a retail organization) establishment of standards/norms, monitoring conformity, and corrective action when deviations occur. Social control can be defined more broadly as the prevailing social perspectives and patterns of social interactions within subgroups in the firm (Jaworski 1988). The entire process of socialization occurs early on in the employment process (see Feldman 1976a, 1976b for a description of the process). From a control perspective, the key point is that the work group will "enforce" work standards through formal or informal means (Dalton 1971). Initially, the work group might resort to humor or kidding when deviations begin to emerge. Later in the process, group ostracism is likely (Hopwood 1974). Importantly, the organization-wide culture can also serve as an informal control mechanism (see Deshpande and Webster 1989; Wilkens and Ouchi 1983). However, this particular mechanism is not investigated in the current research.

In summary, the idea of "self-control" (see Dalton 1971; Hopwood 1974, others) and "social control" (see Jaworski 1988) acting as control mechanism has been noted in the management and accounting literatures (see implicit discussion in Anthony 1952; explicit discussion in Dalton 1971; Flamholtz, Das, and Tsui 1985; Hopwood 1974; Merchant 1985), although the marketing literature has been slow to adopt these ideas (see Jaworski 1988).

The picture that emerges in the retail setting is perhaps best described as a system that contains both formal and informal controls. In this high output/low process knowledge environment, output controls play a central, evaluative role. However, to make up for the lack of definitive "cause-effect" knowledge, self and social controls assume a prominent role in shaping the psychological and behavioral responses of store managers.

Interestingly, this particular set of controls is consistent with contingency reasoning. In highly competitive environments, typical of retail settings, one tends to see an increase in output forms of controls (see Khandwalla 1972, 1973). Also, if the precise process that leads to high

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retail sales is not completely specified, then one would see a greater reliance on informal controls such as self, social, and cultural controls (see Birnberg et al. 1983; Ouchi 1979; Thompson 1967 for conceptual support).

Empirical support for this set of controls can be marshalled from previous work. Although not stressed in their analysis, Jaworski and MacInnis's (1989) study of senior marketing managers indicates that output controls are used in conjunction with professional social and self controls. Similarly, Peterson's (1984) study of high school principals indicates that output controls and social controls (i.e., termed socialization) are used in combination. He concludes by noting that "unlike organizations in which only one or two key mechanisms of control dominate, in this system, multiple controls provide a broad-based and pervasive influence over the work of principals" (p. 594). It is interesting to note that both of these studies focused on top positions within organizations, which share an administrative similarity to store manager positions in retail settings.

RESEARCH HYPOTHESES

Figure 1 overviews the conceptual model examined in the present research. Briefly, we posit that the three controls-in-use (i.e., output, self, social) lower the amount of role stress and increase the level of perfor-

FIGURE 1

Conceptual Model
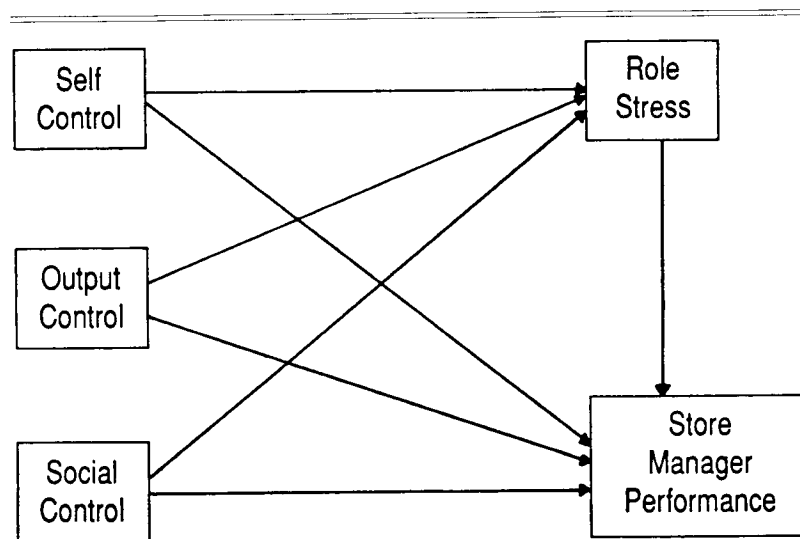
mance of the retail store manager. The model also indicates that we expect role stress to reduce the level of performance. We examine these ideas in greater detail below.

Prior to this discussion, it is important to note that the present investigation of job tension focuses on role stress, rather than the more commonly studied role conflict and role ambiguity measures (cf. Churchill, Ford, and Walker 1977). We define "role stress" (also termed job-related tension) as the extent to which workers are bothered by various features of work (Kahn, Wolfe, Quinn, and Snoek 1964). Similar to Kahn et al., the present investigation focuses primarily on stress *caused by* role ambiguity, conflict, and overload. As Newton and Keenan (1987) recently pointed out, this emphasis on role stress itself "has been largely ignored by role stress researchers" (p. 347).

Controls-in-Use and Role Stress

Very little research has examined the effects of control systems on the role stress of managers. As such, we briefly examine the available control literature and then supplement this work by examining related constructs and their effects on role stress.

In control literature, the empirical evidence linking controls and role tensions is mixed. Swieringa and Moncur (1972) indicated that the greater the reliance on a budgeting style that is "passive and lacking" (i.e., output control) the higher the role stress. This work implies that tight output control would reduce role stress. However, Otley's (1978) replication of an earlier study of Hopwood (1972) indicated that output controls and role stress were unrelated. He concluded by noting that "these results indicated that the effects found by Hopwood are conditional on the organizational context in which the evaluative style is used, with the prevalent norms and values exerting a significant effect" (p. 133). Building on Otley's suggestion, Hirst (1981) argued that when control measures adequately capture the tasks to be performed, job related stress should be reduced. Unfortunately, subsequent empirical tests by Hirst (Hirst 1983) do not adequately assess the contingency reasoning of earlier theorists.

At the same time, we must acknowledge that the overuse of output controls has the potential to increase role overload. Hence, there may be some counterbalancing effects depending upon the type of role stress (i.e., overload vs. ambiguity). However, the current evidence suggests that output controls should reduce role stress particularly when the measures of performance adequately capture the desired output. In retail settings, there are generally agreed upon indicators of output (i.e., performance targets)

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that are (1) easy to obtain and validate, (2) widely accepted, and (3) capture the desired levels of performance. Hence, we expect:

H1: The greater the reliance on output control in retail settings, the lower the role stress experienced by the store manager.

The management literature provides some insight into the relationship between role stress and various self and social controls (or related constructs). First, evidence suggests that internal work motivation (i.e., self-control) is related to less role stress (Ivancevich 1980). Relatedly, the more the individual feels they have the autonomy to perform job tasks, the less frustration is felt in their role (Parasuraman and Alutto 1981) and there is less role stress (Brief and Aldag 1976). In a similar way, it appears that unsatisfactory work group relations increase the level of role conflict (French and Caplan 1972) and the role ambiguity (see Fisher and Gitelson 1983 for a review). Although not a measure of social control, evidence also suggests that organizational commitment is negatively related to both role ambiguity and role conflict (Fisher and Gitelson 1983). Furthermore, a warm/supportive interpersonal climate and social support at the workplace were both linked directly to lower role stress (Newton and Keenan 1987). Finally, Kahn et al. (1964) hypothesize that the manager will experience increased role stress when his or her role partners are antiorganizational (see pp. 162–163). In combination, these studies suggest that self control mechanisms and the broader climate of the organization can play a role in decreasing role stress. Thus,

H2: The greater the reliance and self control in retail settings, the lower the level of role stress experienced by the store manager.

H3: The greater the reliance on social control in retail settings, the lower the level of role stress experienced by the store manager.

Like that on role stress, the literature linking control systems and the performance of managers is extremely sparse. In this study we define manager performance as the extent to which the manager is meeting pre-specified job objectives such as leadership, motivation of employees, and sales targets. Hopwood's (1972) investigation illustrated that a tight output control system was associated with lower managerial performance. Otley's (1978) replication did not support Hopwood's findings. In a sales context, Futrell et al. (1976) showed that an output control system with high clarity (i.e., formal, well-specified system) was directly linked with increased sales performance.

Given the retail setting, we are more inclined to rely on the Futrell et al. findings rather than the Hopwood findings. Hopwood's study focused on

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highly interdependent SBU's while the Futrell et al. investigation focused on sales reps who function independently. Compared to interdependent SBU's, the performance of the store manager in retail settings depends less upon the output or input of other members/units of the organization. One exception to this would be when two stores in a retail chain are close enough in geographic space so they compete with one another (Ingene and Lusch 1981). Several studies indicate that while output control is likely to be appropriate in independent situations (i.e., retail settings), it will be less appropriate in an interdependent situations (Baulmer 1971; Bruns and Waterhouse 1975; Otley 1978). Given the independence between stores in retail settings, output controls are expected to enhance the performance of retail store managers. Thus,

> H4: The greater the reliance on output controls in retail settings, the higher the performance of the store manager.

Relatedly, we also expect the self and cultural controls to enhance performance. Intrinsic motivation has consistently been linked with high performance (e.g., Oldham 1976). It has also been speculated that the social environment of the marketing organization should have a significant impact on the performance of managers (Cherian and Deshpande 1985; Deshpande and Parasuraman 1984; Parasuraman and Deshpande 1984). These findings suggest that:

> H5: The greater the reliance on self control in retail settings, the higher the performance of the store manager.
> H6: The greater the reliance on social control in retail settings, the higher the performance of the store manager.

Role Stress and Manager Performance

The majority of evidence suggests that role-related tensions decrease managerial performance (Brief and Aldag 1976; Otley 1978). It is important to reiterate that the present investigation focuses on role tensions, since the empirical evidence appears to suggest that there is no clear relationship between role conflict/ambiguity and superior ratings of performance (see Fisher and Gitelson 1983 meta-analysis). However, when the individual is *bothered* by increased conflict, ambiguity, and overload, there does appear to be a link to performance (see Brief and Aldag 1976; Otley 1978). Thus, we hypothesize:

> H7: The greater the role stress, the lower the performance of the store manager.

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METHOD

Sample and Setting

The data for the study were obtained from a comprehensive research project conducted for a regional, general merchandise retailer with over 200 stores in the U.S. The statistical analyses reported in this study are based on 182 stores and their managers for which there were complete data available for all variables. The retail units are located in major metropolitan and rural areas in nearly equal numbers. Stores in metropolitan areas generally operate in strip shopping centers, and others stores are stand-alone units in rural communities. Most stores have 7,000 to 10,000 square feet of selling area; new units are larger, ranging in size from 15,000 to 25,000 square feet of selling space. Each store offers a wide range of general merchandise items, catering to a relatively narrow trading area with a tight customer focus. Most stores are also fairly uniform in terms of their merchandise mix and store layouts, and are staffed by a store manager and one or more assistant managers. A district supervisor closely monitors the operations of 10 to 15 retail units and reports directly to senior management.

Research Instruments and Execution

A *Survey of Managerial Effectiveness* was designed to provide an assessment of the performance of store managers, and was completed by the district supervisor for each store manager. The survey form also included items on the demographic profile of each of the store managers, which were obtained from the personnel records of the company.

A *Quality of Work Life Survey* was mailed to and completed by each store manager. This survey was designed to capture a large number of personal and attitudinal characteristics of the store managers including the role stress variables and perceptions concerning the controls-in-use.

The Managerial Effectiveness and Quality of Work Life surveys were exhaustive in their coverage of the chain's retail units and store managers. For the QOWL survey, 208 of the 226 (92%) were returned to be included in the study. However, store managers who had less than one year of tenure with the retail unit were eliminated from further analyses. Other deletions due to missing values in the combined data limited the analysis to 182 stores and store managers.

Measurement

The scales employed in the study were designed by reviewing relevant empirical work and listening to the ideas of senior management. The

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composite reliability estimates for observed and latent variables are summarized in Table 2.

As noted, the control system measures were part of the QOWL Survey. Three of the items captured the extent of perceived self-control (e.g., I have a lot to say about how to do my job, How satisfied are you with the amount of control you have in your work, I feel free to offer suggestions concerning policies and procedures affecting the organization). Items 1 and 2 are direct, general measures of the degree of self-control, while item 3 assesses the degree to which the individual plays a role in shaping the degree of freedom on the job. Two items assess the degree of social control that operates within the work setting (e.g., Working for xyz is like being part of a family; The people here are proud to work for xyz). Consistent with past conceptual work, the social control items focused on the positive

TABLE 1

Definition of Controls

Formal control	Written, management-initiated mechanisms that influence the probability that employees or groups will behave in ways that support the stated objectives.
Process control	Process control is exercised when the firm attempts to influence the means to achieve desired ends. Also termed behavioral controls.
Output control	Output control is exercised when performance standards are set, monitored, and the results evaluated.
Informal control	Informal controls are the unwritten, typically worker-based mechanisms that influence individual or group behavior.
Self-control	The individual establishment of personal objectives, monitoring of their attainment, and adjustment if off course.
Social control	The work unit established certain standards/norms, monitors conformity, and takes action when social deviations occur. Also termed professional or clan control.
Cultural control	Cultural control is defined as the broader values and normative patterns that guide worker behavior within the entire organization.

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TABLE 2

Composite Reliability Estimates for Observed and Latent Variables

Construct [Indicator]	No. of Scale Items	Composite Reliability	GFI	AGFI	Avg. Residual [RMR]
Self Control (x_1–x_3)	3	.72	.996	.977	.037
Output Control (x_4–x_5)	2	.59	1.000	1.000	.000
Social Control (x_6–x_7)	2	.77	1.000	1.000	.000
Role Stress*	3	.80	1.000	1.000	.003
Overload** (y_1)	2	.82	1.000	1.000	.000
Ambiguity (y_2)	4	.67	.998	.989	.016
Conflict (y_3)	4	.67	.998	.992	.012
Managerial Performance*	3	.95	.994	.964	.031
JP-1 [Likert] (y_4)	22	.96	.775	.728	.057
JP-2 [Semantic] (y_5)	8	.94	.902	.823	.038
JP-3 [1 Item] (y_6)	1	n/a	n/a	n/a	n/a

   * Identification requires at least partial Tau-Equivalence.
  ** Identification requires strict Parallel Measurements.

aspects of the firm's social climate. The aim of these two measures was to capture the extent to which social interaction, feedback, and overall socialization occurs within the organization.

Output control was measured by two items (e.g., Management is quick to criticize poor performance; and No one ever says "You've done a good job."). It is important to stress that existing corporate documents, performance reviews, and interviews highlighted the importance of output control within this organization; similar quantitative standards exist across all retail outlets. In order to generate sufficient variance on this construct, we focused attention primarily on the final phase of output control—the feedback and corrective step that completes the control cycle. The composite reliabilities were: self-control = .72, output control = .59, social control = .77.

Role stress or "job-related tension" was operationalized by three indicators using a scale adapted from Kahn et al. (1964). The composite reliability of the role stress construct is .80. Total score of two items, reflective of the severity of demands imposed on the store manager by item constraints, was used to define the first indicator that assessed tension due to role overload. Total score of four items was used to define a second indicator of tension due to role ambiguity. The four items were reflective of pressures resulting from unclear role requirements and lack of adequate

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information on the job. Finally, a total score of four items was used to measure the final indicator—tension due to role conflict. These four items were reflective of the amount of tension felt by the store manager due to discrepant expectations at work, irrespective of time pressures. All ten items described above were five-point scales, anchored by "never bothered" and "bothered all the time."

Managerial performance of store managers was operationalized by three indicators. The composite reliability of the managerial performance construct was .95. The first measure of job performance was a total score from a scale of 22 items, which exploratory interviewing indicated were attributes of effective store performance. None of the items made any direct reference to store performance but simply asked for an evaluation of the store manager on such things as his ability (skills) to "make sound or rapid decisions," "solve day-to-day problems," "adjust to new situation," and his knowledge of "store operations," and "competitive conditions in the marketplace." Each of the items was rated on a five-point Likert scale that ranged from "strongly disagree" to "strongly agree." The second indicator of job performance was obtained as a total score from an eight item, seven-point ("very satisfied" to "very dissatisfied") semantic scale. The eight items were designed to reflect the supervisor's satisfaction with the manager's performance on attributes such as overall managerial skills, level of motivation, and relations with others in the company. The third and final indicator of job performance was a single item rating of "overall performance" of the store manager by his supervisor on a seven-point scale.

In summary, the five latent constructs in this study were collectively measured with 13 indicators. Each of the constructs was measured by multiple indicators ranging from two to three measures per construct. The correlation matrix for the observed variables, including their means and standard deviations are provided in Table 3.

RESULTS

The hypothesized links between the hybrid control system, role stress, and the performance constructs were tested using conventional maximum likelihood techniques (Joreskog and Sorbom 1983). The model, identified in Figure 2, is applied to a sample of 182 retail stores. This appears to be an adequate sample size for the model to be tested (cf. Anderson and Gerbing 1984). As displayed in Figure 2, the model specifies that self (ξ_1), output (ξ_2) and social (ξ_3), control are expected to predict both the extent of role stress (η_1) and the performance of the retail store manager (η_2).

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TABLE 3

Pairwise Correlation Matrix

Observed Variables	Self Control			Output Control		Social Control		Role Stress			Manager Performance		
	x_1	x_2	x_3	x_4	x_5	x_6	x_7	y_1	y_2	y_3	y_4	y_5	y_6
x_1	1.000												
x_2	.464	1.000											
x_3	.314	.553	1.000										
x_4	.279	.375	.281	1.000									
x_5	.288	.322	.184	.355	1.000								
x_6	.379	.479	.279	.309	.298	1.000							
x_7	.354	.357	.284	.187	.198	.591	1.000						
y_1	−.176	−.231	−.178	−.047	−.159	−.143	−.236	1.000					
y_2	−.330	−.452	−.268	−.282	−.402	−.357	−.363	.402	1.000				
y_3	−.330	−.381	−.233	−.192	−.292	−.322	−.368	.624	.618	1.000			
y_4	−.022	.161	.084	.085	.113	−.074	−.010	−.165	−.120	−1.04	1.000		
y_5	−.003	.155	.066	.051	.081	−.046	−.039	−.192	−.108	−.158	.855	1.000	
y_6	.000	.077	.021	.058	.079	−.060	−.033	−.199	−.096	−.150	.834	.885	1.000
Mean	4.39	4.47	3.63	2.34	3.13	3.32	1.12	5.31	9.64	9.74	85.69	42.68	5.30
Standard Deviation	1.54	1.18	1.03	1.18	1.28	3.48	.95	2.00	3.00	2.87	12.49	8.57	1.24

FIGURE 2

Retail Controls-in-use, Role Stress, and Manager Performance

Legend
ξ_1 = Self Control
ξ_2 = Output Control
ξ_3 = Social Control
η_1 = Role Stress
η_2 = Manager Performance
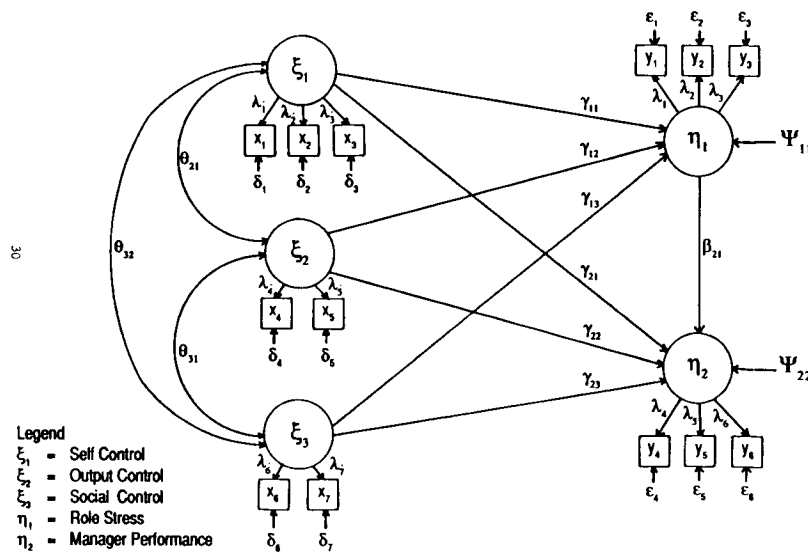
Moreover, role stress (η_1) is expected to decrease the level of managerial performance (η_2).

Table 4A summarizes the overall and incremental goodness-of-fit measures for three hierarchically nested models. These three models are:

(1) The strict null model, M_o, of complete independence;

TABLE 4A

Overall Goodness-of-Fit Measures for the Proposed and Alternative [Null] Models

Step-Up [Nested] Models	Model Designation	Chi-Square	df	Chi-Sq/ df	ΔChi	Δdf	P-Value For Δ
Strict Null Model	M_o	1,157.90	78	14.845			
Measurement Only	M_m	234.75	62	3.786	923.2	16	<.001
Proposed Model	M_p	76.24	55	1.386	158.5	7	<.001

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(2) A modified null model (measurement only), M_m, indicating a completely orthogonal factor structure;

(3) The substantive, proposed model, M_p, representing the correlation structure implied by the research hypotheses outlined in the previous section.

As shown in Table 4A, the correlation structure implied by the proposed model does not well reproduce the sample correlation structure. When the hierarchically nested models of Table 4A are reviewed, M_m is clearly a significant improvement over M_o, and M_p is a significant improvement over M_m. Furthermore, as shown in Table 4B the normed and nonnormed incremental-fit-indices also indicate that a reasonably good fit has been achieved, although further improvements could be possible if the model is relaxed further.

Within the overall model, the estimates of the structural coefficients provide the basic tests of the theory. Following the conceptual model, we address each of the four hypotheses in turn. Table 5 provides the maximum likelihood estimates of the LISREL model.

Hypotheses

H1 to H3 posited a relationship between controls-in-use and role stress. Using one-tail t-tests, the results indicate that both self-control (γ_{11} = $-.27$, p < .10) and social control (γ_{13} = $-.21$, p < .10) reduce the level of role stress. Thus, support is provided for H2 and H3. H1, linking output control and role stress, was not supported.

The effects linking controls and manager performance (H4 to H6) either did not support or provided contradictory support for the hypotheses. The findings indicate that both self-control and output control did not have an effect on performance. Interestingly, however, the results suggest that social control actually decreases store manager performance (γ_{23} = $-.34$, p < .01).

TABLE 4B

Incremental Fit Indices for the Proposed and Alternative Models

Model Comparison	Non Normed—IFI	Normed—IFI
M_o vs M_m	.799	.797
M_m vs M_p	.173	.137
M_o vs M_p	.972	.934

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TABLE 5

Structural Equation Estimates

Parameter	Estimate[a]	t-value[b]
γ_{11}	$-.27$	-1.60
γ_{12}	$-.18$	-1.00
γ_{13}	$-.21$	-1.61
γ_{21}	$.17$	$.97$
γ_{22}	$.10$	$.53$
γ_{23}	$-.34$	-2.41
β_{21}	$-.21$	-1.96
θ_{11}	1.00^c	—
θ_{22}	1.00^c	—
θ_{33}	1.00^c	—
θ_{21}	$.70$	7.45
θ_{31}	$.66$	9.51
θ_{32}	$.56$	5.52
ψ_{11}	$.67$	5.75
ψ_{22}	$.90$	8.04
λ_1'	$.57$	7.56
λ_2'	$.86$	12.11
λ_3'	$.61$	8.21
λ_4'	$.60$	6.57
λ_5'	$.59$	6.48
λ_6'	$.83$	10.93
λ_7'	$.71$	9.36
λ_1	$.66$	8.55
λ_2	$.70$	8.97
λ_3	$.90^c$	—
λ_4	$.90$	21.36
λ_5	$.95^c$	—
λ_6	$.93$	23.65
δ_1	$.68$	8.46
δ_2	$.27$	3.68
δ_3	$.63$	8.17
δ_4	$.64$	6.35
δ_5	$.65$	6.58
δ_6	$.30$	3.59
δ_7	$.50$	6.44
ϵ_1	$.56$	8.03
ϵ_2	$.52$	7.62
ϵ_3	$.18$	2.76
ϵ_4	$.20$	7.35
ϵ_5	$.09$	4.32
ϵ_6	$.14$	5.99

[a] Standardized estimates.
[b] $\chi^2 = 76.24$, (55 df), $p < .03$. GFI $= .938$, AGFI $= .898$, RMSR $= .053$.
[c] Constrained parameter.

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The final link, H7, that hypothesized a negative relationship between role stress and manager performance, was supported ($\beta_{21} = -.21$, p < .01). This last linkage is important to note since it also establishes an indirect path between the two informal controls and performance.

DISCUSSION

Overall, the results support the idea that control systems play a role in affecting the performance of retail store managers. However, in contrast to conventional wisdom, the control system does not appear to directly affect managerial performance. Rather, consistent with role stress theory, informal controls initially reduce the amount of stress experienced by the store manager, and this consequently increases managerial performance.

The one anomalous finding relating social control and decreased performance is difficult to reconcile. We offer two tentative interpretations for this result. First, it may be the case that the social climate directly undermines the aims of the organization; in other words, the social atmosphere contradicts management goals for the retail outlet. Second, rather than directly contradicting management, the informal atmosphere may create too much of a family climate, whereby the managers and their employees over-socialize.

Managerial Implications

The findings have several important managerial as well as research implications. Considering first the managerial implications, the findings suggest, for the first time, that control system variables can be linked to the ''objective'' performance of the organizational units managers are responsible for. Perhaps most importantly, it appears as though the effects of controls on performance are mediated through role stress. Thus, management can ill afford to focus only on the direct effects of controls on performance. Indeed, even if controls could be linked directly to performance in other settings, their ''positive'' effects may be offset by various psychological (i.e., stress, nervousness) and behavioral (i.e., dysfunctional behavior) responses. In short, management needs to pay attention to the mediated effects of controls on psychological and behavioral states, rather than only on performance indicators.

Second, if management is in the process of adapting or changing the current control system, they need to be sensitive to effects the new controls will have on job-related stress. It is clear that a properly designed control system can reduce the stress and tension experienced by the store manager. By implication then, any changes in the control structure may initially be

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reflected in role stress responses. Thus, these indicators may serve as useful "advance signals" of problems with the firm's new control structure.

Third, the findings clearly suggest that a focus on both formal and informal controls provides useful insights. Thus, it may not be sufficient to focus only on the effects of documented controls. Rather, attention should also shift to management's need to be sensitive to the variables and conditions that affect the intrinsic motivation of the store manager and the social controls that are operating within the retail store. Although some research has addressed the factors that affect self-controls, much less has been done to examine the variables that shape the social or cultural controls that are operating.

Research Implications

The retailing research implications that follow from these findings are quite interesting. First, the research suggests that control system variables may first affect the psychological and role responses of individuals prior to their effects on performance. Thus, future work on the effects of controls in retailing on performance may need to incorporate mediator variables. This is consistent with recent work in marketing that views role variables as important mediators of performance (see Churchill, Ford and Walker 1977, others).

Second, this research is one of the first to model both informal and formal controls that operate in a given organizational context. It would be interesting to explore other retail situations where other controls might be evident. For example, managers of retail information systems appear to face situations where their "output" is very difficult to assess. Moreover, while there are some guidelines for managing retail information systems, the process is far from certain. Hence, one might expect a completely different system of control to emerge. Future work needs to focus on the combination of controls that operate because the balancing of informal and formal controls can produce both positive and negative synergy (Hopwood 1974).

Third, the present research focused only on role stress as a mediator variable. However, it would be quite interesting to extend this work to other variables that have been shown to mediate the effects of organizational systems on managerial performance. For example, the well-known Churchill, Ford, and Walker (1977) framework included aptitude/skill as a mediator variable linking organizational systems and salesperson performance. This variable could also be examined in the present retailing context.

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Limitations

Similar to other studies, this work has limitations that must be acknowledged. First, the present research focused primarily on three types of controls. However, other controls may also be operating (see Jaworski 1988). Second, improvement in measurement of key constructs is needed. The role stress and three performance measures are solidly based upon previous work. However, given the lack of attention to measurement issues in retailing research and in control research, the present measures are best regarded as preliminary. Much more work needs to be devoted to obtaining sound measures for each of the control types identified in previous conceptual work (e.g., Dalton 1971; Hopwood 1974; Ouchi 1979). Importantly, future research should obtain both objective and subjective measures of output controls. Given the output results orientation found in most retail enterprises it is important to assess these output controls from both an objective and subjective frame of reference. Third, the present research focused only on role stress as a mediator variable. Other variables may prove to be equally valuable.

CONCLUSION

Clearly this research has shown that in a retail setting management controls can influence performance. Importantly, role stress (job tension) was shown to mediate the impact of management controls on performance. Consequently, management controls may be one of the more significant variables that influence job processes and job outcomes in retailing. This augurs for additional theorizing and research on control systems in retailing.

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