

**"REQUISITE VARIETY VERSUS SHARED
VALUES: MANAGING CORPORATE-
DIVISION RELATIONSHIPS IN THE
M-FORM ORGANIZATION"**

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IN THE M-FORM ORGANIZATION**

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ABSTRACT

This paper elaborates and provides empirical support for two alternate approaches to managing the nexus of corporate-division relations in the M-form organization. The specific context in which we examine this relation is the case of headquarters-subsidary relations in the multinational corporation (MNC). The first approach follows from Ashby's Law of Requisite Variety. We show that a "fit" between the contextual variety manifested by the different national subsidiaries of an MNC and the variety in the structure of its headquarters-subsidary relations leads to enhanced performance of the MNC as a whole. The second approach follows Parson's notion of shared values and we show that high overall levels of normative integration constitute an administrative mechanism that is an alternative to requisite variety.

INTRODUCTION

Since its emergence in the 1920's, the large, geographically dispersed, professionally managed multidivisional enterprise has come to be the most dominant and visible form of modern industrial organization (Chandler 1962, 1977, 1985). Commonly referred to as the M-form organization (Williamson, 1985), the basic features of the multidivisional enterprise are seen to be: (i) quasi-autonomous divisions or sub-units, organized on the basis of different products, technologies, market interfaces, distribution channels, geographic locations, or some combination thereof, that have complete operational responsibilities; and (ii) a corporate staff organization with hierarchical authority over these divisions that has no operational responsibilities, but concentrates on control and coordination across the divisions, and company strategy.

This idealized characterization of the administrative features of the M-form organization is limited in several respects. One set of shortcomings arises from the implicit assumption of homogeneity across the divisions. The divisions are all seen as quasi-autonomous and having complete operational responsibilities. In reality, divisions may vary enormously in terms of possessing the necessary resources or competencies to assume all operational responsibilities. For instance, Unilever's division in Japan is still in its infancy and its resources and competencies to make all operational decisions compare rather poorly with Unilever's more established divisions in countries such as Germany or France. In such cases, direct corporate involvement in operational decisions may be necessary. Moreover, even if all the divisions did have the resources and competencies to make all operational decisions, they may differ widely in terms of their environmental circumstances or importance to the corporation, and therefore warrant differential corporate involvement. To take the case of Unilever again, while its division in India may be broadly comparable to its divisions in Germany or France in terms of local capabilities, the corporate organization may need to be far more involved and concerned with the administration of the latter subsidiaries.

Another set of shortcomings of the idealized M-form arises from the strictly hierarchical characterization of the corporate-division relation. It is wrong to assume that the hierarchical authority of the corporate body is uncontested by

the divisions. Divisions often have independent and partisan interests, and may contest the corporate authority in order to pursue them. Moreover, divisions do not stand in a purely subordinate or dependent relation with the corporate organization. Indeed, the corporate organization may well require the input of the divisions to make key strategic decisions. For instance, NEC's division in America plays a lead role in shaping the company's strategy in the telecommunications area.

Once we take cognizance of these internal characteristics of the M-form organization, we must revise our conception of the nature of the corporate-division relation in the following ways. First, we must see the corporate-division relation as a contested interdependent relation. This view would recognize that the corporate-division relation represents a mixed-motive situation that involves both the mutual and independent interests of the corporate organization and the divisions (Schmidt and Kochan, 1977). Second, we must take seriously the differences in the contextual circumstances of the various divisions along such dimensions as their resource capabilities and strategic importance.

Given these characteristics, how can the nexus of corporate-division relations in the M-form corporation be managed? This is the central question that we address in this paper.

We do so by examining the case of HQ-subsidiary relations in the multinational corporation (MNC). As Chandler (1985) himself concluded, the MNC is the quintessential M-form organization. Its various national subsidiaries are quasi autonomous divisions that are embedded in very different contexts. These subsidiaries are managed and coordinated by a corporate headquarters that is most often located in the home country in which the company was first incorporated. As some recent in-depth analyses (e.g., Prahalad and Doz, 1987; Bartlett and Ghoshal, 1989) have shown, the case of the MNC throws into sharp relief many of the limitations of the traditional view of the corporate-division relationship in an M-form organization and, therefore, provides a very fertile context in which our central question may be studied.

REQUISITE VARIETY VERSUS SHARED VALUES

Our starting point is to develop a richer conception than the purely hierarchical view of how the corporate-division relation may be administered. Broadly, the corporate-division relation can be administered by some combination of hierarchical, bureaucratic, and normative mechanisms. There is well established support for these mechanisms in organization theory. Since the landmark studies of the Aston Group (Pugh et al., 1968, 1969), centralization and formalization have become central constructs in the analysis of structural arrangements in complex organizations. Centralization captures the role of formal authority or hierarchical mechanisms in organizational relations and formalization the role of bureaucratic mechanisms such as systems, rules and regulations. Van Maanen and Schein (1980) have argued that normative integration should be considered another primary element of the structure of organizational relations. Normative integration refers to processes of socialization by which organizational members develop shared values and it captures the role of moral or social suasion in organizational relations. Thus, centralization, formalization, and normative integration, analyzed singly and together, constitute a fairly comprehensive characterization of the mechanisms by which the corporate-division relation may be administered.

Requisite variety

One solution, then, to the problem of managing the nexus of headquarters-subsidary relations in the MNC follows directly from general systems theory and Ashby's (1956) Law of Requisite Variety. This law states that in an effective open system, environmental variety is matched by internal structural variety. Applying this law to complex organizations, Thompson (1967:70), advanced the following proposition: "Under norms of rationality, organizations facing heterogeneous task environments seek to identify homogeneous segments and establish structural units to deal with each."

The historical emergence of the M-form organization was consistent with Thompson's proposition since it surmounted one of the primary deficiencies of the large functional or U-form organization, the previously dominant type, which was its inability to respond to increasing internal diversity as it grew in size and into different products and markets (Chandler, 1977, Williamson, 1985). By creating quasi-autonomous divisions organized according to different task

environments, the M-form addressed some of the key limitations of the U-form organization. However, to fully abide by Thompson's proposition it is also necessary to structure each corporate-division relation to respond to the unique contingencies it presents. Some empirical support for this proposition has been provided by researchers who have shown that a fit between the contextual circumstances of the division and the structure by which the corporate-division relation is governed leads to enhanced divisional performance (see Govindrajana, 1988 for the case of the M-form in which divisions are organized on the basis of different product lines on businesses, and Ghoshal and Nohria, forthcoming, for the case of the MNC). An implicit assumption in this research has been that improved performance of the different divisions also leads to improved performance of the whole organization. To verify the logic of requisite variety, this aggregate assumption must be subjected to empirical investigation.

In sum, the logic of the requisite variety approach requires that the various subsidiaries of the MNC be differentiated in terms of the contingencies they pose for the headquarters-subsidiary relation and that based on these considerations, the appropriate combination of formal structural elements be employed to administer the relation. The specific ways in which subsidiaries may be differentiated and matched to different formal structural arrangements is discussed at greater length later in this paper.

While requisite variety is clearly one approach to managing the corporate-division relation, it is useful to ask if there is an alternative. This is a useful question because the administrative structures implied by the requisite variety approach are likely to be very complex. For instance, if a firm had sub-units that were in 15 different product markets or 15 different countries, the complexity of managing each one of their sub-units by an appropriately differentiated structure might be immense. Such differentiation creates administrative complexity that *ceteris paribus* is more difficult to manage than uniformity. It might also engender problems of perceived inequity among the divisions, and potential inflexibility because, as Perrow (1986) argues, it is difficult to change more complex systems.

Shared Values

An alternate approach to requisite variety is suggested by Parsons (1956) who sought the answer to the Hobbesian problem of social order in the notion of common values, which if properly internalized by individual actors as needs-dispositions, guarantee that the individual wants that she/he should want, and acts as she/he should act. Parson's solution to the general problem of social order has also been applied by Barnard (1939) to the problem of creating and managing complex organizations. In Barnard's view, socializing organizational members to have a common set of values and goals can minimize divergences in the interests of the corporate and division and create a very explicit recognition of the interdependent character of the relation. Conflict could therefore be suppressed or negotiated away in such situations. Similarly, while no overt or formal attempts are made to respond to the differences across the divisions, these differences are legitimated as part of the common norms, as are actions that respond to them. This mode of administration was also anticipated by Etzioni (1965) in his conception of a normative organization.

In the context of the M-form, evidence for the shared values approach to managing the corporate-division relation has been found by scholars such as Ouchi (1977) and Deal and Kennedy (1982). Drawing primarily on empirical research on Japanese M-form companies, they have shown that large, complex industrial organizations could well be managed by normative integration.

The primary administrative mechanism, then, that is employed to administer the corporate-division relation in the shared values approach is normative integration. This does not mean that there are no hierarchical or bureaucratic elements. It only means that these elements are not formally employed as part of a conscious logic based on distinguishing subsidiaries into different types. Instead, as described by Edstrom and Galbraith (1977), a strong emphasis is placed on mechanisms such as training and rotation of managers that promote the initial and ongoing socialization of all organizational members (from the corporate and the divisional organizations) to adopt a set of shared values. Action is mediated by developing a set of common norms and negotiation is facilitated by promoting trust and common purpose.

In order to better understand how these two approaches are alternatives for managing the nexus of corporate-division relations in the M-form

organization, it is useful to compare how each deals with the issues of contested interdependence and heterogeneity. The requisite variety approach is a strictly contingent approach that relies on a strong link between formal structure and action. Formal structure is seen to tightly constrain action. Thus, adopting the appropriate formal structure (the right combination of centralization, formalization, and normative integration) for the different circumstances of the divisions responds to both the interdependent elements in and the difference across the corporate-division relations. By adopting a contingent approach, the issue of diversity or differentiation is dealt with and by deploying mechanisms other than hierarchy when appropriate, the issue of interdependency is also attended.

There is a much weaker link between formal structure and action in the shared values approach. Instead it relies more on the link between cognitive orientation and action. As Barnard (1968: 141) observed: "An organization can secure the efforts necessary to its existence.. by changing states of mind." This approach, then, relies on creating common and shared definitions of goals and procedures to influence both how divisions perceive their interests and how they act. This issue of interdependence is therefore quite simply addressed by defining the interests of the division and the corporate organization as being common and thus interdependent. The issue of diversity is addressed by creating norms that legitimate actions that respond to these differences in the interest of the overall organization.

Put differently, in the case of requisite variety, the link between means and ends is formally specified and constrained, whereas in the case of shared values the link between means and ends is not. Ends, though, are commonly agreed upon, as are norms that shape the means that may be adopted to achieve them.

The distinction between two approaches is also in some ways similar to Ouchi's distinction between behavioral and output control. In requisite variety as with behavioral control, action is directly constrained by formal structure. In contrast, with normative integration as with output control, action is not directly but indirectly constrained by linking it to common values or common objectives.

In the subsequent sections of this paper we operationalize these two approaches for organizing the nexus of headquarters-subsidary relations in MNCs and subject them to large sample empirical investigation.

THE REQUISITE VARIETY APPROACH

The basic foundation of the Requisite Variety approach lies in the definition and operationalization of context-structure fit at the subsidiary level. In Ghoshal and Nohria (forthcoming), we presented a scheme for defining such a concept of fit by categorizing different subsidiary contexts and specifying the appropriate structures of corporate headquarters-subsidary relations for each of those contexts. This scheme is shown in figure 1 and the underlying theoretical arguments are briefly reiterated below.

(Insert figure 1 about here)

We start this exposition by motivating our categorization of subsidiary contexts. As suggested by authors such as Thompson (1967) and Lawrence and Lorsch (1967), the structure of organizations are and should be differentiated to match the characteristics of the external environment they face. In this view, organizational structures must fit critical environmental contingencies such as the degree of uncertainty arising from competition, technological changes, etc.

A different motivation for structural differentiation has been proposed by authors such as Pfeffer (1981) and Pfeffer and Salancik (1978) who have shown that organizational structures depend on internal power relationships, which, in turn, are contingent upon the internal distribution of organizational resources. In this view, resource dependency is the key determinant of the structure of internal relations in multi-unit organizations.

In line with Lawrence and Dyer's (1983) synthesis of these two perspectives, the different subsidiary contexts of an MNC can be categorized into four primary types, viz., (i) C1: low environmental complexity and low local resource levels, (ii) C2: low environmental complexity and high local resource levels, (iii) C3: high environmental complexity and low local resource levels, and (iv) C4: high environmental complexity and high local resource levels. This is the typology that we use to differentiate subsidiary contexts in this study.

Following our earlier discussion, we believe that a fairly comprehensive characterization of the formal structure of headquarters-subsidary relation is obtained by analyzing, singly and together, the degree of centralization, formalization and normative integration.

Using the above characterization of subsidiary contexts and structure of headquarters-subsidary relations, we now develop the arguments for the context-structure fit at the subsidiary level.

Context-Structure Fit at the Subsidiary level

Centralization is a governance mechanism in which the decision-making process is hierarchically organized with the headquarters often making the key strategic and policy decisions. Since centralization shifts the locus of decision-making in favor of the headquarters, it can lead to severe dissonance if the subsidiary is a powerful actor in the headquarters-subsidary relation. The demonstrated association between resource ownership and power in exchange relations (Emerson, 1962; Cook, 1977) therefore suggests that, in an effective governance structure, centralization will be negatively correlated with the level of local resources possessed by the subsidiary. Moreover, as argued by Thompson (1967), centralization is ill-suited for the high interdependencies posed by environments of increasing complexity since it causes decisions to primarily reflect the competencies and perspectives of the headquarters. Therefore, centralization will also be negatively correlated with environmental complexity.

Formalization may be interpreted as the routinization of decision-making and resource allocation (Nelson and Winter, 1982). Such routinization can be an efficient governance mechanism in a stable environment, but it becomes less effective under conditions of diversity and change (Duncan, 1972). Therefore, formalization is expected to be negatively associated with environmental complexity. Moreover, since formalization helps mitigate potential conflict in exchange relations by constraining interaction to a set of impersonal rules, it will also be positively associated with the extent of local resources of the subsidiary.

Normative integration leads to domain consensus and shared values (van Maanen and Schein, 1979). Such shared goals and values facilitate cooperation and participative decision-making. Therefore, normative integration is a particularly effective governance mechanism under conditions of high uncertainty and complexity (Ouchi, 1980). It is also an appropriate mechanism for coordination when the headquarters-subsidary relations are characterized by resource interdependence rather than subsidiary dependence; i.e., when the local resources of the subsidiary are high. Therefore, normative integration can be expected to bear positive associations with both environmental complexity and the level of local resources possessed by the subsidiary.

Collectively, these arguments lead to the fit governance structures proposed in figure 1 for each of the four contextual conditions of the subsidiary.

Requisite Variety and Corporate Performance

Having defined the subsidiary context as a composite of environmental complexity and local resources, we can define the contextual variety for the company as an additive function of the variances in these two attributes for all the different subsidiaries of the company. Similarly, structural variety of the company can be defined as an additive function of the variances in the levels of centralization, formalization, and normative integration in the headquarter's relationships with the different subsidiaries. Requisite variety or the context-structure fit for the company as a whole can be defined simply as the ratio of the number of subsidiaries whose structures fit their contexts to those whose structures do not fit their contexts.

At the corporate level, we expect both contextual variety and structural variety to have negative main effects on performance (see figure 2). The underlying logic is that, compared to homogeneity, variety is expensive since it imposes higher information-processing and coordination costs which, *ceteris paribus*, impede efficiency. However, given contextual variety, requisite variety in structure can be expected to have a positive impact on performance (Ashby, 1956). While intuition alone might be adequate to justify these hypotheses, they also find support in much of the related literature in the fields of both business policy and organization theory (for a detailed review, see Golden, 1988).

(Insert figure 2 about here)

Operationalization of the theoretical model

Following recent empirical studies (e.g., Miller and Friesen, 1983), the environmental complexity faced by a national subsidiary of an MNC can be operationalized as a composite of technological dynamism and competitive intensity in its local market. The contextual variety for the MNC as a whole can then be indicated by the coefficients of variation in competitive intensity (VARCOMP), technological dynamism (VARTECH), and local resources (VARRES) for all the subsidiaries of the company. Structural variety of a company can be similarly indicated by the coefficients of variation in centralization (VARCENT), formalization (VARFORM) and normative integration (VARINT) in the relationships between the company's headquarters and its different national subsidiaries. Fit at the subsidiary level can be measured by classifying each subsidiary according to its context and also according to its structure. When the two classifications are in accord with the scheme for context-structure fit shown in figure 1, the subsidiary can be considered to represent a case of fit. If not, it can be classified as a misfit. Requisite variety (RV) at the level of the whole company can then be measured as the ratio of fit and misfit subsidiaries of the company. Corporate performance can be measured in many different ways corresponding to different goals of a company. Of these, average annual return on net assets (RONA) is a particularly appropriate measure since it appears to be a performance indicator that companies pay considerable attention to (Venkatraman, 1988). With such operationalization, the conceptual model shown in figure 2 can be specified as the following regression model:

$$\text{RONA} = a_0 + (a_1 (\text{VARCOMP}) + a_2 (\text{VARTECH}) + a_3 (\text{VARRES})) + (a_4 (\text{VARCENT}) + a_5 (\text{VARFORM}) + a_6 (\text{VARINT})) + a_7 (\text{RV}) + e. \quad (1)$$

As discussed earlier in the paper and as shown in figure 1, based on the requisite variety approach, we hypothesize a_7 to be positive and all the other coefficients (a_1 to a_6) to be negative.

THE SHARED VALUES APPROACH

The extension of this model to the shared values approach is quite straight forward. As in the case of the requisite variety approach, both contextual and structural variety can still be expected to have negative main effects and the coefficients a_1 to a_6 can, therefore, be predicted to be negative. However, for those MNCs that have a high degree of shared values across all the subsidiaries, performance can be expected to be unrelated to whether or not the structure of each subsidiary matches its specific context. Therefore, for companies that have a high average level of shared values, requisite variety will be unrelated to performance and a_7 can be expected to be insignificant.

More specifically, our theoretical arguments will receive strongest support if (a) in a direct comparison of one sub-sample consisting of companies with low average level of shared values across all subsidiaries with another comparable sub-sample consisting of companies with high average level of shared values, (b) subject to the condition that average performance of companies in the two sub-samples are not significantly different, (c) if a_7 is positive in the first sub-sample and insignificant in the second.

MEASUREMENT PROCEDURE AND SAMPLE

Empirical investigation of these propositions required, for each of a reasonably large number of MNCs, measures of environmental complexity, local resource, and different structural attributes of the headquarters-subsidiary relations for its different national subsidiaries in addition to an indicator of overall corporate performance. This enormous volume of information required from each MNC posed a key measurement dilemma given our competing interest in sampling a reasonable number of MNCs for the purposes of robust statistical analyses. A review of the options available to us suggested that the only feasible way to collect data was via a mail questionnaire survey that would require a single knowledgeable respondent at the headquarters of each MNC to furnish, for each of a number of national subsidiaries of the MNC, single measures for each of the constructs we wished to measure. Such a procedure, however, involved a number of possible shortcomings, such as (i) dependence on a single respondent, (ii) dependence on single indicators for complex

constructs, and (iii) the questionable reliability of subsidiary level information being provided by a corporate level respondent. To adopt this procedure, it was necessary to assess the implications of each of these shortcomings on the reliability and validity of the data. This was done through the following process.

Two different instruments were developed. One was designed for response by headquarters managers and all constructs were operationalized by single variables measured on centrally anchored five point scales (the final version of this instrument that was used for this study is described in Appendix I-A). The other questionnaire was designed for response by subsidiary managers and sought subsidiary responses for the same constructs used in the instrument described earlier. In this instrument, though, the structural constructs were operationalized through multiple indicators (summarized in Appendix I-B).

In the first instance, both questionnaires were implemented in three large MNCs. In each of these MNCs, two senior headquarters managers responded to the first questionnaire providing single indicators for the various constructs for at least five different national subsidiaries of the company. At the same time, between 6 and 8 managers from each of those subsidiaries responded to the second questionnaire and provided multiple indicators for each of the constructs as applicable to their own subsidiary. Analysis of the data so obtained revealed the following:

1. In each MNC, inter-rater convergence was high for the two headquarters-level respondents. For each variable measured, the ranks of the different subsidiaries were assessed similarly by both respondents as is manifest from the rank correlations shown in Table 1.
2. In each MNC, inter-rater convergence was also consistently high among headquarters and subsidiary level respondents. The rank correlation between the ranks for the different structural elements for the subsidiaries obtained by aggregating the responses of the subsidiary managers and the corresponding ranks obtained by aggregating the responses of the two headquarters managers are reported in Table 1.

(Insert table 1 about here)

Based on these findings of high inter-rater convergence among headquarters level respondents as well as the congruence of data obtained through multiple indicators and multiple respondents at the subsidiary level and single indicators and single respondents at the headquarters level, the final survey was carried out using the instrument described in Appendix I-A.

While our system for operationalization and measurement of the different variables are fully described in the appendix, some potential weaknesses of these measures need to be highlighted. All our measures (except the measure of overall company performance) represent the perceptions of a senior manager and can, therefore, suffer from all the well-known deficiencies of perceptual measures (see Downey and Ireland, 1979, for a review).

However, we believe the use of perceptual responses from key informants to be appropriate for this study for several reasons. First, given the diversity of environments faced by the sampled organizations, reliable and comparable objective measures were particularly difficult to find. This problem was compounded by the consideration that the same national environment could pose very different contingencies for different MNCs, based on factors such as the industry, and even within the same industry, the specific strategic orientation of the firm. Second, subscribing to an important theoretical tradition (Starbuck, 1976; Weick, 1980), we believe that the cognitive orientations of senior managers play a key role in shaping the structure of the headquarters-subsidiary relations in these corporations.

Based on these practical and theoretical considerations, data for testing these hypotheses were obtained through a questionnaire that was mailed to the Chairman or CEO of all the 438 North American and European MNCs listed in Stopford's (1983) World Directory of Multinational Enterprises. The questionnaire (described in Appendix I) required each respondent to provide, on scales of 1 (low) to 5 (high), comparative estimates of competitive intensity, technological dynamism, local resources, centralization, formalization and normative integration for the company's subsidiaries in 19 pre-specified countries. These countries were selected to represent a wide variety of contexts such as large and small size, high and low regulation, different regions of the

world and different levels of per-capita GNP. To maintain comparability, respondents were requested to provide information only on the company's wholly-owned subsidiaries in these countries.

We did not receive any response from 281 (64%) companies, while another 50 wrote to us declining participation on different grounds. 31 questionnaires were returned due to wrong mailing address and completed questionnaires were received from the remaining 76 (17%) companies. Of these, 44 (10%) companies reported data on 8 or more subsidiaries and only these responses were used for the statistical analysis reported in this paper. While this overall response rate is low, and we cannot formally test for response bias, we did note that the sample was not skewed relative to the population in terms of revenues, industry, or corporate performance. 24 of these 44 companies were headquartered in North America and the remaining 20 in Europe; 33 companies had annual sales between \$1 and 10 billion while the other 11 companies had annual sales above \$10 billion. 20 of these companies had between 8 and 12 subsidiaries and 24 had more than 12 subsidiaries in the 19 countries that were specified in the questionnaire.

The annual financial statement of these companies for the years 1981-1985 (since the data were collected in early 1986) were consulted to compute the five-year average of their annual return on net assets (RONA).

ANALYSIS AND FINDINGS

In the first step of the analysis, measures of VARCOMP, VARTECH, VARRES, VARCENT, VARFORM and VARINT were computed for each of the 44 companies as the coefficients of variation of the related measures for all its subsidiaries in our sample. In the next stage, each subsidiary of the company was tested for context-structure fit through the operationalization procedure described earlier in the paper (the statistical methodology adopted has been described fully in Ghoshal and Nohria, forthcoming). For each company, a measure of RV was then calculated as the ratio of the numbers of fit and misfit subsidiaries.

Table 2 shows the means, standard deviations and inter-correlations among these variables and also their correlations with the companies' average annual return on net assets during the 1981-1985 period (RONA).

(Insert Table 2 about here)

Finally, the regression parameters in equation (1) were estimated using this data. The estimates of each parameter and the values and significance of the corresponding t-statistics are shown in the first part of table 3 (full sample).

(Insert Table 3 about here)

As argued by Venkatraman (1988), for both conceptual and empirical reasons, in the analysis of context-structure "fit", the overall explanation of variance (R^2) is unimportant; what matters is the estimate of the effect of fit (in this case the significance of the coefficient a_7) which is positive and significant. As predicted, the coefficients of all the indicators of contextual and structural variety are negative in sign, but they are not statistically significant. Thus, while there is no evidence of negative main effects of contextual or structural variety, the data supports the contention of a positive association between requisite variety and corporate performance.

The full sample was then split by calculating the average level of normative integration for all the subsidiaries of each company and categorizing those companies whose average scores fell above the median for all companies as "high shared values" and the others as "low shared values". The scores of five companies were equal to or very close to the median, and these were dropped from the analysis. 19 companies then remained in the "high" sample, and 20 in the "low" sample.

The regression parameters for equation 1 were then estimated for the two split samples. For companies with high normative integration, none of the variables, including RV has any significant effect on performance. In contrast, for companies with low average level of normative integration, RV has a significant positive effect that is clearly more pronounced than for the sample as a whole. Further, variance in competitive intensity as well as variances in formalization and normative integration within the company has significant negative effects on performance. In other words, not only does our hypothesis of a positive association between requisite variety and performance find a stronger support in this sub-sample, the overall model also proves to be a far better fit.

Several other results are worth noting that help establish these two approaches as alternatives for managing the nexus of headquarters-subsidary relations in the MNC. First, the correlation between the measures of requisite variety and aggregate levels of shared values is insignificant. This establishes that the two approaches are distinct and that the results of the regression for the split sample for companies with high levels of normative integration are not being driven by the correlation between these two variables. Second, the average performance of the companies in the high shared value sub-sample are no different from those in the high RV sub-sample (created by splitting the sample into those with values for RV above the median value). This establishes that these approaches are truly alternatives and neither one of them dominates the other.

SUMMARY AND CONCLUSION

The results of our study provide empirical support for Ashby's idea of requisite variety and Parson's idea of shared values as being alternate approaches for the administration of complex, multi-unit organizations, such as MNCs.

Based on their contextual observations in a few large companies, Evans and Lorange (forthcoming) have suggested that MNCs follow one of two broad approaches to cope with contextual and cultural diversity. The first, which they call the "global enterprise approach" and of which they cite IBM as the exemplar, depends on creating organizational uniformity amid the environmental diversity primarily on the strength of a strong and homogeneous corporate culture. This, in essence, is what we have described as the shared values approach. Evans and Lorange's second alternative corresponds to the requisite variety approach: as described by the authors, companies like Nestle, American Express or Britain's GEC cope with diversity by allowing each subsidiary to adapt to its own circumstances. As argued by these authors, neither of the approaches is intrinsically better than the other. What matters for superior performance is internal consistency: firms must be consistent in whichever approach they adopt.

Our findings provide some empirical support to this hypothesis of equifinality. It would be wrong to conclude or prescribe based on our results that an administrative structure based on high levels of shared values is more or less efficient than one based on requisite structural variety. All that this

study allows us to conclude is that under conditions of high shared values, maintaining requisite variety is not essential for effective performance. In order to compare these administrative approaches as alternatives, several additional issues must be addressed. We need to consider more carefully the relative benefits and costs of each approach. Structuring for requisite variety, though clearly one approach to enhanced performance, can lead to a very complex and difficult to manage organizational structure. As we suggested earlier, homogeneity is certainly easier to manage than diversity. This may also be an approach that leads to an inflexible structure that may be difficult to adapt dynamically. Managing by normative integration, on the other hand, though structurally simpler, involves a significant investment of administrative resources for both initial socialization and continued cultural fidelity. In certain contexts, this approach could well entail inefficiencies resulting from redundant communication channels and undue effort spent in negotiating consensus.

In addition to the above considerations, there may also be overall company level contingencies (in this paper we primarily looked at subsidiary level contingencies) that affect the assessment of these alternatives. The overall size of the MNC (in terms of revenues and/or number of subsidiaries), or its degree and nature (related or unrelated) of diversification in different product markets might well affect which approach is more efficient. For instance, one could argue that the shared values approach becomes less effective with increases in the number of subsidiaries and with the extent to which the company is diversified into unrelated product markets or located in very different cultural contexts. Additional theoretical and empirical research is needed to explore such questions with greater rigor.

We also admit that our empirical approach compromised rigorous measurement in the interests of the practical concerns of getting the volume of data required for this study. However, now that we have initial support for these propositions, it is important to subject them to more careful scrutiny and revision by putting together a more comprehensive data set.

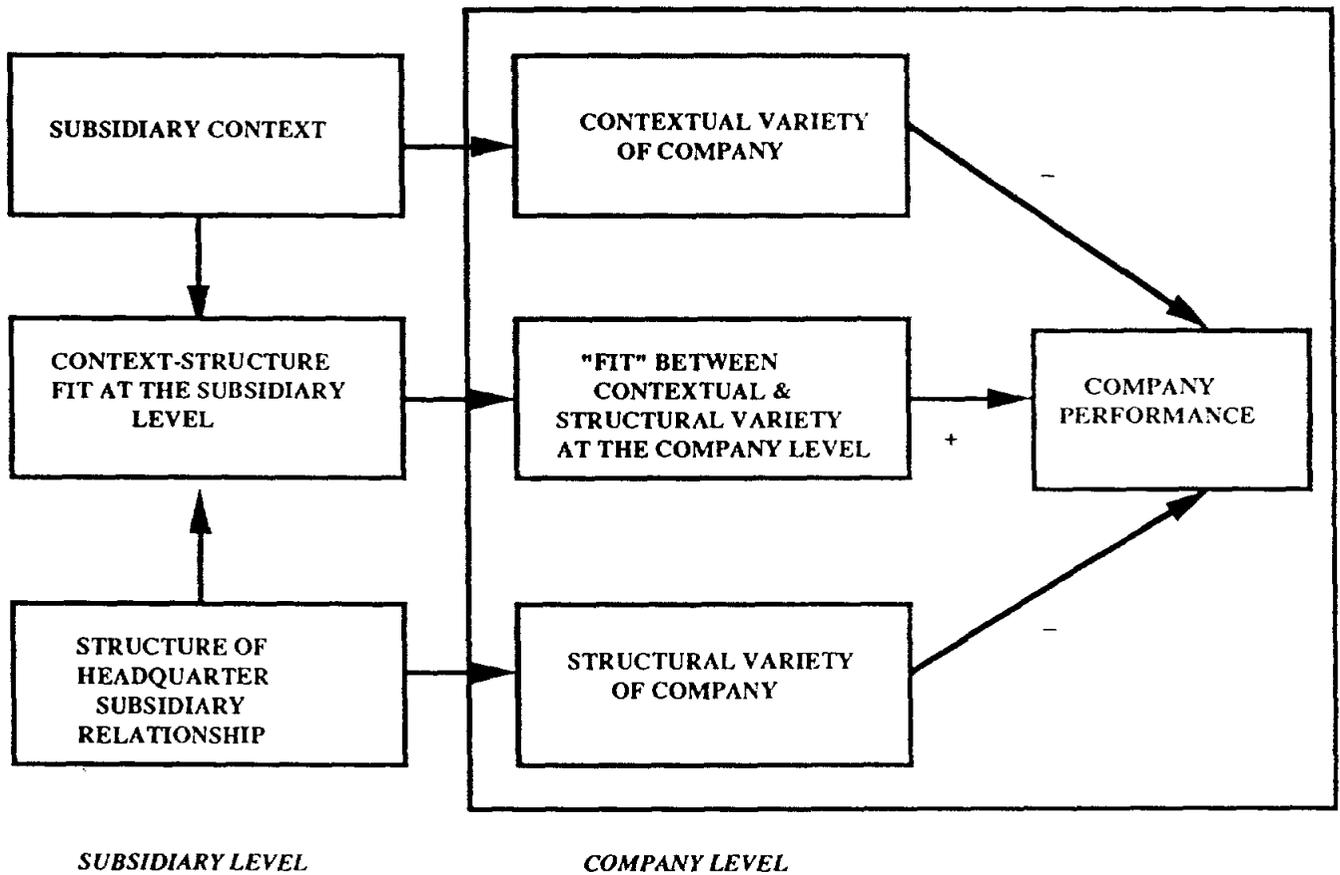
Finally, one assumption underlying the idealized M-form which is clearly flawed is that there is little or no direct interactions among the divisions. We have also been guilty of bracketing this feature of the M-form organization in our analysis in this paper. A more complete theory of the M-form organization

would have to include these considerations as well and might well require a network approach that would account for all these linkages.

**FIGURE 1: CONTEXT-STRUCTURE FIT
AT THE SUBSIDIARY LEVEL**

<i>Environmental Complexity</i>	<i>High</i>	C3	Centralization: High Formalization: Low Normative Int: High	C4	Centralization: Low Formalization: Low Normative Int: High
	<i>Low</i>	C1	Centralization: High Formalization: High Normative Int: Low	C2	Centralization: Low Formalization: High Normative Int: High
		<i>Low</i>	<i>Local Resources</i>	<i>High</i>	

FIGURE 2: THE CONCEPTUAL MODEL FOR REQUISITE VARIETY



**TABLE 1: SPEARMAN'S RANK CORRELATION
FOR ASSESSING INTER-RATER
CONVERGENCE ON SELECTED VARIABLES**

<u>MNC to which raters belong:</u>	<u>HO-HQ Raters</u>			<u>HO-Sub. Raters</u> ²		
	<u>A</u>	<u>B</u>	<u>C</u>	<u>A</u>	<u>B</u>	<u>C</u>
<u>Contextual Variables</u>						
1. Environmental Complexity ¹						
a. Technological Dynamism	.63	.79	.76			
b. Competition	.88	.63	.71			
2. Local Resources	.79	.84	.76			
<u>Structural Variables</u>						
3. Centralization	.71	.69	.86	.95	.70	.75
4. Formalization	.92	.88	.83	.65	.50	.70
5. Normative Integration	.62	.59	.43	.60	.75	.70

Notes:

1. No correlations are available for environmental complexity directly since this is merely an additive scale of Technological Dynamism and Competition.
2. Only structural variables were assessed for convergence of headquarters and subsidiary rater assessments.

TABLE 2: MEANS, STANDARD DEVIATIONS, AND INTERRELATIONS

	MEAN	STANDARD DEVIATION	INTERCORRELATIONS							
			VARCOMP	VARTECH	VARRES	VARCENT	VARFORM	VARINT	RV	
VARCOMP	0.2567	0.0879								
VARTECH	0.3288	0.1157	0.1724 (P=0.118)							
VARRES	0.3847	0.1051	0.0940 (P=0.260)	0.3894 (P=0.003)						
VARCENT	0.2933	0.1273	0.1774 (P=0.116)	0.0265 (P=0.430)	0.0932 (P=0.267)					
VARFORM	0.2374	0.1405	0.2898 (P=0.024)	0.1684 (P=0.129)	0.1654 (P=0.133)	0.4887 (P=0.000)				
VARINT	0.2824	0.1396	0.2209 (P=0.066)	0.1292 (P=0.191)	0.2232 (P=0.064)	0.1615 (P=0.142)	0.3500 (P=0.009)			
RV	0.7371	0.2756	-0.0442 (P=0.382)	0.0325 (P=0.412)	-0.0846 (P=0.282)	-0.2203 (P=0.068)	-0.2507 (P=0.045)	0.0827 (P=0.288)		
RONA	0.0422	0.0327	-0.0367 (P=0.401)	-0.1074 (P=0.231)	-0.1070 (P=0.232)	0.0457 (P=0.380)	-0.0327 (P=0.414)	-0.0036 (P=0.490)	0.2227 (P=0.062)	

TABLE 3: REGRESSION RESULTS

VARIABLE	PARA-METER	FULL SAMPLE			SPLIT SAMPLE					
					HIGH NORMATIVE INTEGRATION			LOW NORMATIVE INTEGRATION		
		BETA	T	SIG T	BETA	T	SIG T	BETA	T	SIG T
CONSTANT	a ₀		1.975	0.056		1.572	0.129		4.311	0.002
VARCOMP	a ₁	-0.226	-1.287	0.206	-0.218	-1.027	0.315	-0.515	-3.046	0.005
VARTECH	a ₂	-0.146	-0.846	0.403	-0.137	-0.651	0.521	-0.390	-1.730	0.095
VARRES	a ₃	-0.107	-0.609	0.546	-0.098	-0.469	0.643	-0.245	-0.838	0.409
VARCENT	a ₄	-0.001	-0.008	0.994	-0.063	-0.245	0.808	0.086	0.413	0.683
VARFORM	a ₅	-0.195	-0.977	0.335	-0.101	-0.369	0.715	-0.419	-1.899	0.068
VARINT	a ₆	-0.028	-0.163	0.871	-0.096	-0.462	0.652	-0.517	-3.056	0.005
RV	a ₇	0.333	1.970	0.057	-0.206	0.985	0.334	0.486	2.493	0.019
	ADJ R2	0.092		0.551	-0.011		0.826	0.331		0.006

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APPENDIX I:OPERATIONALIZATION AND MEASUREMENT OF CONSTRUCTSI-A: HEADQUARTERS LEVEL INSTRUMENT (Instrument Finally
Employed in Study)

Environmental complexity is an additive 5-point scale consisting of two equally weighted variables, local competition and technological dynamism (Cronbach's $\alpha=0.7$). These variables were proposed by Lawrence and Dyer (1983) as important constituents of environmental information complexity. Competition was measured by - "On a scale of 1 (not much competition) to 5 (extremely intense competition), rate the intensity of competition your company faces in each of the following markets. (This was followed by a list of 19 countries, with a centrally anchored 5-point scale associated with each and the option of specifying the non-existence of a subsidiary in each case. The same pattern was adopted for all the other questions). Technological dynamism was measured by - "On a scale of 1 (very slow) to 5 (very rapid), indicate the relative rate of product and process innovations (for industry as a whole) that characterizes each of the following markets".

Local organizational abilities/resources. This was measured by - "Some national organizations in your company may have relatively advanced physical resources (such as technology, capital) and managerial capabilities. Some others in contrast may not have such resources to the same extent. On a scale of 1 (low) to 5 (high), rate the overall level of resource availability in your national organizations in each of the following countries."

Centralization. This was operationalized as the opposite of autonomy measured by - "Different national organizations in your company may enjoy different levels of autonomy for deciding their own strategies and policies. On a scale of 1 (very low) to 5 (very high), rate the extent of local autonomy enjoyed by each of the following national organizations."

Formalization. This was measured by - "The extent to which policies and systems are formalized may vary within the company, being different for different national organizations. On a scale of 1 (low formalization) to 5 (high formalization), rate the extent of formalization of policies and systems (through instruments such as manuals, standing orders, standard operating procedures, etc.) in each of the following national organizations"

Normative Integration. This was measured by - "Some of your national organizations, compared to others may be relatively more in tune with the overall goals and management values of the parent company. Let us call this the extent of shared values. On a scale of 1 (low shared values) to 5 (high shared values), rate each of the following national subsidiaries."

Perceptions of relative strategic importance of the local markets, governmental regulation, impact of budgetary reductions, communications flows, innovativeness, ease of innovation adoption, and relative performance of subsidiary were also obtained but were not used in this study.

I-B: SUBSIDIARY LEVEL INSTRUMENT (Employed for Pre-Test)

Centralization. Operationalized as the opposite of autonomy and measured by estimates of subsidiary managers on the extent of headquarters and/or subsidiary influence on the following four decision situations: (i) introduction of a new product, (ii) changes in product design, (iii) changes in manufacturing process, and (iv) career development plans for senior managers. For each of these situations, the relative influences could be scored on a 5-point scale representing: 1 - headquarters decides alone; 2 - headquarters decides but subsidiary can and does provide suggestions; 3 - both headquarters and subsidiary have roughly equal influence on the decision; 4 - subsidiary decides but headquarters can and does provide suggestions; and 5 - subsidiary decides alone.

Formalization. Measured by the assessment of subsidiary managers of the extent of truth or falsehood of the following three statements: (i) for most tasks, the headquarters have provided a fairly well-defined set of rules and policies, (ii) to the extent possible there are manuals that define the courses of action to be taken under different situations, and (iii) the headquarters continuously monitors to ensure that rules and policies are not violated. Responses could be scored on a 4-point scale representing: 1 - definitely true; 2 - more true than false; 3 - more false than true; and 4 - definitely false

Normative Integration. Measured by aggregating the responses of subsidiary managers on the following three indicators: (i) extent of time the respondent actually worked in the headquarters, scored as 1 if the duration was one year or more and 0 otherwise; (ii) perception of having a mentor at the headquarters, positive responses being scored as 1 and negative responses as 0; and (iii) the number of headquarters visits per year, scored as 1 if the count was one or more and 0 otherwise.

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