ASSET RESTRUCTURING AND BUSINESS GROUP AFFILIATION IN FRENCH CIVIL LAW COUNTRIES

ROBERT E. HOSKISSON,[1]* ALBERT A. CANNELLA, JR.,[2] LASZLO TIHANYI[3] and ROSARIO FARACI[4]
[1] W. P. Carey School of Business, Arizona State University, Tempe, Arizona, U.S.A.
[2] Mays Business School, Texas A&M University, College Station, Texas, U.S.A.
[3] Michael F. Price College of Business, University of Oklahoma, Norman, Oklahoma, U.S.A.
[4] University of Catania, Catania, Italy

We examine the relationship of environmental antecedents to asset restructuring in nine French civil law countries in Latin America and Europe. In these countries, business group affiliation helps member firms to access resources, take advantage of environmental opportunities, and neutralize threats. Results indicated that environmental antecedents, such as change in country development, increased competition and deregulation led to increased asset restructuring. More importantly, however, we also found that the influence of environmental factors was moderated by business group membership. The relationship between change in country development and restructuring was stronger for group-affiliated firms and the effects of increased competition and deregulation on asset restructuring were stronger for primarily independent firms. Our study offers additional evidence that organizations may respond differently to environmental opportunities and threats depending on the institutional setting. Copyright © 2004 John Wiley & Sons, Ltd.

Asset restructuring has been a popular means for organizations to respond to threats and opportunities in their business environments (Duhaime and Grant, 1984; Hitt, Harrison, and Ireland, 2001; Hoskisson and Hitt, 1994; Markides, 1992). Restructuring commonly involves 'a sequence of acquisitions and divestitures to develop a new configuration of the lines of business' (Bowman and Singh, 1993: 6). When the environment is changing, firms that restructure their set of businesses may improve the chances of achieving synergies and increase their performance (Bethel and Liebeskind, 1993; Bergh, 1998; Johnson, 1996).

Most prior studies have examined asset restructuring in the United States and the United Kingdom, but restructuring has become a widely observed strategy for responding to environmental

changes in other institutional settings (e.g., Chang and Hong, 2000; Filatotchev, Buck, and Zukov, 2000). For example, financial crises and privatization policies have led to an increase in restructuring activities by Latin American and Asian firms. However, prior research on corporate restructuring may have a limited generalizability to different regions due to the variations in institutional systems around the world (La Porta *et al.*, 1998). A potentially important institutional difference in many (perhaps most) countries is firms' affiliation with large diversified business groups (Khanna and Palepu, 2000a). Such group affiliation in different countries may have a profound effect on firms' restructuring.

Business groups are dominating forces in the industries of many countries and membership in these groups is likely to play a role in how firms respond to environmental challenges. Business groups are generally composed of legally independent firms that are bound by formal and informal ties to take coordinated actions (Khanna

and Rivkin, 2001). These groups often serve as organizational substitutes for imperfections in capital, labor, and product markets (Chang and Choi, 1988; Leff, 1976). Whereas business groups may have a unified set of entrepreneurs or managers, they cannot be classified as 'fully integrated' organizational structures (Guillén, 2000). Nonetheless, business group affiliation can provide firms access to substantial tangible and intangible resources that are typically unavailable to independent firms (Chang and Hong, 2000). Our conceptualization in this paper goes beyond the dominant prior research foci of antecedents and profit implications of business group affiliation by concentrating on how group affiliation influences corporate-level action when pressures from environmental change are present. Indeed, despite the limited empirical evidence, restructuring by business groups is one of the most important challenges firms and governments face in many countries (Hoskisson *et al.*, 2001; Khanna and Palepu, 1999).

This study focuses on business groups in Latin America and Europe. Our sample countries share French civil law traditions, leading to contexts in which firms are likely to benefit from business group affiliation. Rooted in Roman law, French civil law has been adopted by many countries, including countries of Latin America, from their former European settlers or colonizers (David and Brierley, 1985). In contrast to nations with English common law traditions, French civil law countries have relatively poor investor and creditor protection and weak law enforcement (La Porta *et al.*, 1997). Partly due to these institutional characteristics, French civil law countries usually have high ownership concentration in the form of business groups (La Porta *et al.*, 1998). Furthermore, as business groups appear to exist in many countries regardless of the level of economic development (e.g., Ghemawat and Khanna, 1998; Khanna and Rivkin, 2001), the French civil law context provides a setting with sufficient variation to generalize the role of business group affiliation in firms' asset restructuring.

We examine the interactive effects of a set of environmental antecedents and business group affiliation on restructuring through a mail survey of corporate executives from nine French civil law countries. The research question we address is whether business group affiliation leads to lower or higher levels of restructuring in response to

environmental opportunities and threats. Furthermore, our approach contributes to what has been partly examined in the prior restructuring literature regarding the relationship between environmental characteristics and restructuring (e.g., Bergh and Lawless, 1998) by investigating three key areas: country development, competitive environment, and government regulation. The context of our sample provides an opportunity to extend restructuring research beyond the U.S. and U.K. environments.

THEORY AND HYPOTHESES

A body of restructuring literature considers asset restructuring as a strategic response by firms to changes in their environment (Chatterjee, 1992; Meyer, Brooks, and Goes, 1990). Restructuring research focusing on the effects of government regulations and competition (e.g., Ginsberg and Buchholtz, 1990; Rajagopalan and Spreitzer, 1997; Zajac and Kraatz, 1993) has made important contributions to the previous restructuring literature dominated by agency theory (Johnson, 1996). For example, the study by Bergh and Lawless (1998) found that restructuring is related to changes in environmental uncertainty. Results of this study also indicate that firm diversification may influence the relationship: highly diversified firms tend to divest during times of increased environmental uncertainty and pursue acquisitions when environmental uncertainty is decreased. Other studies along this line suggest that responding to changes in the environment by restructuring can lead to benefits through jointly managing a sales force, assembling a corporate task force of capable individuals, or sharing marketing and technology operations (Hill and Hoskisson, 1987; Markides and Williamson, 1996). Furthermore, the effects of environmental changes on restructuring have been found to depend on additional factors, such as competitive position, organizational size, and financial resources (Zajac and Kraatz, 1993).

Asset restructuring has been increasing worldwide owing to a number of recent changes in the global environment, such as economic development, global competition, regional integration, financial crises, and changes in government policies in both developing and developed economies (Hitt *et al.*, 2001; Megginson and Netter, 2001). Because of the magnitude of these changes, the

extension of research on the environment–asset restructuring relationship to different country environments, such as countries of French civil law traditions, is an important endeavor. For instance, although firms in this institutional setting may respond to a number of environmental changes by restructuring, important differences are expected based on firms' affiliation with large diversified business groups.

Environmental changes and asset restructuring in French civil law countries

There are a number of environmental changes that incline firms in French civil law countries to restructure their assets. Of these, the change in country development should be among the most important because it leads to critical opportunities and threats to which firms may need to respond by restructuring their asset portfolios. Despite its importance, little prior research has considered the link between change in country development and restructuring. Factors related to country development include Gross Domestic Product, development of human capital, level of inflation, level of employment, and life expectancy. The development of a country is also closely linked to other social and political factors. For example, changing attitudes toward business in a society may limit or increase market opportunities and political reforms may result in changes in the role of private ownership (Megginson and Netter, 2001).

Country development tends to be associated with increased governance by market forces, leading to more efficient resource allocation. Change in country development has two main effects on firms. First, the improved efficiency in resource allocation leads to an increase in business opportunities. The availability of capital and an educated work force facilitate the growth of firms. Frequently, firms can better exploit these opportunities by restructuring their assets (Bethel and Liebeskind, 1993). Second, the increasing socio-economic stability associated with country development reduces the risks of doing business and therefore is likely to increase the entry of foreign as well as local firms (Wan and Hoskisson, 2003). Under these conditions, firms may improve their chances of acquiring resources by selling unrelated businesses and acquiring related businesses (Bergh, 1998; Bergh and Lawless, 1998).

Hypothesis 1a: Change in country development is positively associated with asset restructuring in French civil law countries.

Changes in competition are among the most important environmental factors for corporate executives to consider in restructuring (Johnson, 1996). The entry of new competitors increases the level of competition and can reduce profit margins in an industry. Competition might intensify because of the diversity of strategies by firms in an industry, a shift in the power balance of players, and changes in market demand (Porter, 1980). These effects are particularly relevant in the context of foreign direct investment in many countries of French civil law traditions. Multinational firms as new entrants, often from English common law countries, possess the necessary outside resources, such as capital from their home markets, to change the competitive landscape of local industries and the market position of local firms.

To meet the challenges of increasing rivalry, executives of firms are often encouraged to take more risk and often respond by asset restructuring (Cool, Dierickx, and Jemison, 1989). Grinyer and McKiernan (1990) found that competitive changes lead to an 'aspiration-induced crisis.' Firms in French civil law countries may respond by restructuring their assets; frequently by acquiring related businesses and divesting unrelated ones. When the competitive environment changes, restructuring helps firms to allocate resources, realize synergies, and improve performance (Bergh, 1995, 1998; Chatterjee, 1986; Hoskisson and Hitt, 1988). These restructuring benefits may be particularly critical to firms in French civil law countries because of the limited opportunities to obtain resources from outside sources, such as capital markets (La Porta *et al.*, 1997). Thus,

Hypothesis 1b: Increased competition is positively associated with asset restructuring in French civil law countries.

Another important antecedent of restructuring, the level of government regulation, is a tool to control excessive risk-taking at the firm level: when an economy is highly regulated, organizations are faced with limited discretion in their business decisions (Wiseman and Catanach, 1997). Because of the aforementioned market failures, governments in French civil law countries tend to act more as

resource allocators than governments of countries with English civil law traditions do (La Porta *et al.*, 1998). However, to solve macro-economic ineffi-ciencies, governments of French civil law coun-tries have substantially decreased their economic involvement in recent years (Megginson and Net-ter, 2001). The reduction of government involve-ment increases the decision-making discretion of firms, improves the efficiency of governance mech-anisms, and reduces the barriers to trade and investments (Ramamurti, 2000). Reduced govern-ment intervention, nevertheless, raises the level of uncertainty for firms due to the increase in the diversity of stakeholders, the appearance of newly privatized firms, and an accompanying increase in the likelihood of bankruptcy (Megginson and Net-ter, 2001).

Regulatory changes are positively related to changes in firm risk-taking behavior and strate-gies, such as acquisitions (Datta, Narayanan, and Pinches, 1992; Ginsberg and Buchholtz, 1990). Under deregulation, less-focused, defender-like firms tend to change to more focused, prospector-like strategies (Rajagopalan and Spreitzer, 1997). Divestiture from unrelated businesses may pro-vide means for firms to respond to deregulation in French civil law countries by realizing syner-gies from their reduced portfolio of operations and achieving positive wealth effects for their share-holders (Meyer *et al.*, 1990).

Hypothesis 1c: Deregulation is positively asso-ciated with asset restructuring in French civil law countries.

The interaction effects of environmental changes and business group affiliation

Beyond the direct effects of environmental chang-es, firms' propensity to restructure their assets might be influenced by their affiliation to diver-sified business groups in French civil law coun-tries. The long-term survival of business groups in these countries seems to contradict the widely held theoretical argument that high levels of prod-uct diversification are detrimental to firm per-formance (Hoskisson *et al.*, 2001; Khanna and Palepu, 2000a; Khanna and Rivkin, 2001). Firms affiliated with business groups can continuously realign their assets and financial resources and increase their political power in dealing with

national and local governments (Encarnation, 1989; Lincoln, Gerlach, and Ahmadjian, 1996).

When there is a change in the level of country development, the opportunity of group-affiliated firms to restructure their assets is likely higher than that of independent firms. Group affiliation in French civil law countries can facilitate access to resources during times of economic growth when demand for resources is high (Chang and Hong, 2000). Firms with strong links to business groups can obtain superior information about investment opportunities, gain access to other firms' resources, and take advantage of the growing supply of edu-cated labor. Furthermore, business group members likely have better chances to acquire other firms by relying on their group's internal capital market (La Porta *et al.*, 1997).

Change in country development may also prompt business groups to restructure their oper-ations to improve their odds of survival. Guillén (2000) suggests that business groups may not survive when asymmetries in foreign trade and investment disappear in a country. For exam-ple, the power of Spanish business groups has declined since Spain's increased integration into the European Union. Because business groups have emerged in response to institutional voids in many economies, their role may become con-strained with the development of market institu-tions (Ghemawat and Khanna, 1998; Khanna and Palepu, 2000a; La Porta *et al.*, 1997). Thus, change in country development may provide a stronger push for group-affiliated firms to restructure their assets.

Hypothesis 2a: Group affiliation will moder-ate the relationship between change in country development and asset restructuring in French civil law countries in such a way that the rela-tionship will be stronger for group-affiliated firms.

The variation in organizational responses to com-petitive change (e.g., Bergh and Lawless, 1998; Johnson, 1996) is likely to be profound in French civil law countries. Although changes in coun-try development may have a stronger effect on the restructuring of business group-affiliated firms,

changes in competition may increase the restructuring of independent firms. Business groups replicate the functions of missing intermediating institutions, such as product, labor, and capital markets in French civil law countries and thus enable their member firms to deal more efficiently with imperfect property rights, weak contract enforcement, and information problems (Khanna and Palepu, 2000b; Ghemawat and Khanna, 1998). Access to distribution channels, financial resources from other group member firms, and group brand names can provide buffers for group-affiliated firms when they are faced with increased competition. Along this line, prior research noted the risk-sharing benefits of business group affiliation through bank relationships and interlocking shareholdings (Sheard, 1994). Financial distress of a member firm, for example, tends to lead to concerted group-wide rescue operations, often headed by a group-affiliated bank (Suzuki and Wright, 1985). A potential negative effect of such access to these group resources is the relative inflexibility of business group members in responding to changes in the competitive environment (Hill and Hoskisson, 1987). Independent firms without these linkages, on the other hand, will have more flexibility to make adjustments in the face of competition.

By operating in multiple markets, group-affiliated firms are able to leverage market power in individual markets and thus are less vulnerable to increased competition from local or multinational firms. Further, business group-affiliated firms can offer their unique resources to new multinational entrants, such as reputation in local markets (Khanna and Palepu, 2000b). Whereas firms without links to business groups need to respond to competitive changes by restructuring their assets, this is likely less critical for firms with business group affiliation.

Hypothesis 2b: Group affiliation will moderate the relationship between competitive change and asset restructuring in French civil law countries in such a way that the relationship will be stronger for independent firms.

Responses to changes in government regulations are also likely to be affected by affiliation with business groups. Because of their size, business groups directly influence the state of economies and the level of employment and, thus, governments in French civil law countries tend to monitor group performance closely (La Porta *et al.*, 1998). Close ties to government agencies can allow group-affiliated firms to benefit from favorable regulatory treatments. Furthermore, group-affiliated firms have better access to state resources during high government regulation. Some of these relative advantages of group affiliation, however, may disappear with decreasing government involvement, and when the opportunity for acquisitions declines. For instance, the waning political connections and limited access to state resources make affiliated firms less attractive partners in acquisitions (Encarnation, 1989).

In turn, deregulation, including privatization of state assets, may increase the propensity to acquire among independent firms. Other elements of deregulations, such as the reduction of taxes and tariffs, may reduce the previous levels of preferential treatment given to diversified business groups and a larger population of unaffiliated firms can access resources to acquire new lines of business. Independent firms may also restructure their asset portfolios to take advantage of trade liberalization policies. As deregulation opens up local markets to a wider range of firms for export or foreign direct investment, independent firms may restructure their assets to benefit from these opportunities. Thus, asset restructuring is expected to be stronger among independent firms during deregulation.

Hypothesis 2c: Group affiliation will moderate the relationship between deregulation and asset restructuring in French civil law countries in such a way that the relationship will be stronger for independent firms.

METHODS

We used a survey to test our hypotheses about the relationship between environment, restructuring, and group affiliation in Latin America, including Argentina, Brazil, Chile, Colombia, Mexico, Peru, and Venezuela, and in Europe, such as Italy and Spain. The legal systems of the selected countries are based on French civil law traditions and thus provided an appropriate setting for this study (David and Brierley, 1985; La Porta *et al.*, 1998). Furthermore, the institutional conditions of these

countries have been identified by prior empirical studies as environments in which diversified business groups are present (Ghemawat and Khanna, 1998; Guillén, 2000; Khanna and Rivkin, 2001). The largest firms and their executives per country with publicly available data were identified through the Worldscope database. Further information on Latin American firms was provided by the Sao Paolo, Brazil branch of the international consulting firm, Arthur D. Little. We sent surveys to multiple respondents per firm in 1996 and sent a second copy of the survey to non-respondents. From the 1400 surveys mailed out, 68 were returned as undeliverable, and a total of 252 completed surveys were returned, yielding a response rate of about 19 percent, a typical response rate in cross-national studies (Jobber and Saunders, 1988). Because of the moderate response rate, non-response bias raised a legitimate concern. To check for potential non-response bias, we conducted *t*-tests for differences in two control variables: performance and size. Data for these tests, involving return on investment and the number of employees, were collected from Worldscope. We found no significant differences between respondents and non-respondents by country, suggesting that non-response bias did not overly influence the findings.

Measures

Asset restructuring

We assessed our dependent variable using four items, including (1) the ratio of acquisition to divestitures (e.g., Bergh and Lawless, 1998), (2) the percentage of total sales due to acquisitions (e.g., Hitt *et al.*, 1996; Simmonds, 1990), (3) the importance of acquisitions, and (4) the importance of divestitures. The two importance-of-restructuring items, (3) and (4), were the composite of different motivations for asset restructuring measured by seven-point Likert-type scales. Using multiple components from prior literature (e.g., Hitt *et al.*, 2001; Hoskisson and Hitt, 1994; Johnson, Hoskisson, and Hitt, 1993) broadened the scope of the traits and increased the content validity of our measure (Ghiselli, Campbell, and Zedeck, 1981). The factor loadings for the four items of asset restructuring were 0.65, 0.66, 0.70, and 0.74. Cronbach's alpha for the combined measure was 0.70. The survey items used in this study are presented in the Appendix.

Independent variables

Change in country development was measured by the 5-year average of Human Development Index (HDI). HDI is a composite of (1) adjusted real GDP per capita (in Purchasing Power Parity $), (2) educational attainment (combined first-, second-, and third-level gross enrollment), (3) adult literacy, and (4) life expectancy. HDI indexes were collected from the United Nations Development Programme's *Human Development Reports 1992–1996*. Change in a country's HDI is an appropriate measure for this study because it reflects changes in a country's development and its economic potential, and is relatively free from income inequalities (Lubatkin, Ndiaye, and Vengoff, 1997; Streeten, 1994). Furthermore, pure macro-economic indicators do not accurately depict country development for businesses because 'economic development can neither be achieved nor sustained if it does not promote or encourage human development' (Zahra, 1999: 38).

Competitive change was measured by using three items on the survey: (1) change in local competition, (2) change in access to the local market by foreign competitors, and (3) access to capital. Responses were made on seven-point Likert-type scales. The factor loadings were 0.86, 0.85, and 0.74. Cronbach's alpha for the composite scale was 0.88.

Deregulation was assessed by using four items: (1) number of government regulations with which the company must comply, (2) liberalization in the government's attitude toward domestic acquisitions, (3) changes in government policy regarding privatization, and (4) export liberalization. These items were measured by seven-point Likert-type scales. The factor loadings of the four items were 0.72, 0.64, 0.61, and 0.63. We summed the four items and obtained a Cronbach's alpha of 0.71.

Group affiliation

Because of the complex and informal links among firms in diversified business groups, public data on group affiliation may be unavailable or misleading (Khanna and Palepu, 2000b, Guillén, 2000). Our moderator variable, group affiliation, is a dummy variable based on three survey items: (1) the importance of a commercial bank which has ownership in the firm, (2) importance of affiliated partner firms which have ownership interest

in the firm, and (3) importance of other companies in which the firm has ownership interest. The responses were on seven-point Likert-type scales. The three items had factor loadings of 0.72, 0.75, and 0.68. Cronbach's alpha reliability estimate of group affiliation was 0.72. This combined survey item was used to divide our sample into business group-affiliated firms and primarily independent firms, to match classification in prior studies on business group affiliation (e.g., Guillén, 2000; Khanna and Palepu, 2000a). The median split resulted in 92 business group-affiliated firms and 106 independent firms.

Control variables

We included six control variables: firm performance; size; diversification; international diversification; country political risk; and industry. Firms with poor performance, for instance, tend to view changes in the environment as more significant and accordingly are prompted to restructure their operations to improve performance. However, poor-performing firms lack the resources to make adjustments in their asset portfolios (Duhaime and Grant, 1984). Performance was assessed by using three survey-based items: (1) return on investment, (2) increase of sales revenue, and (3) pretax profit. The factor loadings of these Likert-type items were 0.86, 0.89, and 0.89, respectively. We summed these items and obtained a Cronbach's alpha estimate of 0.94 for the performance measure.

Firm size may be important because large firms have the resources to acquire other businesses when their managers view opportunities in the environment or are often pressed to sell unprofitable operations, making restructuring a more frequent strategy. Firm size was measured by the number of employees.

Level of diversification might be relevant for restructuring, as highly diversified firms may need to respond to environmental threats or opportunities by reducing their diversified scope (Chang, 1996). Level of diversification was measured by inverse of the sales of the largest business unit divided by total sales. Size and diversification measures were collected from the respondents and the Worldscope database.

International diversification is another potentially important variable that might be associated with asset restructuring. Firms, for instance, may divest from their business operations because of the problems in their international portfolios. International diversification was measured by the number of countries with foreign subsidiaries (country scope) and was obtained from our survey respondents (Tallman and Li, 1996).

There might be variation in asset restructuring across countries of French civil law traditions. We included the 5-year average of country political risk to assess the general political and economic environment of our sample countries (e.g., Brewer, 1985; Uhlenbruck and De Castro, 2000). We collected this variable from the *Political Risk Yearbook* published by Political Risk Services.

Lastly, firms might be affected by environmental changes differently, depending on their industry membership. We constructed nine industry dummy variables and included them in the analyses, following Amburgey and Miner (1992). Based on their primary industry, firms were divided into extractive, processing, equipment manufacturing, electronics, construction, other manufacturing, telecommunication, trade, and other services industry groups. We used effect coding, as we had no preference to select any industry as a reference category (Kerlinger and Pedhazur, 1973).

It is important to acknowledge that the data in this study were obtained using self-report measures. Campbell and Fiske (1959) note that common method bias can pose problems for survey research that relies on self-reported data, especially if the data are provided by the same person at the same time. We employed Harman's single-factor test to estimate the extent of common method variance. If common method variance is a problem, a single factor should emerge from a factor analysis with most of the covariance in the independent and dependent variables (Podsakoff and Organ, 1986). The analysis found six factors with eigenvalues greater than one, with the first one explaining 20.6 percent of the variance. These results indicate that common method variance was not a serious problem.

Because we had multiple respondents, we calculated the interrater reliability by using the coefficient of agreement. While this measure is similar to the intraclass correlation index (e.g., Jones *et al.*, 1983), it is preferred in small-groups responses (Robinson, 1957). The coefficients were 0.64 (restructuring), 0.88 (competitive change), 0.69 (deregulation), 0.66 (group affiliation), and 0.95 (performance). Thus we averaged the multiple

responses from the same firm for the subsequent analyses, resulting in a final sample of 198 firms.

RESULTS

Table 1 presents the means, standard deviations, and correlations for all the variables. We performed a confirmatory factor analysis (CFA) on the survey items to evaluate the fit of the measurement model. The sample covariance matrix was used as input for the CFA in ESQ 5.7b. Fit statistics included the comparative fit index (CFI), the normed fit index (NFI), and the root-mean-square error of approximation (RMSEA) (Hu and Bentler, 1985). We used maximum likelihood estimation and achieved an acceptable fit (CFI = 0.95, NFI = 0.90, RMSEA = 0.07). The chi-square test of our model was significant ($\chi^2 = 178.76$, d.f. = 96, $p < 0.001$); however, the inspection of these fit indexes suggests that fit of the measurement model is satisfactory for further analyses (Anderson and Gerbing, 1988; Bollen, 1989).

Hierarchical regression analysis was used to test the hypotheses. In the model, the control variables were entered in the first step, the independent variables in the second step, group affiliation in the third step, and the interaction terms in the fourth step. All models also include the nine industry dummy variables; however, only the significant industry effect (other manufacturing) is reported. To control for the potential multicollinearity in the interaction terms, we used a deviation score approach and centered the variables (Jaccard, Turrisi, and Wan, 1990). We examined the Variance Inflation Factors (VIF) and all of the scores were below 1.52 (VIFs over 10 normally indicate multicollinearity). These results suggested that multicollinearity was not a serious problem (Belsley, Kuh, and Welsch, 1980). The results of the hierarchical regression are shown in Table 2.

The results of the first regression model indicate a positive effect of size, a marginal positive effect of international diversification, and a marginal negative industry effect on the dependent variable ($R^2 = 0.13$, $F = 2.09$, $p < 0.05$). The results of testing Hypotheses 1a, 1b, and 1c of the main effects are presented in Model 2. The positive beta coefficients for change in country development ($\beta = 0.16$, $p < 0.05$), competitive change ($\beta = 0.16$, $p < 0.05$) and deregulation ($\beta = 0.17$, $p <$

0.05) indicate relationships between these variables and restructuring. Thus, Hypotheses 1a, 1b, and 1c received support. Model 2 indicates a significant effect for the independent variables over the control variables ($\Delta R^2 = 0.06$, $\Delta F = 4.71$, $p < 0.01$). The group affiliation variable is entered in Model 3. This model indicates a marginally positive main effect for group affiliation on restructuring over the independent variables ($\beta = 0.13$, $p < 0.10$, $\Delta R^2 = 0.02$, $\Delta F = 3.31$, $p < 0.10$).

Hypothesis 2a states that business group affiliation will moderate the relationship between change in country development and restructuring with the relationship stronger for group-affiliated firms. The results of Model 4 indicate a significant positive interaction between country development and group affiliation ($\beta = 0.14$, $p < 0.05$). Consequently, Hypothesis 2a is supported. Hypothesis 2b states that business group affiliation will moderate the relationship between competitive change and restructuring with the relationship stronger for independent firms. The results of Model 4 indicate a significant negative interaction between competitive change and group affiliation ($\beta = -0.24$, $p < 0.01$), providing support for Hypothesis 2b. Hypothesis 2c predicts that business group affiliation will moderate the relationship between deregulation and restructuring with a stronger relationship for independent firms. The results of the regression analysis provide support because the coefficient is negative and significant ($\beta = -0.21$, $p < 0.01$). The results, presented in Model 4, demonstrate that the interaction terms accounted for a significant amount of incremental variance beyond that due to the main effects ($\Delta R^2 = 0.07$, $\Delta F = 6.10$, $p < 0.01$). To better explain the moderating effect of business group affiliation on the relationship between environmental antecedents and asset restructuring, we plotted the interactions in the graphs shown in Figures 1–3 using one standard deviation below and above the mean (Cohen and Cohen, 1983).

DISCUSSION

This study extends research on restructuring by examining the association between various environmental antecedents and asset restructuring in French civil law countries. We found that Latin American and European firms may restructure their assets during changes in their countries'

Table 1. Means, standard deviations, and correlations[a]

Variables	Mean[b]	S.D.	1	2	3	4	5	6	7	8	9	10
1. Restructuring	11.54	2.45										
2. Performance	14.58	4.44	0.10									
3. Size	3.43	0.67	0.25***	−0.04								
4. Diversification	0.62	0.26	0.02	0.02	−0.07							
5. International diversification	23.78	32.32	0.17*	0.04	0.23**	−0.23**						
6. Political risk	0.88	0.12	−0.11	0.10	−0.09	−0.02	0.04					
7. Industry (other manufacturing)	0.15	0.44	−0.17*	−0.07	−0.11	−0.04	−0.06	−0.13†				
8. Change in country development	0.78	0.06	0.11	0.06	−0.04	0.01	−0.05	−0.04	0.27**			
9. Competitive change	14.20	4.94	0.11	−0.07	−0.07	0.05	−0.01	−0.05	−0.05	−0.05		
10. Deregulation	14.03	4.23	0.13†	0.10	0.02	0.09	−0.20**	−0.23**	0.09	0.23**	−0.24**	
11. Group affiliation	0.46	0.50	0.08	0.03	0.06	−0.10	−0.07	0.01	−0.04	−0.07	0.07	−0.02

[a] $n = 198$. †$p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$
[b] Unstandardized means and standard deviations are reported for standardized items to simplify interpretation. Spearman Rank correlations are reported where ordinal data are used.

Table 2.   Results of hierarchical regression analysis

| Variable	Model			
	1	2	3	4
Step 1				
Performance	0.10	0.07	0.07	0.08
Size	0.21**	0.22**	0.21**	0.19**
Diversification	0.06	0.04	0.06	0.04
International diversification	0.13†	0.15†	0.16*	0.16*
Country political risk	−0.10	−0.04	−0.04	−0.03
Industry (other manufacturing)	−0.13†	−0.16*	−0.16*	−0.14*
Step 2				
Change in country development		0.16*	0.17*	0.18*
Competitive change		0.16*	0.15*	0.09
Deregulation		0.17*	0.17*	0.14†
Step 3				
Group affiliation			0.13†	0.13†
Step 4				
Change in country development × group affiliation				0.14*
Competitive change × group affiliation				−0.24**
Deregulation × group affiliation				−0.21**
R^2	0.13	0.19	0.21	0.28
ΔR^2	0.13	0.06	0.02	0.07
Adjusted R^2	0.07	0.12	0.13	0.20
Model F	2.09*	2.68**	2.75***	3.45***
ΔF	2.09*	4.71**	3.31†	6.10**

Standardized coefficients: $n = 198$.
†$p < 0.10$; *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$
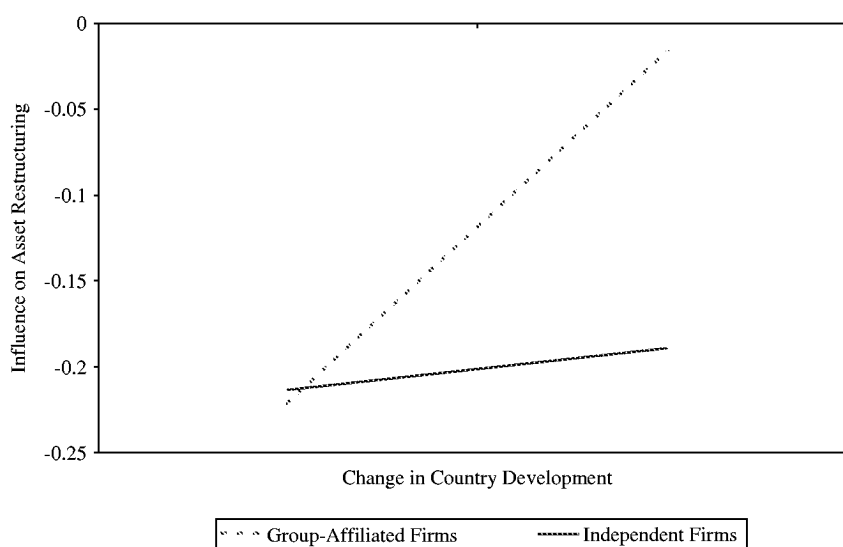
Figure 1.   Group affiliation and change in country development interaction

development, competition, and deregulation. These results enhance prior literature (e.g., Bergh, 1998; Markides, 1992; Rajagopalan and Spreitzer, 1997) by examining the effects of three different segments of the environment on restructuring, including change in country development, an important variable that has received relatively little prior attention.
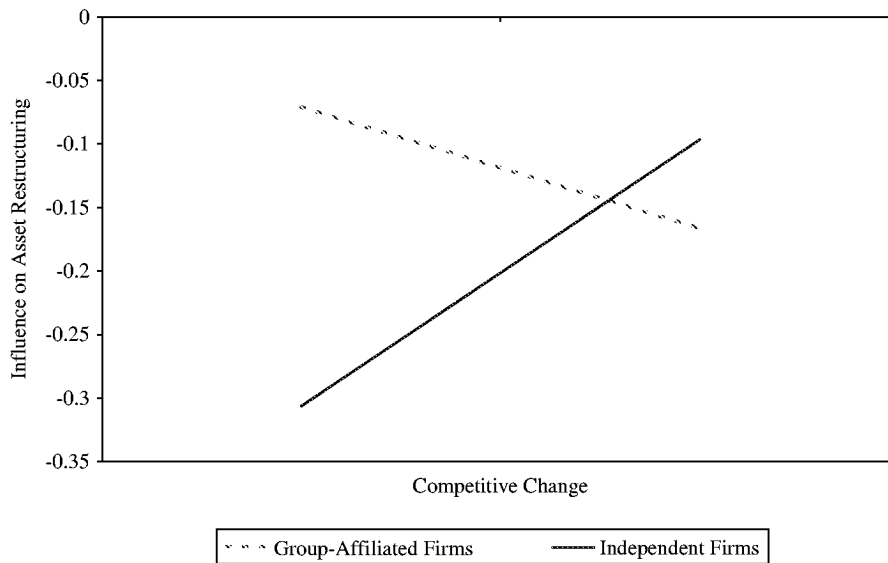
Figure 2. Group affiliation and competitive change interaction

Figure 3. Group affiliation and deregulation interaction

More importantly, this study investigated the potential differences in asset restructuring in a well-defined institutional setting (La Porta *et al.*, 1998). Drawing from the growing body of research on business groups (e.g., Caves and Uekusa, 1976; Ghemawat and Khanna, 1998; Khanna and Palepu, 2000a), the study uncovered evidence that firms in countries of French civil law traditions may have a different stake in restructuring, depending on their group affiliation. Thus, this study potentially

contributes to the existing restructuring literature by showing that group affiliation is an important moderator of the relationship between environmental change and asset restructuring in countries of French civil law traditions.

The regression analysis revealed that group-affiliated firms tend to restructure their assets when their country's macro-economic conditions improve. Figure 1 illustrates the relatively stronger relationship between change in country

development and asset restructuring for group-affiliated firms. There may be different reasons for this relationship and thus the restructuring of group-affiliated firms has important implications. For example, if the development of a country is derived from a broad economic and social infrastructure (e.g., human capital, technology, and natural resources), as opposed to the development of transactional infrastructure (e.g., property rights, legal and contractual institutions), it is likely that business groups will continue to be important players (Khanna and Palepu, 1999). Alternatively, if the institutional infrastructure has evolved to the point where group membership no longer provides benefits, the group structure may be a roadblock to restructuring and government actions may be necessary to foster downscoping of such groups (Chang, and Hong, 2000; Guillén, 2000). Since significant transition efforts are underway in many French civil law countries, the restructuring of business groups is a central issue for the governments of these countries.

The results and the form of interaction on Figure 2 indicate a stronger effect by competitive change on asset restructuring for independent firms. Similarly, the plot on Figure 3 portrays a stronger relationship between deregulation and asset restructuring for independent firms than for firms with group affiliation. These results contribute to recent empirical research on diversified business group performance (e.g., Chang, and Hong, 2000; Guillén, 2000; Khanna and Rivkin, 2001) by showing the interactive effect of group affiliation and environmental change on a critical corporate strategy, asset restructuring. The combination of complementary resources, such as capital, know-how, distribution, and the ability to win government favors, may help group-affiliated firms to cope with the uncertainties resulting from increased competition and deregulation. Independent firms, on the other hand, are more likely to restructure their assets under these environmental pressures. The asset restructuring may help independent firms to improve their business focus and gain further flexibility. The joint examination of the three environmental effects also has important policy implications considering that business group-affiliated firms are more likely to restructure their assets in response to changes in country development and are less influenced by competitive and regulatory changes.

The results of this study introduce opportunities for future research. First, this study identified associations between environmental changes and restructuring and not causal relations. It is likely that additional environmental, organizational, and individual characteristics have important effects on corporate restructuring. For example, acquisitions tend to have a high failure rate and managers may decide to sell acquired businesses when they no longer see their potential (Hitt *et al.*, 2001; Johnson, 1996). Additionally, although we did not find relationships between restructuring, performance, and diversification, prior empirical results suggest that these and other variables may have an effect on corporate restructuring. Subsequent research could examine the potential effects of firm strategy and managerial characteristics on restructuring in addition to the environmental antecedents, the focus of the present investigation. Another potential extension is related to the institutional differences across countries. Because of additional institutional variation, there are differences among business groups in different countries. These differences may be important for the restructuring of affiliated firms.

CONCLUSION

This study included firms from different developing and developed countries of Latin America and Europe. Our identification of these countries was based on their shared tradition of French civil law, relying on the findings of La Porta and colleagues (1998). Based on prior research, we argued that the institutional setting of our sample countries has traditionally provided a role for diversified business groups. Our results contribute to prior research by examining corporate restructuring in French civil law countries and showing the effect of business group affiliation on the environment–restructuring relationship. The results of this study highlight the need for more research on how group affiliation affects strategic choices in different institutional settings.

ACKNOWLEDGEMENTS

support of Arthur D. Little & Co., of Sao Paolo, Brazil, and Roberto Haaland. Thanks are also due to Lorraine Eden, Rick Johnson, Bill Megginson, *SMJ* Associate Editor Karel Cool, and two anonymous reviewers for their helpful comments.

REFERENCES

Amburgey TL, Miner AS. 1992. Strategic momentum: the effects of repetitive, positional, and contextual momentum on merger activity. *Strategic Management Journal* 13(5): 335–348.

Anderson JG, Gerbing DW. 1988. Structural equation modeling in practice: a review and recommended two-step approach. *Psychological Bulletin* 103: 411–423.

Belsley DA, Kuh E, Welsch RE. 1980. *Regression Diagnostics*. Wiley: New York.

Bergh DD. 1995. Size and relatedness of units sold: an agency theory and resource-based perspective. *Strategic Management Journal* 16(3): 221–239.

Bergh DD. 1998. Product-market uncertainty, portfolio restructuring, and performance: an information-processing and resource-based view. *Journal of Management* 24: 135–155.

Bergh DD, Lawless MW. 1998. Portfolio restructuring and limits to hierarchical governance: the effects of environmental uncertainty and diversification strategy. *Organization Science* 9: 87–102.

Bethel JE, Liebeskind J. 1993. The effects of ownership structure on corporate restructuring. *Strategic Management Journal*, Summer Special Issue 14: 15–32.

Bollen KA. 1989. *Structural Equations with Latent Variables*. Wiley: New York.

Bowman EH, Singh H. 1993. Corporate restructuring: reconfiguring the firm. *Strategic Management Journal*, Summer Special Issue 14: 5–14.

Brewer TL. 1985. Politics, risks, and international business. In *Political Risks in International Business*, Brewer TL (ed). Praeger: New York; 3–12.

Campbell D, Fiske D. 1959. Convergent and divergent discriminant validation by the multitrait–multimethod matrix. *Psychological Bulletin* 56: 81–105.

Caves R, Uekusa M. 1976. *Industrial Organization in Japan*. Brookings Institution: Washington, DC.

Chang SJ. 1996. An evolutionary perspective on diversification and corporate restructuring: entry, exit, and economic performance during 1981–89. *Strategic Management Journal* 17(8): 587–611.

Chang SJ, Choi U. 1988. Strategy, structure and performance in Korean business groups. *Journal of Industrial Economics* 37: 141–158.

Chang SJ, Hong J. 2000. Economic performance of group-affiliated companies in Korea: intragroup resource sharing and internal business transactions. *Academy of Management Journal* 43: 429–448.

Chatterjee S. 1986. Types of synergy and economic value: the impact of acquisitions on merging and rival firms. *Strategic Management Journal* 7(2): 119–139.

Chatterjee S. 1992. Sources of value in takeovers: synergy or restructuring—implications for target and bidder firms. *Strategic Management Journal* 13(4): 267–286.

Cohen J, Cohen P. 1983. *Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences* (2nd edn). Erlbaum: Hillsdale, NJ.

Cool K, Dierickx I, Jemison D. 1989. Business strategy, market structure, and risk–return relationships: a structural approach. *Strategic Management Journal* 10(6): 507–522.

Datta DK, Narayanan VK, Pinches GE. 1992. Factors influencing wealth creation from mergers and acquisitions: a meta-analysis. *Strategic Management Journal* 13(1): 67–84.

David R, Brierley J. 1985. *Major Legal Systems in the World Today*. Stevens: London.

Duhaime IM, Grant JH. 1984. Factors influencing divestment decision-making: evidence from a field study. *Strategic Management Journal* 5(4): 301–318.

Encarnation D. 1989. *Dislodging Multinationals: India's Comparative Perspective*. Cornell University Press: Ithaca, NY.

Filatotchev I, Buck T, Zukov V. 2000. Downsizing in privatized firms in Russia, Ukraine, and Belarus. *Academy of Management Journal* 43: 286–304.

Ghemawat P, Khanna T. 1998. The nature of diversified business groups: a research design and two case studies. *Journal of Industrial Economics* 46: 35–61.

Ghiselli EE, Campbell JP, Zedeck S. 1981. *Measurement Theory for the Behavioral Sciences*. W. H. Freeman: San Francisco, CA.

Ginsberg A, Buchholtz A. 1990. Converting to for-profit status: corporate responsiveness to radical change. *Academy of Management Journal* 33: 445–477.

Grinyer P, McKiernan P. 1990. Generating major change in stagnating companies. *Strategic Management Journal*, Summer Special Issue 11: 131–146.

Guillén MF. 2000. Business groups in emerging economies: a resource-based view. *Academy of Management Journal* 43: 362–380.

Hill CWL, Hoskisson RE. 1987. Strategy and structure in the multiproduct firm. *Academy of Management Review* 12: 331–341.

Hitt MA, Harrison JS, Ireland RD. 2001. *Mergers and Acquisitions: A Guide to Creating Value for Stakeholders*. Oxford University Press: New York.

Hitt MA, Hoskisson RE, Johnson RA, Moesel DD. 1996. The market for corporate control and firm innovation. *Academy of Management Journal* 39: 1084–1119.

Hoskisson RE, Hitt MA. 1988. Strategic control systems and relative R&D investment in large multi-product firms. *Strategic Management Journal* 9(6): 605–621.

Hoskisson RE, Hitt MA. 1994. *Downscoping: How to Tame the Diversified Firm*. Oxford University Press: New York.

Hoskisson RE, Johnson RA, Moesel DD. 1994. Corporate divestiture intensity in restructuring firms: effects of governance, strategy, and performance. *Academy of Management Journal* 37: 1207–1251.

Hoskisson RE, Johnson RA, Yiu D, Wan W. 2001. Restructuring strategies of diversified business groups: differences associated with country institutional environments. In *Handbook of Strategic Management*,

Hitt MA, Freeman RE, Harrison JS (eds). Blackwell: Oxford, U.K.; 433–463.

Hu L, Bentler PM. 1985. Evaluating model fit. In *Structural Equation Modeling: Concepts, Issues, and Applications*, Hoyle RH (ed). Sage: Thousand Oaks, CA; 76–99.

Jaccard J, Turrisi R, Wan CK. 1990. *Interaction Effects in Multiple Regression*. Sage: Newbury Park, CA.

Jobber D, Saunders J. 1988. An experimental investigation into cross-national mail survey response rates. *Journal of International Business Studies* **19**: 483–489.

Johnson RA. 1996. Antecedents and outcomes of corporate refocusing. *Journal of Management* **22**: 439–483.

Johnson RA, Hoskisson RE, Hitt MA. 1993. Board of director involvement in restructuring: the effects of board versus managerial controls and characteristics. *Strategic Management Journal*, Summer Special Issue **14**: 33–50.

Jones AP, Johnson LA, Butler MC, Main DS. 1983. Apples and oranges: an empirical comparison of commonly used indices of interrater agreement. *Academy of Management Journal* **26**: 507–519.

Kerlinger FN, Pedhazur EJ. 1973. *Multiple Regression in Behavioral Research*. Holt, Rinehart &Winston: New York.

Khanna T, Palepu K. 1999. The right way to restructure conglomerates in emerging markets. *Harvard Business Review* **77**(4): 125–134.

Khanna T, Palepu K. 2000a. The future of business groups in emerging markets: long-run evidence from Chile. *Academy of Management Journal* **43**: 268–285.

Khanna T, Palepu K. 2000b. Is group affiliation profitable in emerging markets? An analysis of diversified Indian business groups. *Journal of Finance* **55**: 867–891.

Khanna T, Rivkin JW. 2001. Estimating the performance effects of business groups in emerging markets. *Strategic Management Journal* **22**(1): 45–74.

La Porta R, Lopez-de-Silanes F, Shleifer A, Vishny R. 1997. Legal determinants of external finance. *Journal of Finance* **52**: 1131–1150.

La Porta R, Lopez-de-Silanes F, Shleifer A, Vishny R. 1998. Law and finance. *Journal of Political Economy* **106**: 1113–1155.

Leff N. 1976. Capital markets in less developed countries: The group principal. In *Money and Finance in Economic Growth and Development*, McKinnon R (ed). Dekker: New York; 97–122.

Lincoln JR, Gerlach ML, Ahmadjian CL. 1996. Keiretsu networks and corporate performance in Japan. *American Sociological Review* **61**: 67–88.

Lubatkin MH, Ndiaye M, Vengoff R. 1997. The nature of managerial work in developing countries: a limited test of the universalist hypothesis. *Journal of International Business Studies* **28**: 711–733.

Markides CC. 1992. Consequences of corporate refocusing: ex ante evidence. *Academy of Management Journal* **35**: 398–512.

Markides CC, Williamson PJ. 1996. Corporate diversification and organizational structure: a resource-based view. *Academy of Management Journal* **39**: 340–367.

Megginson WL, Netter JM. 2001. From state to market: a survey of empirical studies on privatization. *Journal of Economic Literature* **39**: 321–389.

Meyer AD, Brooks GR, Goes JB. 1990. Environmental jolts and industry revolutions: organizational responses to discontinuous change. *Strategic Management Journal*, Summer Special Issue **11**: 93–110.

Podsakoff PM, Organ DW. 1986. Self-reports in organizational research: problems and prospects. *Journal of Management* **12**: 531–544.

Porter ME. 1980. *Competitive Strategy*. Free Press: New York.

Rajagopalan N, Spreitzer GM. 1997. Toward a theory of strategic change: a multi-lens perspective and integrative framework. *Academy of Management Review* **22**: 48–79.

Ramamurti R. 2000. A multilevel model of privatization in emerging economies. *Academy of Management Review* **25**: 525–550.

Robinson WS. 1957. The statistical measurement of agreement. *American Sociological Review* **22**: 17–25.

Sheard P. 1994. Interlocking shareholdings and corporate governance. In *The Japanese Firm: Sources of Competitive Strength*, Aoki M, Dore R (eds). Oxford University Press: New York; 310–344.

Simmonds PG. 1990. The combined diversification breadth and mode dimensions and the performance of large diversified firms. *Strategic Management Journal* **11**(5): 399–410.

Streeten P. 1994. Human development: means and ends. *American Economic Review* **84**: 232–237.

Suzuki S, Wright RW. 1985. Financial structure and bankruptcy risk in Japanese companies. *Journal of International Business Studies* **16**: 97–110.

Tallman S, Li J. 1996. Effects of international diversity and product diversity on the performance of multinational firms. *Academy of Management Journal* **39**: 179–196.

Uhlenbruck K, De Castro JO. 2000. Foreign acquisitions in Central and Eastern Europe: outcomes of privatization in transition economies. *Academy of Management Journal* **43**: 381–402.

Wan WP, Hoskisson RE. 2003. Country resource environments, corporate diversification strategies and firm performance. *Academy of Management Journal* **46**: 27–45.

Wiseman RM, Catanach AH. Jr. 1997. A longitudinal disaggregation of operational risk under changing regulations: evidence from the savings and loan industry. *Academy of Management Journal* **40**: 799–830.

Zahra SA. 1999. The changing rules of global competitiveness in the 21st century. *Academy of Management Executive* **13**: 36–42.

Zajac EJ, Kraatz MS. 1993. A diametric forces model of strategic change: assessing the antecedents and consequences of restructuring in the higher education industry. *Strategic Management Journal*, Summer Special Issue **14**: 83–102.

APPENDIX: MEASUREMENT SCALES OF THE DEPENDENT, INDEPENDENT, AND MODERATOR VARIABLES

Asset restructuring

1a. How many businesses has your company bought in the past five years?

1b. During the past five years, how many businesses has your company sold to other firms or liquidated?

2. Approximately, what percent of your company's overall sales are due to these acquisitions?

3. How much does your company's strategy of buying other businesses emphasize each of the following?[1]
   (Likert scale: 1–7, scale anchors: not at all—very much)
   3a. Buying businesses because they are for sale at low prices.
   3b. Buying businesses because they have potential but need capital which your company can supply.
   3c. Buying businesses so that your company can improve market share.

4. During the past five years, how important have each of the following objectives been in leading to a restructuring decision? By restructuring we mean sizeable changes in the number of businesses owned by your firm. (Likert scale: 1–7, scale anchors: not at all—very much)
   4a. Improving overall profitability.
   4b. Reducing costs.

---

[1] The factor loadings for the components of item 3 are 0.75, 0.69, and 0.59, and for item 4 are 0.85 and 0.88. The composite scores for item 3 and 4 are the mean scores of their components to recapture scale (Ghiselli *et al.*, 1981).

Competitive change

In the past five years, how much have each of the following changed for your company?
   (Likert scale: 1–7, scale anchors: decreased—increased)

1. The number of local producers making products that compete with those your company sells.
2. The level of difficulty foreign companies have selling products in your local markets.
3. Your company's ability to raise capital.

Deregulation

In the past five years, how much have each of the following changed for your company?
   (Likert scale: 1–7, scale anchors: decreased—increased)

1. The number of government regulations with which your company must comply (reverse coded).
2. Government policy toward making domestic acquisitions.
3. Government policy toward purchases of privatized businesses.
4. Ease of your access to foreign markets for exporting products and services.

Group affiliation

How important are each of the following to your company?
   (Likert scale: 1–7, scale anchors: not at all—very much)

1. A bank which has a large ownership interest in your company.
2. Partner companies which have ownership interest in your company.
3. Other companies in which your company has ownership interest.