MANAGERIAL ACTIVITIES AND ORGANIZATIONAL PERFORMANCE: AN EMPIRICAL STUDY IN 26 HIGH TECH PLANTS

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ABSTRACT

Managerial activities like planning have been advocated as a help in managing the organization's environment. If effective, such activities are assumed to improve the performance of an organization. This paper reports the findings of research involving twenty-six plants of a large electronic high tech firm. The results suggest that different types of management activities have mixed but significant impact upon three measures of plant performance. Externally oriented activities, including planning appear to most significantly impact subjective evaluations of the supportiveness of a plant's internal operating climate. Several implications of these findings are explored.

Introduction

Considerable theoretical support exists in the strategic management and organization design literatures for a strong, positive relationship between specific types of managerial activities and organization performance.^{1,2,3} Theoretical arguments generally stress the importance of activities like planning in anticipating events within the organization's environment, which facilitates adaptive responses by management.⁴ When adaptive, an organization should perform better than organizations which do not engage in these activities as well or as much.⁵ Specifically, resources should be used more productively when some managerial activities are performed more than others. In addition, inappropriate or slow responses to environmental events can also mean lost sales or poorly timed investment decisions. The relative importance of different managerial activities should therefore be reflected in hard financial performance outcomes.

Several managerial activities other than planning are also thought to be important to organization performance. Critical relationships with external or-

ganizations such as customers, suppliers, and regulatory agencies are, for example, managed through boundary spanning activities.^{6,7} Organizations need specialized roles which help manage relations with these external actors. Purchasing and Customer Relations, for example, help buffer the internal operations of the organization by smoothing the impact of surprises that would otherwise be felt. Managerial activities designed to regulate supplier, customer, and other external actor relationships thus help create orderly, internal operating environments or business climates. The relative importance of different managerial activities in creating a supportive internal business climate is thus an important question. While an orderly internal business climate could be an important outcome in itself, it is still not clear whether a supportive internal climate would result in either higher productivity or better financial performance.

The relationship between different types of managerial activities and organization performance is important for

more than purely theoretical reasons. Individual managers are evaluated and rewarded on the basis of their organization's performance and the activities in which they engage.^{8,9,10}

Managers need to know which of their activities, including the amount of time devoted to each of those activities, will result in improved performance. Too frequently, performance appraisals do not clearly link specific managerial activities to performance. As a consequence, managers engage in those activities which they believe appraisers want to see. As another consequence, managers may waste their time and resources by not strategically focusing on the most important managerial activities.

Empirical research linking specific types of managerial activities to organization performance is surprisingly mixed. For example, tests of the relationship between planning and financial performance have yielded mixed results.^{11,12} The other organization performance measures, productivity and internal business climate, have not been extensively used in research regarding planning. This study extends past research linking planning with organization performance and puts this relationship in the context of the relationships between several other managerial activities and organization performance.

Methodology

For this study, twenty-six high technology plants, located in several midwest states, were selected from within a large corporation which develops, produces, and markets sophisticated electronics equipment. All plants produce and sell electronic equipment that competes against domestic and foreign producers. These twenty-six plants were chosen for the study since all function as distinct, autonomous profit centers. They were selected by corporate management because they exhibited a high degree of operational

independence from corporate headquarters, yet faced essentially similar technological and environmental conditions. While many uniform procedures exist between the plants and corporate headquarters, each plant develops and implements its own business plan. Corporate management plays an approval role in major capital budgeting and product decisions, but a purely consultative role in all other decisions. Indeed, this corporation is noted for its highly decentralized decision making and control of its operating units.

Measures of Managerial Activities

A stratified random sample of 380 managers was selected from various functional areas across each of the twenty-six plants. These managers were asked to complete the Management Position Description Questionnaire (MPDQ). The MPDQ consists of 234 items which describe managerial activities in different companies, functions, and management levels. MPDQ items are collapsed into nine factors which provide a complete, succinct, description of managerial activities. These nine factors and their definitions appear in Table 1. Statistical evaluations of these factors have been extensively and thoroughly reported elsewhere and are therefore not presented in this paper.^{9,10} A given activity score obtained for a plant indicates the average percentile standing for its managers on that activity, relative to all other managers across the remaining twenty-six plants. A score of 59, for example, indicates that 59% of the managers in a given plant score higher on that factor than managers in other plants. Management activity score differences were present between managerial levels and functions on a plant by plant basis, and the aggregation of scores to a plant level did not cancel plant differences, as research results indicate shortly.

As discussed above, Planning is a recognized activity for helping the

organization anticipate events, manage uncertainty, and provide information about the environment. As defined in Table 1, the planning activity is broadly defined because the plants develop both annual operating plans and three-year long-range plans.

The Monitoring Business Indicators activity is critical for helping managers assess the organization's performance in terms of general and business-specific economic trends. Like the planning activity, the monitoring activity helps managers anticipate events and position

TABLE 1

DEFINITIONS OF MANAGERIAL ACTIVITIES

EXTERNALLY-ORIENTED MANAGEMENT ACTIVITIES

PLANNING

Engaging in planning, strategy development and decision making for major divisions and functions. This includes determining the annual performance objectives of major divisions and functions, developing major plan revisions, revising the structure of one or more divisions, giving guidance in planning, determining international business potential, and consulting on corporate-wide problems.

MONITORING BUSINESS INDICATORS

Being concerned with monitoring key business indicators, such as total net income, five-year return on equity, total assets that have been acquired, net income as a percent of sales, optimum return on investments of the organization, debt-equity ratio, external market conditions, and general economic indicators.

CUSTOMER RELATIONS/MARKETING

Being involved in providing, promoting, and selling products or services to external customers, negotiating with customers, identifying and developing new markets for products or services, monitoring sales volume and market conditions affecting the users of products or services, anticipating new or changed demands for products or services.

EXTERNAL CONTACT

Interacting with individuals external to the organization other than customers. These activities involve first-level contact and negotiation with employees of suppliers, representatives of community organizations, and representatives of federal or state governments.

TABLE I (Continued)
DEFINITIONS OF MANAGERIAL ACTIVITIES

INTERNALLY-ORIENTED MANAGEMENT ACTIVITIES

PRODUCTS/SERVICES

Being involved in planning, scheduling, and monitoring the design, development, production, and delivery of products and services; tracking their progress, quality, and profitability.

CONTROLLING

Having responsibility for controlling the allocation of human, financial and material resources through activities such as assignment of supervisory responsibility, expense controls, performance goals, and budgets. Also included are employee relations responsibilities, establishing parameters to guide the planning of functional units, developing operational policies and procedures under which managers are expected to perform, and allocating and scheduling resources to assure that they will be available when needed.

SUPERVISING

Planning, organizing, and controlling the work of subordinates. The activities are such that they require face-to-face contact with subordinates on an almost daily basis. The concerns covered by this factor revolve around getting work done efficiently through the effective utilization of employees. Activities include analyzing subordinates' strengths/weaknesses and training needs, reviewing their work methods for possible increases in productivity, providing them complete instructions when giving assignments, and scheduling their work so it flows evenly and steadily.

COORDINATING

Coordinating the efforts of others over whom managers exercise no direct control. These activities include working in close association with individuals from other units, sharing information required by other units, coordinating interdependent activities of different groups, handling conflicts or disagreements when necessary and touching base with many different people before making major decisions.

CONSULTING

Applying technical expertise to special problems, issues, questions, or policies; having an understanding of advanced principles, theories, and concepts in more than one required field; and being asked to apply highly advanced techniques and methods to address issues and questions which very few other people in the organization can do.

the organization such that harmful events are moderated and opportunities seized.

The Customer Relations/Marketing and External Contacts activities are both boundary-spanning activities subjected to considerable past research.^{6,7} Both activities process and interpret information and buffer operations from external disruptions.

On the other hand, more internally focused managerial activities are those devoted to assuring smooth, effective, and efficient operations. For example, the Controlling activity efficiently allocates resources so that products and services meet quality standards.

Performance Measures

A time lag of sixteen months was allowed between collection of the MPDQ data and the evaluation of each plant's performance. Sixteen months was set for the first data collection point since researchers and plant management felt that the effects of the previous year's activities would be operationally visible to corporate management by then. This time period represented one year of actual operating results, with performance assessment completed shortly after one quarter's performance of the following year. There is no assumption that a sixteen months lag is necessarily the best time period for performance assessment in all organizations. This time lag was simply viewed by plant management in this corporation as the earliest point at which their performance could be accurately assessed, based upon the nature of their operations.

Importantly, unusual environmental and internal events like temporary plant closures were monitored during this time period. In the views of both corporate and plant management, no events were believed to be so significant in terms of their impact that performance

measures would be affected.

To develop the subjective performance measures, eight senior executives in corporate headquarters were asked to evaluate the performance of each plant. These executives were selected based on their rank in the company (all were vice presidents or higher), their intimate knowledge of the corporation, and the fact that all of the plant managers reported to them via an intermediate buffer of general manager levels in corporate headquarters. Their position in the organization hierarchy thus allowed them to provide in their opinion an "unbiased" evaluation of each plant's performance in terms of two specific measures:

Productivity. The quantity and quality of goods and services produced per employee. This measure indicates the overall accomplishment of each plant in terms of transforming inputs like raw materials into a final product. Productivity is reflected in such indices as number of units produced, number of rejects, meeting quality assurance specifications, unit costs, and actual versus expected production levels.

Internal Business Climate. The extent to which managers engage in activities which promote confidence in their competence and the perception of order and predictability in the internal operations of the plant. Business climate is reflected in such factors as perceived job security among employees and the extent to which change is anticipated and growth managed. The business climate measure is essentially a measure of management's ability to create a supportive internal plant climate for smooth, effective operations.

Both of these definitions were developed through extensive discussion sessions involving the eight executives. The productivity measure, while based upon objective indices such as a number of rejects, required a subjective evaluation by each executive after

reviewing productivity data summaries for each plant.

Each plant was evaluated by asking the executives to rank order the plants from "highest" to "lowest" in terms of the two above characteristics. The executives were not aware of the managerial activity profile results from the MPDQ data collected earlier. Each plant was thereby given two performance scores by the executives based on the average ranking assigned to it on the two subjective dimensions. A reliability analysis indicated that the rankings were highly consistent, with interrater reliability coefficients of .88 and .74 for the Productivity and Internal Business Climate measures respectively.

An objective financial measure, Net Operating Profits, was also available since the plants operated as independent profit centers. To control for plant size differences, which impact sales volumes in this corporation, a Per Capita Net Profit measure was calculated. Corporate and plant management confirmed that no exceptional financial transactions were reflected in the data for this measure.

Results and Discussion

The research results reveal a clear and consistent relationship between four similar types of management activities and one subjective performance measure. Two of these same four management activities also impact at least one of the other performance measures. As the discussion shortly points out, these results demonstrate the value of these activities in buffering and anticipating environmental demands upon an organization. Most importantly, planning is significantly associated with the two subjective performance measures, but not the objective financial performance measure.

Pearson correlation coefficients

were calculated across the twenty-six plants between scores on each of the nine managerial activity factors and three measures of performance. Table 2 summarizes the study's findings. The consistently significant correlations between Internal Business Climate and all four externally-oriented management activities is striking. No internally-focused managerial activity significantly correlates with this measure. These correlations support the idea that these activities may positively and visibly buffer internal operations from uncertainties and contingencies within a plant's larger environment.

On the other hand, only the Planning and Monitoring Business Indicators activities correlate with either of the other two performance measures. For example, those plants in which the most planning occurs are perceived to be the most productive. In setting annual performance objectives, Planning is understandably a significant productivity determinant since it encourages efficient resource allocations and achievement of production objectives. Similarly, the Monitoring Business Indicators activity has a logically obvious association with Net Revenue Per Capita; management attention to general economic trends would be expected to produce direct benefits in terms of plant profitability.

On the other hand, the lack of a significant correlation between Planning and Net Revenue Per Capita is unexpected. The time lag between the planning activity and the performance assessment may have simply not been sufficient to allow the full benefits of planning to be manifested in earnings. The study also did not distinguish between planning intensity and quality -- poor quality planning is never overcome by more planning activity. At least in this limited study, the most significant contribution of the Planning activity is its ability to produce perceptions of a productive plant with a supportive internal work climate. These contribu-

TABLE 2

CORRELATIONS BETWEEN MANAGERIAL ACTIVITIES AND PERFORMANCE MEASURES

(N = 26 PLANTS)

MANAGERIAL ACTIVITIES	PERFORMANCE MEASURES:		
	NET REVENUE PER CAPITA	OVERALL PRODUCTIVITY	INTERNAL BUSINESS CLIMATE
<u>Externally-Oriented Management Activities</u>			
Planning	.18	.38*	.52**
Monitoring Business Indicators	.37*	.26	.60**
Customer Relations/Marketing	.28	.13	.45*
External Contact	.19	.23	.56**
<u>Internally-Oriented Management Activities</u>			
Products and Services	.12	.22	.29
Controlling	.45*	.39*	.28
Supervising	.05	-.06	.10
Coordinating	.26	.40*	.19
Consulting	.21	.19	.31

* $P \leq .05$ ** $P \leq .01$

tions are obviously important for managers.

The possible explanation that only plants with positive business climates engage most in these activities is weak, but needs consideration. Plants with poor business climates, for example, would be expected by corporate management to engage in planning activities more, not less, to improve their performance. In addition, the absence of negative correlations between all three performance measures and the four externally-oriented activities is consistent. Results are unequivocal in the direction of the relationship.

The study does suffer from a limited access to other objective performance measures and its ability to control some variables which may have played intervening roles in the relationships that were found. For example, the impact of planning on financial performance can be moderated by the quality of decision making by management. No strong argument is made, as a consequence, about the role of plann-

ing upon financial performance. The lack of significant results does clearly suggest that additional research is necessary to understand what is occurring. Nonetheless, the study consistently and clearly demonstrates that planning and other externally-oriented management activities are significant activities in plants with positive internal operating environments.

One important implication of this study is the potential for managers to manipulate corporate management's perceptions of plant performance by selectively engaging in different managerial activities. Performance outcomes are apparently independent of each other in terms of the nine managerial activities, at least for the time period used in this research. Finally, performance measures used by corporate management need to be sensitive enough to capture the full range of impacts which different management activities can have. Reward systems clearly need to be tailored to emphasize preferred activities.

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