

International Differences in the Size and Roles of Corporate Headquarters: An Empirical Examination

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**INTERNATIONAL DIFFERENCES IN THE SIZE AND ROLES OF
CORPORATE HEADQUARTERS: AN EMPIRICAL EXAMINATION**

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This paper examines differences in the size and roles of corporate headquarters around the world. Based on a survey of over 600 multibusiness corporations in seven countries (France, Germany, Holland, UK, Japan, US, and Chile) the paper describes the differences among countries, and then applies a model of the factors determining the size of corporate headquarters (Young, Collis, and Goold, 2003) to systematically examine those differences.

The data shows that there are significant differences among countries in the size and role of corporate headquarters, and strongly suggests the existence of a developing country model, a European model, a US model, and a Japanese model of corporate headquarters. Contrary to popular expectations, corporate headquarters in the US are about twice the size of European counterparts. Headquarters there exert a higher level of functional influence and have larger staffs in certain key areas, such as IT and R&D. US managers are generally more satisfied than their European counterparts with their larger more powerful headquarters which suggests that, at least in the US context, large corporate headquarters can create value.

Japanese headquarters, as might have been expected, are substantially larger than elsewhere – a factor of four times larger than in Europe. However, those headquarters are becoming smaller because of dissatisfaction with their performance. It is clear that having headquarters the size of the Japanese firms in the survey is not conducive to value creation.

More specifically, the evidence cannot refute a hypothesis that the slope of the relationship between firm size and the size of corporate headquarters is the same across all countries, but that there are significant differences in the intercept for Chile, the US, Japan, and the European countries. What the data indicates is that at a firm employing 20,000, a European corporate headquarters would on average employ 124 individuals, a US headquarters would have 255 employees, and Japan 467 employees.

The paper also examines differences between countries in the extent to which they perform the two key corporate tasks of control and coordination. The US and Chile chose to be somewhat more interventionist in the traditional tools and processes used to monitor and control business units – setting strategy, budgets, and administering capital budgets. However, there was a significant difference in the degree of influence in operational affairs between countries. The US and Japan exerted far more influence than the other countries over every activity from IT and purchasing, to marketing, R&D and HR issues.

The US was also found to have significantly larger legal, tax, and treasury functions than the common European model, perhaps reflecting a more legalistic institutional structure. Japan also has significantly larger tax, treasury, and corporate management functions, but overall was not that much larger than the common European model.

While the causes of these observed differences cannot be directly determined from the research, suggestions are made that the institutional infrastructure, the size and homogeneity of the domestic market, and cultural factors within countries are important underlying drivers.

INTERNATIONAL DIFFERENCES IN THE SIZE AND ROLES OF CORPORATE HEADQUARTERS: AN EMPIRICAL EXAMINATION

While many aspects of organizational design, such as the M-form organization, are similar around the world (Dyas, de la Torre, Stopford), significant international differences have been observed in the organisational heritage shared by firms from a single country (Bartlett and Ghoshal 19). Since both micro elements of organization behaviour and macro elements of structure will reflect differences in broad societal phenomena, firms headquartered in the same country will adopt similar organisational designs (Child and Keiser 1979, European 2002) ¹.

One such difference concerns the size and role of corporate headquarters around the world. While drawn from a set of common global templates (Galbraith, Donaldson, Goold and Campbell) under the mandate that "structure follows strategy" regardless of domicile (Chandler 1966), the design of this entity will be influenced by a myriad of country specific variables from institutional systems to those that arise from deeper cultural and historical phenomena values, such as "power distance" or "individualism" (Hofstede 1980, 1991). Indeed, specific linkages between elements of a nation's institutional context and the size of corporate headquarters can be conjectured, such as the role that unions play on supervisory boards in Germany, or the impact of bank ownership also in Germany (Cable and Dirrheimer 1983).

In particular, the size and role of corporate headquarters should be one of the more sensitive indicators of international differences in corporate governance systems. While there is much debate over whether economic systems are converging (Kerr et al 1962, Hickson et al 1979) or continuing to exist in different forms of capitalism, such as a "Rhine" and "neoAmerican" model within Europe (Albert 1993), descriptive research has given rise to a view that there are market-centred and bank-centred economies (Denis and McConnel 2003). Such differences in governance systems will have their most direct influence on CEO level decisions. As the many dramatic alterations in the size of corporate headquarters under new CEO's at companies like Coca Cola and P&G illustrate (Neuborne and Berner 2000, and Faust 2000), the design of corporate headquarters is such a decision² and so will be directly affected by different governance systems.

Indeed, there is a popular belief that substantial differences in the size and roles of corporate headquarters around the world exist and have a substantive influence on firm performance (Economist 2000). The US and the UK, after decades pursuing shareholder value under the threat of discipline from the capital markets are believed to operate "lean and mean" headquarters that are paragons of cost efficiency. In contrast, European and Japanese firms, insulated from the external control pressure of "market-centred" economies by their "bank-centred" systems (Denis and McConnel 2003), are believed to be bureaucratic and able to afford the "slack" of a large headquarters (Skapinker, 2000). The headquarters of Japanese firms, particularly since the bursting of the "bubble economy" in the early nineties, are viewed as ripe for restructuring, burdened by a legacy of consensus decision making and protected by the keiretsu structure from capital market sanction (Helou 1991). Corporate headquarters in developing countries with nascent or missing

¹Some go so far as to claim that country of origin has profound and long-lasting effects on firm strategy, (Porter 1996).

²Indeed, the dissipation of shareholder funds in slack at corporate headquarters is often used to illustrate agency conflict between owners and managers (refs).

governance systems are believed to be fundamentally different again (Khannah).

While plausible, there is a dearth of empirical evidence with which to validate or contradict these beliefs. In perhaps the only substantive previous empirical research on the size of corporate headquarters, the Ashridge Strategic Management Centre conducted a survey of 120 companies in the UK (Young and Goold 1993) and the University of Passau surveyed 49 German companies (Buhner 1994) in the early nineties. This research effectively described the contemporary state of affairs in the UK and Germany, but the question of the generality of the findings to other institutional contexts naturally arose. Furthermore, the surveys covered a period before much corporate restructuring had occurred. The results, therefore, could be relevant for that time period alone, and might not lie on an efficient production frontier.

The absence of research is surprising given that the variation in the size of corporate headquarters is astounding. Some companies, like the leveraged buyout firm KKR in the US, can operate over \$40 billion in revenues with less than eighty people at headquarters (Baker and Smith 1998). Others, like Coca Cola before its recent restructuring, had nearly five thousand corporate employees for less than \$20 billion in revenues. Even within a single industry in one country, the variance can be enormous. In Germany in the late nineties, the chemical and pharmaceutical manufacturer, Hoechst had only 180 people in the headquarters function, at the same time as which Bayer had several thousand (Young et al. 2000).

This paper seeks to remedy that deficiency by using a unique database of over 600 companies in seven countries to determine whether systematic differences in the size and roles of corporate headquarters between countries actually exist, and if so, in what ways they differ (Collis et al 2005, Goold et al 2002). In particular, we examine whether there is a systematic difference between market, and bank centred economies, and between developed and developing countries. The most surprising result, to entice the reader, is that American corporate headquarters appear to be about twice the size of an apparently consistent European model and yet to be, if anything, more effective than those headquarters. Japanese corporate headquarters are substantially larger than US companies, and do appear to be less effective. The developing country model of headquarters appears to fit none of these developed country models.

The chosen methodology can describe international differences in corporate headquarters but does not attempt to account for those differences. While governance systems cannot be the explanation, it is recognised that there are myriad other potential causes of those differences, such as domestic market size and culture, and we merely conjecture towards the end of the paper as to which might account for the observed differences in the size and role of corporate headquarters.

The emphasis in this paper is on describing differences between countries, and it is left to a companion paper (Collis et al 2005) to systematically explain the causes of differences in the size of corporate headquarters among firms. A book (Young et al 2000) and several papers (Buhner 2000, Digmayer 2001, Eppink 1998, Jimenez 2000, Kagono 1998, Young and Goold 1999) present the detailed country specific findings of the survey, and provide more normative analyses.

DISTINCTIVE FUNCTIONS OF CORPORATE HEADQUARTERS

If we are to document the size and roles of the corporate headquarters, we need a precise definition of that entity. Empirically, few companies have difficulty documenting the number of employees who are formally employed at corporate headquarters. As a result, the survey data, which defined headquarters the same way in each country as “staff functions and executive management with responsibility for, or providing services to, the whole of (or most of) the company, excluding staff employed in divisional headquarters” should be reliable.

In spite of this, it is theoretically hard to draw precise lines around those activities which are performed at headquarters and in the business units (Markides 2002) even though since Chandler documented the emergence of the multibusiness corporation (Chandler 1966), it has been recognised that corporate headquarters plays a distinctive role in managing diversified firms. Indeed, the existence of a discrete headquarters, distinct from and having delegated decision rights to various operating units, delineates the M-form multi-business firm from a company that operates in several industries with a unitary functional organization structure.

Defined as the “general office”, Chandler originally attributed the unique roles of resource allocation, coordination, appraisal, and planning goals and policies to corporate headquarters (Chandler 1966 p9). Once self-contained units had been established to operate the corporation’s businesses, a superior entity - the corporate headquarters - still had to fulfill the roles of allocating resources among, and providing integration across those businesses, while also monitoring and evaluating their performance.

While those roles have not gone away, contemporary research has recognised that corporate headquarters also provides the additional functions of public entity reporting, and delivering shared services to the businesses (refs Goold et al, consulting firms). It is these four functions that are recognised as the distinctive roles of the corporate headquarters in a diversified firm because they have to be performed at the supra business unit level.

The first, and most important, role derives from the economic justification of the corporation as a diversified entity. It involves the functions that a corporate hierarchy performs more efficiently than is possible with the market governance of the transaction (Markides 2002). Chandler refers to these as the “entrepreneurial“ functions (Chandler 1991), others call them “parenting” skills (Goold and Campbell 1996). These are the value creating or coordinative functions which concern the development, allocation, and deployment of valuable corporate resources which are subject to scope economies (Collis and Montgomery 1997, Teece 1980).

The second role derives from the hierarchical nature of the diversified firm. The existence of a discrete corporate office requires it to monitor and control the performance of the autonomous units to which operational decision rights have been delegated. Since the corporate entity remains ultimately accountable for financial performance, it must adopt a control system to minimize agency costs.

In addition, as the legal representative of the firm to external constituencies, corporate headquarters bears all the associated reporting obligations and requirements, whether legal, financial, or regulatory that accompany such a status.

The fourth role of the corporate headquarters is providing activities which benefit from the operation of scale economies. Typically these activities are back office functions, such as payroll processing, that are referred to as “Shared Services” when performed at the corporate level. In principle, that shared activity could equally well be located in a business unit. It could even be outsourced to a third party, since the economic advantage sought is merely the aggregation of the function. There is, therefore, no compelling economic reason for corporate headquarters to provide the shared service, even though many companies find locating it there to be convenient.

THEORETICAL DETERMINANTS OF THE SIZE AND ROLES OF CORPORATE HEADQUARTERS

At this point it would be appropriate to lay out a comprehensive theory of the determinants of headquarters design. The country specific effects on each of the factors identified in that theory could then be identified in order to develop a rigorous theoretical explanation of the nature and extent of country differences in headquarters design. Unfortunately, this step is impossible to achieve (Collis et al 2005). The varied functions performed at headquarters, and the multiple theoretical perspectives, from the resource based view of the firm (Wernerfelt, Barney, Peteraf) to transaction cost economics (Coase, Williamson,) and agency theory (Jensen and Meckling, Baker) that claim jurisdiction over the phenomena, prohibit the development of a unified theory. Instead, we identify in Table 1 the determinants of the size of corporate headquarters which are suggested by theoretical frameworks for each of the four roles (Collis et al 2005), and then outline factors that will lead to country differences in those determinants. This approach has the merit of practicality and is appropriate for the primary aim of a paper which is exploratory and descriptive.

Information processing theory suggests that the more data reporting requirements a firm faces, the larger will be the external public company reporting function. Such requirements involve legal, taxation, financial, and other filings and will be affected by the external governance institutions as well as by internal organisational design choices. Moreover, it is the existence of economies of scale in the performance of common overhead activities, such as payroll processing, that allow for the aggregation and centralization of those functions in a “shared services” unit. To the extent that firms make a discretionary choice to locate such activities at headquarters, the presence of information processing scale economies will therefore increase the size and scope of activities performed at corporate headquarters.

Agency theory is the preferred framework with which to analyse the control function performed by corporate headquarters (Eisenhart 19 , Ouchi , Antle). A fundamental distinction has been drawn at the corporate level between financial and operating control (Hill et al 1990, Goold and Campbell 1987, Collis and Montgomery 1997 and 1998). Financial control corresponds to the outcome control resolution of the agency problem by measuring and periodically rewarding business units on their financial performance. Operating control, in contrast, is closer to the behavioural control solution by directly specifying certain strategies or policies and by continuously monitoring

individual operating decisions³. The demands on corporate headquarters of each type of control system are, therefore, substantially different and will be reflected in much larger headquarters for firms practicing operating control.

Organisational contingency theory (Donaldson 19) has a long history of application to the design of corporate headquarters, from its original statement by Chandler that “structure follows strategy” (Chandler 1966, p 14). Recently, the preferred contingent variable is the corporate strategy – defined as the way the entity seeks to create value from multi-business activity (ref). This suggests a dichotomy between related and unrelated corporate strategies (Rumelt ref), or between competitive and cooperative strategies (Hill et al 1990) that has profound consequences for the roles and size of headquarters under each of the two strategies.

Supporting this view with its focus on the value creating function of corporate headquarters, is the resource based view of the firm (Wernerfelt 1984, Collis and Montgomery 1997, Markides and Willamson 2002). In this perspective, it is the existence of valuable corporate resources that justify the existence of multi-business activity by generating scope economies (Teece 1980 and 1982). Adhering to a contingent view of organizational design that processes to invest in and deploy resources across businesses will vary with the nature of the resource, implies that the activities performed by corporate headquarters will vary with the valuable resource. While, in principle, the list of potentially valuable resources is long, in practice, researchers have argued either that the set is dichotomous (Hill et al 1990), or arrayed along a continuum of resource specificity (Collis and Montgomery 1997).

Finally transaction cost theory also illuminates the roles that corporate headquarters must perform. The existence of the multi-business corporation requires not only a valuable firm specific resource, but also a market failure or inefficiency (Williamson 19). In the absence of such a failure the value of the resource could be extracted through a market contract. Exactly which markets are absent or incomplete, will therefore determine the role that corporate headquarters must perform to fill in for those markets.

These theories, with their emphasis on the contingent design of corporate headquarters, suggest a number of factors that determine the size of headquarters in any country (see Young et al 2000, and Collis et al 2005, for more information on the determinants of the size of headquarters). While hard to develop accurate measures of those factors, they can pragmatically be categorized as due to differences in company size and structure, corporate strategy and the reflection of that strategy in the choice of certain policies and systems, and the external context within which that strategy operates, including the industries in which the firm competes and the technological and institutional structures it faces. These became the object of data collection in the survey (Appendix 1 describes the variables contained in the survey instrument).

COUNTRY EFFECTS

³ A third type, strategic control, is sometimes identified as intermediate between these two extremes (Goold and Campbell 1987).

With this framework in hand, it is expected that there will be important country specific effects in the design of corporate headquarters which can best be identified for each of the four unique functions (Table 1).

First, the reporting requirements of a public entity - providing the relevant authorities with legal, tax, accounting and other types of information that refer to the firm as a whole, will differ between countries according to the specific legal mandates and institutional structures that exist in those countries. While there is a trend for larger multinationals to list on multiple stock exchanges (Siegel), and the emergence of international accounting standards, such as , do suggest a convergence of some, primarily financial reporting requirements, substantial idiosyncratic country requirements. Similarly, the typical ownership structure, whether state owned, publicly held, or privately owned and controlled by an individual or family of firms in a country will affect the reporting requirements (Charkham 1994).

Second, the design of a firm's control system will differ among countries. Monitoring and reward schemes are designed to optimise individual behavior and so must respect country differences that arise from deeply held cultural beliefs that, for example, treat extrinsic and intrinsic rewards differently, or that value seniority rather than current performance differently, or prefer group rather than individual rewards (Laurent 1983 and other refs). To the extent to which these deeply embedded attitudes about work related values differ among countries (Hofstede 1980, 1991), we would expect to see profound differences in control systems between countries.

As these monitoring and reward systems can vary from outcome control relying on extrinsic individual rewards for meeting a few, primarily financial targets, with limited corporate involvement, to behaviour control that monitors and rewards decision-making and so requires substantial corporate intervention (Ouchi, Eisenhardt, Hill et al, Collis and Montgomery) the potential exists for substantial country differences in the size of corporate headquarters at performing this function. Other cultural differences, such as attitudes towards time, can also be expected to influence the design of something as fundamental as individual motivations towards reward and compensation, as will the administrative heritage of patterns and styles of decision making, such as Japan's consensus or ringi (Johnson 19***)

Third, the potential for shared services to be provided at a corporate centre will, to some extent, depend on the ability to exploit scale economies that justify aggregating the service at headquarters (ref to shared services). Companies based in larger geographic entities lend themselves more readily to this sort of activity than those in smaller countries where even aggregating across business units might not achieve sufficient scale to justify centralising activities.

Finally, the need for, and extent of the corporate nurturing and allocation of resources depends on the demands on the corporation to fill in for missing factor markets (Khannah). To the extent to which market failures and inefficiencies differ among countries (Khannah) we would expect the roles that corporate headquarters can economically justify will vary dramatically. In developing countries, for example, we might expect training and personnel development to be a corporate value adding function given the failures that abound in domestic labor markets (ref).

Ultimately these differences in the value adding functions performed at corporate headquarters can be interpreted as differences in a firm's corporate strategy (since they relate directly to the way the corporation adds value to its constituent businesses). To the extent that they can be explained by differences in corporate strategies, therefore, we would expect a firm specific not a country specific explanation for their variation. However, if we cannot fully identify the direct effect of corporate strategy on the size and roles of corporate headquarters, any residual variance that has a systematic country bias will show up as a country specific effect.

We can, therefore, advance the hypothesis that there will be significant differences in the size and roles of corporate headquarters between countries. We have not yet suggested in what direction the individual country effects will go. Indeed, the more interesting question is whether those differences are in anyway systematically correlated with international differences in governance structures. If there is any truth to distinction between market and bank centred economies, we could expect the former to have smaller headquarters. JUSTIFY Specifically, we test whether there is a significant difference in the size and roles of corporate headquarters between bank centred economies (represented in our sample by Japan and Germany), market centred economies (UK and USA), and developing countries (Chile).

Methods and Survey Instrument

A survey methodology was adopted because companies are not required to report data on the size of headquarters. The most relevant publicly available data is US filings with the SEC which include a line item for "corporate expenses". Unfortunately, this is a residual category after expenses have been allocated to self-reported segments, so there is no consistency across companies. In other countries, not even this level of detail is publicly available.

Data was collected in a survey of diversified companies undertaken by researchers from within each of seven countries between 1997 and 1999⁴. Countries were selected to include representatives of the four dominant governance systems (Albert 1993) - AngloAmerican, Continental European, Asian, and developing countries. Within each sphere, the specific choice of country was determined by contacts of the lead researchers. The survey instrument was an amended version of that originally employed in the UK in 1993 (Young and Goold 1993) in order to facilitate longitudinal comparisons. In five countries the survey was exactly the same, being merely translated into the appropriate language. In the US, some definitions were altered to recognise differences in contemporary usage – company secretary, for example, has a very different connotation in the US than in the UK - and the order and phrasing of some questions was amended. In Japan a local variant of the survey was employed which, unfortunately, makes comparison of some measures difficult.

In each country, CEO's of the largest corporations, identified as those with more than a certain number of employees, were mailed the survey questionnaire (Table 1). After initial responses, follow-up mailings and phone calls took place to contact non-respondents. While the extent of these contacts varied by country, final response rates were similar across countries,

⁴ Participants were M.Goold and D. Young of the Ashridge Strategic Management Centre in the UK, D. Collis of the Yale School of Management in the US, Georges Blanc of HEC in France, Rolf Buhner of Universtat Passau in Germany, Jan Eppink of the Vrije Universiteit Amsterdam in the Netherlands, Gonzalo Jimenez of Universidad Adolfo Ibanez in Chile, and Tadao Kagono of Kobe University in Japan.

averaging about 20%. While larger companies were more likely to respond, there is no reason to suspect survey bias. Follow up calls indicated that non-respondents were disproportionately single business entities that did not feel the questions were relevant.

The survey asked respondents to list the total number of employees at corporate headquarters, as well as the distribution of those employees between each of sixteen functions, such as treasury, and across the generic roles⁵. The survey, except in Japan, also requested data on the total expense of the corporate headquarters.

There was a significant difference in the size of firms responding to the survey in the various countries because the economies of the different countries are of markedly different sizes (Table 1). Not surprisingly, Chile had the smallest median firm size, measured as number of employees, the US the largest. One anomaly appears to be Japan, which has a low median employee size, but the highest median revenue per employee. The Japanese industrial structure includes many company cross holdings and affiliations, particularly of suppliers, that make establishing the boundary of the firm difficult (Kagono 1998). It appears that firm size in Japan as measured by number of employees may be understated by excluding subsidiary and affiliated company employees, while effectively including their value added in the company's revenue. Other statistics describing survey responses from the different countries are in Appendix 2.

RESULTS

HEADQUARTERS SIZE: Figure 1 presents the raw data on the size of corporate headquarters as a percentage of total corporate employment. Since firm size was the major determinant of the share of employees in corporate headquarters in every country, the data is plotted against firm size measured as number of employees (Collis et al 2005). The scatter diagram reveals enormous dispersion in the size of corporate headquarters. Indeed, there is a factor of almost three hundred between the largest and the smallest headquarters at any given firm size.

While there is enormous dispersion in the size of corporate headquarters, even within countries (Table 2 shows how the ranges of numbers in headquarters by firm size varied by country), important, and surprising country differences are apparent in the regression lines shown in Figure 2. While corporations in the different European countries cannot be shown to have different relationships between company and headquarters size, the US, and Japan, in particular, have significantly larger headquarters⁶. Indeed, for the 475 non financial companies that reported separate corporate headquarters the data indicates that at a firm employing 20,000, a European corporate headquarters would on average employ 124 individuals, a US headquarters would have 255 employees, and Japan 467 employees⁷.

⁵ For example, respondents were asked for each activity eg payroll administration, what percentage of that group's time was spent on shared services.

⁶ The existence of a common slope among all countries implies that scale economies in the operation of corporate headquarters are the same around the world. The slope coefficient in the univariate log/log regression pooled across all countries, implies that a doubling of firm size would only increase corporate headquarters staff by ***** - a scale slope of nearly 80%.

⁷ Given the possibility of mismeasurement of the size of Japanese firms mentioned earlier, some care needs to be taken in asserting the degree to which Japanese headquarters are larger than other countries. If we adjust Japanese firm size so

Chow tests⁸ were used to determine whether a single global model could be applied to each of the seven countries (Table 3). This showed that, with the exception of Chile, the relationship in all countries was significantly different from a pooled global model. Similarly, analysis of variance shows that allowing both slope and intercept to vary by country rejects, at the 1% level, the null hypothesis of a single global model that fits all countries. However, allowing the slope to vary between countries does not significantly reduce variance after incorporating different country intercepts⁹. Together these results indicate that while there is not a single global model for the relationship between firm size and the size of corporate headquarters, we cannot refute a hypothesis that the slope of the relationship between firm size and the size of corporate headquarters is the same across all countries, but that there are significant differences in the intercept for Chile, the US, Japan, and the European countries.

This suggests that there is no difference between bank centred and market centred governance systems. Instead it appears that there is a more regional model. When countries were tested for their difference from a pooled European model (Table 3), only Germany of the European countries showed a significant difference (and only at the 10% significance level), while the US, Japan, and Chile did show significant differences. Again, there were no significant differences between the slope coefficient of the European model and any individual country.

The stylized fact appears to be that there is a common European model, while the US and Japan have larger headquarters, although sharing the same slope with Europe. Chile, as befits a developing country, appears to be a model unto itself that cannot be shown to be statistically different to any other country¹⁰.

More limited data collected on the expense of corporate headquarters supports this pattern¹¹. Measured as a share of corporate revenue, the US at a median of 1.47%, and Chile at 2.19% had substantially more expensive headquarters than the UK 0.65%, Germany 0.60%, and the Netherlands 0.71%, even though the median expense for a corporate employee, excluding Chile, only varied from a low of \$177,000 in the Netherlands to a high of \$241,000 in France (Young et al 2000, Table 3-5).

The evidence of substantial differences in the size of corporate headquarters among countries, which supports the existence of a European, a US, and a Japanese model of corporate headquarters, was based on a simple univariate regression between firm and headquarters size. Given the contingent view of organizational design described above, one reason for the difference between the sizes of corporate headquarters among countries could be the many omitted variables. To control for this we examined how a more complete model of the determinants of corporate

that the median revenue per employee is the same as the average of all the other countries, the predicted size of corporate headquarters at 20,000 employees would be about 310.

⁸ The sample on which these tests were performed excluded financial firms and those without separate corporate headquarters – the two types of entity that were outliers in headquarters size.

⁹ The null hypothesis of a single slope for all countries was just rejected at the 10% significance level.

¹⁰ The small Chilean sample size and wide variance within the sample makes it hard to demonstrate any statistical significance in differences with other countries.

¹¹ No data on the expense of corporate headquarters was collected in Japan. In France, the median estimate of the fifteen reporting firms was 1.31%.

headquarters size differed between countries. This model draws on Collis et al 2005, where a full derivation of relationships is presented.

The overall size of the firm and its organisation structure can be expected to determine the size of corporate headquarters. Information processing theory suggests the operation of scale economies in data. Similarly, the choice of In spite of the widespread dissemination of the M-form organisation structure around the world after WW2, it was challenged as the optimal design for multibusiness corporations in the seventies by alternative structures, notably the matrix organization (Galbraith 1995) and more recently by the network organisation (Nohria and Eccles 1992) imposes differing information processing requirements on the headquarters unit (Galbraith 1995, Egelhoff 1988), and so can be expected to affect the size of headquarters. Two measures that describe the organization structure are the span of control of corporate headquarters, in terms of numbers of business units reporting to the center, and the number of organizational layers in the structure.

Dimensions of the corporate portfolio that will affect the size of headquarters include the broadly defined industry sector in which a firm competes because this affects the technological possibilities for scope economies and hence the degree to which corporate headquarters needs to actively coordinate activities across business units (Wiersema and Robbins 1995, Henderson and Cockburn 1996) as well as the ability to share services among otherwise separate business units; the relatedness of businesses in the corporate portfolio, which determines the appropriate design of the corporation's control systems (Hill et al 1992) and coordination systems, such that related portfolios will have more horizontal systems and processes than unrelated conglomerates because they can valuably leverage resources across multiple business units (Collis and Montgomery 1998); and the geographic scope of operations.

Choices a company makes as to the specific policies it employs to manage businesses in the portfolio, although jointly determined by the portfolio and structure, will also affect the size of corporate headquarters. To capture these phenomena the survey asked respondents to assess on a four point Likert scale the amount of influence and intervention the corporate office had in business unit decisions (from general budgeting and strategy issues, to specific functional decisions such as pricing and manufacturing); the style of control (whether financial or strategic); and the extent to which the corporate office actively exploited linkages across businesses.

In addition, the ownership structure of the firm, which is likely to differ substantially between countries, might affect the size of corporate headquarters. Research has demonstrated that the governance consequences of privately held and public corporations lead to behavioural differences on a number of dimensions, including merger and acquisitions behaviour (Morck et al 1988), and executive compensation (Finkelstein and Hambrick 1989). With respect to corporate headquarters, it is possible that publicly quoted companies will see corporate overhead as a managerial perk, while privately held firms will maintain efficient headquarters because the agency conflict between management and shareholders will be minimized (Shleifer and Vishny 1989). Similarly, nationalized or regulated entities will have objectives that differ from simple shareholder value maximization, including the provision of jobs, so that corporate headquarters might be larger (Aharoni 1986, Foster 1992).

Table 4 presents the results of the multivariate regression of these determinants of the size of corporate headquarters for all countries, and just for the European countries. Two versions of the model are presented, one that excludes corporate policy variables (HQ1 and 2), and one that includes those variables (HQ 3 and 4). Nearly all the variables are significant and with the expected sign, and the overall predictive power of the regression is high (see Young et al 2003, for more details). For purposes of understanding international differences in the size of headquarters, it is important to note that the country dummy included in the model is significant at the 0.1% level in both regressions including all countries, but it is significant only at the 10 and 5% level for the European countries alone, indicating more homogeneity within the European model.

To test for differences in the response of individual variables across countries, we examined the significance of the marginal improvement from the interaction of each variable with country dummies (Table 5). While there are some significant differences across countries in the effect of size, industry sector, influence and linkages, they are muted within Europe where only the slope coefficient in this more complex model of the determinants of the size of corporate headquarters differs across countries at a significance level of 5% or better.

Importantly, the relative size of corporate headquarters in the different countries indicated by this model shows a similar pattern to the previous data (Table 6). European headquarters are about one half the size of US headquarters, while Japanese headquarters are at least one third larger even when controlling for differences in portfolio, structure, and governance. Again, there is no finding of a bank versus a market centred difference in the regressions.

Performance : Given these substantial differences in the size of headquarters between Europe, the US, and Japan, we were interested in whether they had any performance implications. The evidence suggests that Japanese headquarters are too large, but that US firms are comfortable with the relatively large size of their headquarters and see these as creating value.

A direct test of the impact of larger Japanese and US corporate headquarters on financial performance runs foul of unobservable country fixed effects. There are many reasons to believe that financial measures of performance will systematically vary between countries, from differences in equity risk premia (refs) and the risk free interest rate, to accounting and taxation treatments (refs). Longitudinal capital market measures of performance across countries will confound changes with levels, so that value creation will not identify an absolute effect of corporate headquarters size. Cross-sectional capital market performance measures will suffer from country fixed effects on valuation. As a consequence we examined more indirect measures of performance.

Over the last five years more US firms have increased the size of their headquarters than have decreased them (Table 7). In contrast, all the European countries have seen many more firms reduce headquarters than increase them. The US has also seen proportionately more firms increasing their influence over business units and providing more services centrally, than their European counterparts. This suggests that the role of headquarters in the US has actually been increasing over the last several years. In contrast, Japanese firms have been the most likely to reduce the size of headquarters in the past.

In the next five years the pattern looks similar, with significantly fewer US firms expecting to reduce the size of headquarters than in Europe. Japanese firms report a much higher likelihood of reducing the size of corporate headquarters over the next five years. This evidence is sympathetic to the notion that Japanese firms, under pressure from poor performance and demands for change, are beginning to reform themselves and reduce the bureaucracy that has accumulated in the keiretsu.

It is by a very significant margin over all other countries that US firms state their satisfaction with the effectiveness of corporate headquarters – overall, and in terms of its cost effectiveness¹² and ability to support the corporate strategy (Table 7). This satisfaction rating, is perhaps the strongest evidence that for US firms¹³, larger headquarters are an advantage, rather than an impediment to effective implementation of corporate strategy and does strongly suggest that large headquarters staffs can add more than enough value to compensate for their higher cost¹⁴.

In spite of the other evidence, the percentage of Japanese firms that stated they were dissatisfied with their corporate headquarters was not substantially different to European firms. Perhaps Japanese respondents were culturally less willing to criticize their elders.

HEADQUARTERS ROLES

Part of the explanation for the substantial differences between countries in the size of their headquarters comes from a more detailed examination of the specific functions that are performed at headquarters (Table 8, and in the relative size of some of those functions in different countries (Table 9)

For the set of what might be considered public company or core corporate functions, very nearly every country has more than 90% of companies reporting the performance of those functions at headquarters – the top half of Table 8– (although quite how any corporation can survive with no corporate executives is a mystery!). Chi square tests were performed for the significance of the difference in the incidence of the functions between a pooled European model and the US and Japan, and within Europe and are reported in Table 9¹⁵. These, show few significant differences in incidence because in all countries certain core functions are the essential minimum roles of any corporate entity.

With the notable exception of Chile¹⁶, which has substantially larger numbers, the median sizes of these public company functions are also similar around the world (Table 9, which shows the median number of headquarters staff per thousand employees in a function in each country). The US

¹² Although satisfaction levels are self-reported, there is confirming evidence that they reflect effectiveness. Those companies who reported that cost effectiveness needed to be improved in many areas of headquarters, had 2.5 times the number of staff, when adjusted for firm size, than companies that reported the cost effectiveness of their headquarters was good in most areas.

¹³ Unless the satisfaction level merely reflects a natural American “irrational exuberance”

¹⁴ Tests of the relationship between size of corporate headquarters and measures of performance, including return on capital and total returns to shareholders, did show a positive relationship, although this begs the question of causation (see Young et al 2003 for more details).

¹⁵ The sample size for Chile was too small to report tests of significance at this level of refinement.

¹⁶ Because there are scale economies in the size of functions, Chile, which has smaller firms, will appear to have relatively more staff in each function.

was found to have significantly larger legal, tax, and treasury functions than the common European model, perhaps reflecting a more legalistic institutional structure. Japan also has significantly larger tax, treasury, and corporate management functions. However, in aggregate the size of these functions in the US and Japan was not that much larger than the common European model.

One of the interesting implications of this analysis concerns the minimum size of a corporate headquarters. It appears that in many countries it would be possible to run a 20,000 employee firm with only 27 people in headquarters. Those who doubt the feasibility of such a small headquarters, should note that ***** % of firms above that size did in fact report headquarters that small.

For a broad range of tasks whose salience would be expected to vary with corporate strategy, there is, however, considerable variation among countries – the lower half of Tables 8 and 9 where Chi squared tests of the difference between the US and Japan and a common European model are reported. Both the incidence and the size of many of those functions are very different between countries. European companies tend to have fewer of these functions and to have smaller such functions. Japanese headquarters both perform more of these tasks and have more staff in each function. The US is somewhat between the two extremes, and Chile is, again, a world unto itself. This data confirms the distinction between a European, Japanese, American, and developing country model of the roles of corporate headquarters.

Probably the most important differences in the incidence and size of discretionary functions in the US concern the IT, pension and pay administration, training, purchasing, marketing, and distribution functions. It is these functions that US corporations are significantly more likely than their European counterparts to perform at headquarters. The US also has a significantly larger IT function at headquarters than do European countries, in this case by a factor of nearly ten. This combination of a higher incidence of this function and its larger size means that IT makes a substantial contribution to the larger overall size of US corporate headquarters. In addition, although the incidence of the R&D function is similar in the US and Europe, when it does occur it is substantially larger in the US. There is a clear willingness in the US to have large corporate staffs in certain key activities.

The incidence of “discretionary” functions at corporate headquarters (Table 8) reveals just how extreme is the Japanese version of corporate headquarters. For every discretionary function, except corporate planning (which appears to show the reticence of Japanese firms to consider corporate planning a discrete function), Japan has higher incidences of the function being performed at headquarters than any other country. Many functions, such as HR management and training, which appear to be discretionary in other countries, are almost universal within Japanese companies. It is clear that the Japanese corporate headquarters is far more involved in the operation of its businesses than in any other country.

The size of discretionary functions in Japan is also significantly larger than in Europe (Table 9). Every discretionary function is larger than Europe, and the differences are particularly large in R&D and IT. It is also interesting to note that Japanese firms have much larger corporate departments for what are traditionally thought of as operating activities, such as marketing and purchasing. Japanese corporations are not just involved in the operation of their businesses, they also have a corporate staff of a size capable of substantial intervention.

Peeling the onion of country differences one level further to explain why the US and Japan have more discretionary and larger functions at headquarters, we can examine differences between countries in the role played by corporate headquarters in the operation of the business units, and the extent to which they perform the two key tasks of control and coordination (Table 10).

To examine how companies controlled their business units, the survey asked about the assessment method that was used to evaluate overall performance. While in every country about 10% of firms primarily used financial targets for performance assessment, countries differed in their preferences for using strategic targets, such as long-term competitive position, or a mix of financial and strategic targets. The US and the UK are similar in favouring strategic target setting, along with France and Germany, whereas Chile, Japan and, perhaps, surprisingly, the Netherlands, preferred a more mixed assessment (Table 10).

With respect to control, one revealing difference between countries was apparent in the degree to which corporate headquarters chose to directly influence specific business unit decisions¹⁷ (Table 10). The US and Chile chose to be somewhat more interventionist in the traditional tools and processes used to monitor and control business units – setting strategy, budgets, and administering capital budgets - in which every country had a relatively high degree of intervention (an average score of 2.3 for each on a 3 point Likert scale). But there was a significant difference in the degree of influence in operational affairs between countries. The US and Japan exerted far more influence than the other countries over every activity from IT and purchasing, to marketing, R&D and HR – an average of 1.6 versus 1.2 per activity.

The data, therefore, shows that corporate headquarters in the US and Japan have systematically more influence on the operational activities of their businesses than in Europe and Chile. While we might not be surprised that this is the case in Japan, to find a more interventionist and controlling headquarters in the US was unexpected, and partially accounts for the finding of larger headquarters in the US¹⁸.

Table 10 also reports the differences among countries in the extent to which corporate headquarters coordinated the operations of the various businesses by exploiting specific linkages. The US had a linkage score exactly the same as the European scores. This suggests that larger US headquarters are not due to more involvement in coordinating activities across businesses, but rather are due to more intervention within each separate unit. In fact, Chilean firms were the only outlier in the degree to which they tried to exploit linkages.

¹⁷ Respondents could rank each variable on a four point Likert scale, with the least amount of influence set to zero. The maximum possible score for influence of traditional control variables was 9.0 (three measures times a score of 3), and for 15.0 for operational variables (five measures times a score of 3).

¹⁸ American companies also report a much lower share of the corporate headquarters functions is spent in the provision of services to the business units. On average US firms report that about 20% of the time of the core functions involves the provision of shared services, while about 40% of the remaining functions are shared services. In contrast, for European firms about 45% of the core functions time is spent in services for the businesses, and about 60% of the other functions. This confirms the notion that American corporate headquarters play a much more independent role than their European counterparts

Japan also had a linkage score similar to the European model. Given that Japanese corporate portfolios were more related in a ranking of the similarity of their business portfolios in terms of products and services, product and process technologies, and customer dimensions which indicates that there was more potential for synergies among businesses in the portfolio (Table 10), this was an unexpected finding. Unfortunately, it almost certainly reflects a variation in the survey used in Japan, and not indifference to the potential for exploiting synergies among related businesses. Rather than phrasing the question positively, on the Japanese survey, the linkage question was translated negatively, to ask the degree to which business units were “self-contained”¹⁹.

DISCUSSION

The data shows that there are important differences among countries in the size and role of corporate headquarters, and strongly suggests the existence of a developing country model, a European model, a US model, and a Japanese model of corporate headquarters. Surprisingly, given that the legal and institutional structures that might be expected to shape corporate headquarters differ between AngloAmerican and Continental European traditions, there appears to be a consistent European and a discrete American model of corporate headquarters. In fact, US headquarters are about twice the size of their European counterparts, and certainly twice the size of their UK equivalents. In Japan, corporate headquarters are substantially larger again. Chilean headquarters are all over the place because the concept of corporate headquarters is emergent in developing countries where family owned groups remain dominant and market failures of all types are widespread (Jimenez 2000, Khanna *****).

Explanations for the differences between the US, Japanese and European models are necessarily conjectural. What is clear is that Japan has substantially more functions at the corporate level and larger staffs in those functions, and that US headquarters are more interventionist than their European counterparts and are more likely to have large central staffs in certain key functions, notably IT and R&D.

The Japanese model of large interventionist corporate headquarters might well be due to prohibition of the zaibatsu organizational form under the Occupation legislation, which essentially prohibited the M-form structure. In its place, firms that sought to manage portfolios of different businesses were compelled to perform a substantial amount of activities at the headquarters of a company that did not formally control those entities. As a result, corporate headquarters of keiretsu companies might be managing larger business portfolios than they formally report controlling. Indeed, if we adjust the number of employees at each Japanese firm so that their mean revenue per employee is the same as European firms, the average size of corporate headquarters would fall from 467 for a company of 20,000 employees to 310***, at which point it is still more than twice as large as European firms but closer to US firms.

Some of the difference in size of Japanese headquarters might also reflect a belief that resources are owned by the corporation and made available as needed to the businesses. This would explain the large staffs in corporate R&D and HR, as well as the substantially higher overall level of

¹⁹ Such problems, unfortunately, are often unavoidable in comparative international research that is performed collaboratively.

influence that Japanese headquarters exert over their businesses. It is also likely that the higher degree of relatedness in the corporate portfolio of businesses reported in Japan reflects more intense coordination across businesses even though the choice of survey question did not actually elicit a positive response in Japan.

The dissatisfaction expressed with the effectiveness of Japanese corporate headquarters and the intention of the vast majority to reduce the size of those offices in the next five years, however, does suggest that there is real inefficiency in the current structure. Part of this may be due to structural inefficiencies in Japan, such as the difficulty using Kanji character computers in white-collar jobs, but much of it must be simply due to a historical cultural acceptance of inefficiency and excessive bureaucracy in the corporate office. In turn, some of this might be due to the ringi or consensus decision making process which requires more managerial time (Chalmers ****). Certainly, it is hard not to attribute some of the size of Japanese headquarters to the culture of lifelong employment and the absence of severe discipline from the capital markets in the Japanese governance system. Contested takeovers are rare in Japan, which would allow slack to become entrenched in large headquarters.

The existence of a European and an American model, rather than a Continental and an Anglo Saxon model was a surprise. The US was found to have significantly larger corporate headquarters, which perform more functions, and were significantly more influential over the operation of the businesses. This finding was a surprise, given the ideology of independence, decentralization and market forces in the US. Its value was however confirmed by the satisfaction US managers expressed, relative to their European counterparts, with the performance of those larger headquarters. Perhaps, the large homogeneous domestic market has allowed corporate executives to be more involved in the businesses and has facilitated centralisation. IT facilities, for example, might be easier to provide centrally in the US, or at least be more closely directed by corporate headquarters because there is only one geography to deal with. In Europe, differing standards for different countries might compound the problem of differing business requirements, and so lead to a more decentralized solution. Certainly, there seems to be more willingness in the US to have large central units, like R&D, that perform key activities for the company as a whole.

That the four European countries were surveyed were so alike in the size and roles of corporate headquarters was also a surprise. Given the very different industrial structures, to say nothing of the different legal and institutional traditions and governance structures, the finding of similarity was a definite surprise. Only Germany, which was significantly different at the 10% **** level in an F test of European homogeneity, appeared to be any different to a common model. Perhaps, the EU has had more impact on corporate actions than previously thought in leading to convergence, or perhaps the recent emphasis on shareholder value has led to similar actions with regard to corporate headquarters. It has certainly led to substantial recent downsizings at companies as varied as Hoechst, Philips, and BNP.

That European firms systematically have the smallest corporate headquarters was nevertheless a surprise. One explanation for Germany's small corporate headquarters is the use of the "management holding" company structure. Employed to exploit tax advantages, the consequence has been the decentralization of responsibility to separate legal entities (Buhner 2000), and the consequent reduction in the corporate staff. Offsetting this, is the ongoing role of codetermination in

German governance structures, which might be expected to increase the size of corporate headquarters.

Dutch firms had the greatest international scope of all the countries in the survey, and the fact that they had relatively small corporate headquarters certainly supports an argument that operating in many different countries may actually decrease the size of headquarters since it can only manage dispersed operations effectively by allowing more independence to overseas subsidiaries. Indeed, geographic scope was not found to be a significant predictor of corporate headquarters size (Table 5).

It is possible to look at changes in the size of UK headquarters because of the prior Ashridge study in 1993 (Young and Goold 1993). This shows that in spite of the increasing rhetoric about shareholder value and decentralization in the UK, corporate headquarters have not declined substantially in the last five years. It was only the largest companies that have seen any decline in the average size of headquarters between the two survey dates (Young et al 2000, Figure 6-2).

Nevertheless, we should not overreach in our claims to understand the causes of the international differences we observed in the size and roles of corporate headquarters. This paper set out to describe those differences, rather than to systematically explain the observed differences.

CONCLUSION

Its main finding that there is not a “market centered” and “bank centered” model of corporate headquarters, suggests that at the level of important corporate decisions, other phenomenon have important independent influences.

Nevertheless, it is clear that we should not over-estimate the importance of differences in broad corporate governance systems on micro-level economic phenomena. Nor should we believe that a convergence in the formal aspects of these structures will necessarily lead to the convergence of firm behaviour. Other, equally deep rooted phenomena are at work in determining such important elements of corporate structure as the size of corporate headquarters.

There are wide variations in the size and role of corporate headquarters both between countries and within countries. Indeed, amongst all the evidence of global differences, we should not overlook the fact that there is more variation within each country than there is between countries. Some of those intra-country differences in size are simply the result of scale economies in the operation of corporate headquarters. Larger firms have proportionately smaller headquarters than small firms, regardless of country of origin. Some of the intra-country differences are the result of the various corporate strategies that firms within a country pursue. Since many of the functions performed at corporate headquarters are contingent on the strategy (Young et al 2003), variation in the size of corporate headquarters within a country is only to be expected. In particular, the extent to which the corporate strategy seeks to create value by directly influencing business unit operations, and actively managing linkages between those units has a major influence on the size of corporate headquarters, even within a country.

More normatively, the evidence does suggest, in line with a contingent view of corporate headquarters design, that it is not universally valuable to have small corporate headquarters. While companies with small headquarters can be successful, even in the US, it is clear that larger headquarters can also be correlated with high performance and executive satisfaction with their role and cost effectiveness.

It is evident, however, that differences in institutions and culture lead to differences in corporate headquarters among countries. The context in Japan and Chile is very different from that in the US and Europe and results in headquarters with very different sizes and roles. Globalisation, free flows of capital and ideas about corporate strategy might have led European countries to converge on a common model for headquarters, while Japan is clearly moving towards US and European practices, but differences remain.

Evidence strongly supports a finding that, contrary to popular expectations, corporate headquarters in the US are about twice the size of European counterparts. Headquarters there exert a higher level of functional influence and have larger staffs in certain key areas, such as IT and R&D. US managers are generally more satisfied than their European counterparts with their larger more powerful headquarters which suggests that, at least in the US context, large corporate headquarters can create value.

Japanese headquarters, as might have been expected, are substantially larger than elsewhere – a factor of nearly four times Europe. However, those headquarters are becoming smaller because of dissatisfaction with their performance. It is clear that having headquarters the size of the Japanese firms in the survey is not conducive to value creation.

The single developing country in the sample, Chile, does not appear to display a consistent approach to the size or role of corporate headquarters probably because the concept itself is only recently emerging (Jimenez 2000). Indications are that it will gradually converge on a more traditional model over time. Reliance on a single data point, however, does suggest the need to replicate this research in other developing countries before confirming the conclusion.

There is substantially less divergence across countries when comparing the size of only the minimum corporate parent functions. This suggests that there is a more global approach to the provision of these obligations. Substantive differences between countries arise from differences in the extent to which the corporate center intervenes in business unit activities or provides central resources and services to those businesses. Given the continuing divergence of the US and European models, it would be premature to predict convergence on a single global model of corporate headquarters, at least in these activities.

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Headquarters staff

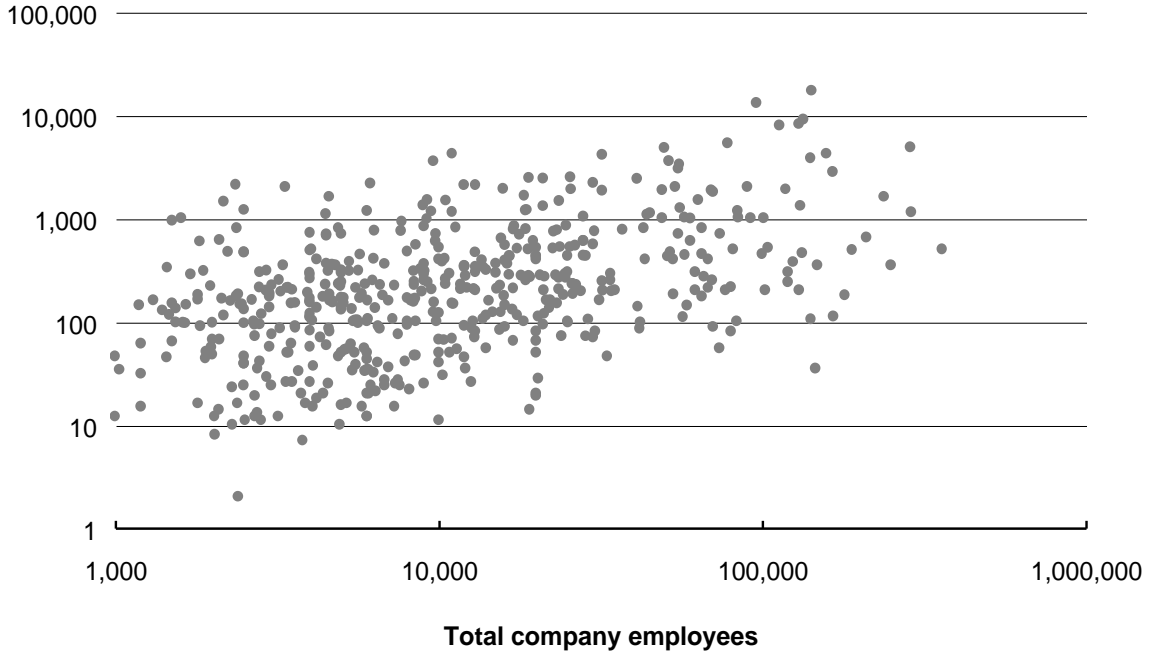


Figure 1. Headquarters staff versus company size

Figure 2 Regression of headquarters staff versus company size by country

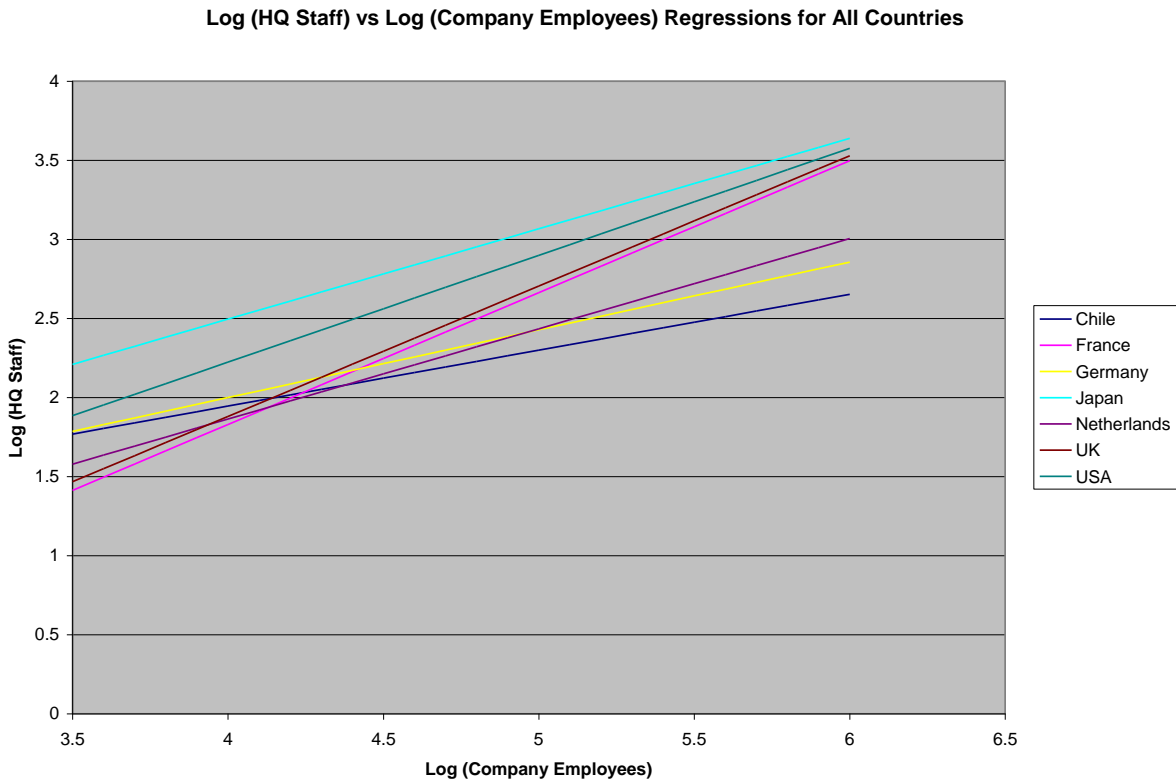


Table 1. The surveys

	France	Germany	Netherlands	UK	USA	Japan	Chile
Period of survey	1998-99	1997-98	1997-98	1997-98	1998-99	1997-98	1998
Target size (employees)	>2,000	>2,000	>2,000	>2,000	>5,000	>2,000	>1,000
Companies approached	170	370	120	500	840	870	200
Number of responses ^a	41	57	40	101	96	220	50
Percentage response	24%	15%	33%	20%	11%	25%	25%
Median employees (000)	24.7	10.0	7.3	10.8	24.7	6.1	2.1
Median turnover (\$bn) ^b	6.12	1.98	2.01	2.17	3.54	2.75	0.18

a. These numbers exclude some companies that were judged to be subsidiaries of other companies.

b. Industrial companies only. Turnover not measured for financial services companies.

Table 2. Headquarters staffing

	FRA	GER	NL	UK	USA	JPN	CHL	All
Number of companies	39	55	39	100	91	163	49	536
Number of headquarters staff								
Minimum	12	15	8	10	7	32	2	2
Maximum	3,800	17,100	1,115	8,100	13,030	7,912	1,328	17,100
Percentiles								
10	15	26	19	16	52	88	12	25
50	290	240	61	103	400	226	46	184
90	2,800	1,790	300	1,190	2,000	779	195	1,161
Number of HQ staff per 1000 employees								
Minimum	0.2	1.0	1.4	0.7	0.7	3.0	0.8	0.2
Maximum	349.1	670.1	107.1	890.6	295.9	336.2	324.6	890.6
Percentiles								
10	1.4	2.0	3.1	2.9	3.1	14.8	4.3	3.2
50	10.0	9.3	7.4	7.3	14.8	38.7	25.8	19.7
90	59.5	188.9	26.7	60.1	96.2	109.2	116.7	105.9
Geometric mean	10.0	17.6	8.5	9.8	15.9	38.9	25.4	18.6

Table 3
Chow Tests of Sample Homogeneity

	<u>Global Model</u>	<u>European Model</u>	
	F TEST	F TEST	SLOPE
CHILE	0.98	4.81*	3.82*
FRANCE	4.28**	0.42	
GERMANY	3.50*	3.02*	
NETHERLANDS	7.06**	0.35	
UK	17.84**	1.54	
USA	3.37*	11.61**	0.001
JAPAN	47.27**	74.1**	[.103]

ANALYSIS OF VARIANCE

SLOPE 1.85

SLOPE AND INTERCEPT 13.64**

ANALYSIS OF VARIANCE

SLOPE [0.53]

SLOPE AND INTERCEPT 1.04

* 5%, ** 1% significance
[interpolated}

Table 4. Regressions for proportion of employees in corporate headquarters

Log(HQ staff per 1000 employees) - Analysis of variance (Type III sums of squares)				
	HQ1	HQ2	HQ3	HQ4
	All	Europe	All	Europe
<i>Corporate portfolio</i>				
Number of employees	15.080 - ***	6.312 - ***	13.561 - ***	6.375 - ***
Industry sector	17.585 ***	15.077 ***	15.244 ***	12.231 ***
Relatedness	1.464 + **	2.132 + ***	0.009 -	0.052 +
Geographic scope		0.026 +		0.204 +
<i>Corporate structure</i>				
Span of control	0.014 +	0.046 -	0.038 +	0.246 -
Organizational layers	2.528 - ***	2.326 - ***	1.183 - **	1.043 - **
<i>Corporate policies</i>				
General influence			0.457 -	0.364 -
Functional influence			5.381 + ***	3.937 + ***
Financial control			0.092 -	0.074 -
Linkages			0.857 + *	0.351 +
Shared services				1.780 + ***
Services data missing				1.049 + **
<i>Ownership & regulation</i>				
Privately owned	0.172 +	0.887 + *	0.005 +	0.254 +
Government owned	4.291 + ***	4.999 + ***	2.573 + ***	2.789 + ***
Regulated public	0.483 +	0.265 +	0.331 +	0.315 +
Privatized	1.653 + **	2.305 + ***	1.305 + **	1.448 + **
<i>Country</i>	21.274 ***	1.465 #	14.223 ***	1.453 *
Corrected model	83.176 ***	46.945 ***	91.155 ***	55.060 ***
Residual	<u>84.172</u>	<u>37.312</u>	<u>76.193</u>	<u>29.197</u>
Corrected total	<u>167.349</u>	<u>84.257</u>	<u>167.349</u>	<u>84.257</u>
RMS residual	0.437	0.434	0.417	0.390
R squared	0.497	0.557	0.545	0.653
Adjusted R squared	0.469	0.506	0.514	0.601
N	467	222	467	222

+ and - indicate the sign of the regression coefficient for quantitative variables.

Significance levels: # p<0.1; * p<0.05; ** p<0.01, *** p<0.001.

Table 5. Tests for differences in response across countries

Log(HQ staff per 1000 employees) - Analysis of variance (Type III sums of squares)								
	HQ1		HQ2		HQ3		HQ4	
	All		Europe		All		Europe	
Marginal improvements from inclusion of interactions with Country								
<i>Corporate portfolio</i>								
Number of employees	2.916	*	1.307	#	3.025	**	1.209	*
Industry sector	14.426	#	4.097		13.559	*	3.407	
Relatedness	2.272	#	0.478		1.669		0.464	
Geographic scope			0.540				0.344	
<i>Corporate structure</i>								
Span of control	0.473		0.175		0.452		0.074	
Organizational layers	2.342	#	0.031		1.627		0.073	
<i>Corporate policies</i>								
General Influence					0.435		0.080	
Functional Influence					2.617	**	0.221	
Financial control					1.698		1.034	#
Linkages					2.282	*	1.008	#
Shared services							0.288	
<i>Ownership & regulation</i>								
Privately owned	1.071		0.164		0.840		0.057	
Government owned	1.169		0.273		0.825		0.199	
Regulated public	0.512		0.167		0.569		0.370	
Privatized	1.454		0.731		1.073		0.590	

Significance levels: # p<0.1; * p<0.05; ** p<0.01, *** p<0.001.

Table 6. Differences in headquarters size across countries

Country	Number of companies	Relative number of headquarters staff	
		CN1 ^a	CN2 ^b
France	39	x0.66	x0.41
Germany	47	x0.69	x0.68
Netherlands	38	x0.33	x0.32
UK	98	x0.46	x0.40
USA	87	x1.00	x1.00
Japan	116	x1.42	x1.37
Chile	42	x0.57	x0.43
N		467	467
Significance		p<0.001	p<0.001

a. Controlled for company size.

b. Controlled for corporate portfolio, corporate structure, ownership and regulation.

Table 7 Changes to, and effectiveness of corporate headquarters

NET CHANGE IN HEADQUARTERS (%reporting increase - % reporting decrease)							
PAST FIVE YEARS CHILE	FRANCE	GERM.	NETH.	UK	US	JAPAN	
No. of staff	34	-23	-14	27	-19	19	-39
Outsourcing	36	30	47	20	32	37	-3
HQ influence	24	30	2	12	15	27	na
Services provided	19	23	25	-7	13	36	7
FUTURE FIVE YEARS							
No. of staff	10	-25	-33	-23	-22	-13*	-70
Outsourcing	38	31	35	9	36	40*	10
HQ influence	23	20	2	16	19	20	na
Services provided	21	20	14	-11	3	30*	8
EFFECTIVENESS							
GOOD IN MOST AREAS (% reporting)							
Overall	23	22	38	32	24	61**	27
Cost Efficiency	41	27	38	45	31	53*	na
Support Strategy	45	29	50	30	34	63**	na

Table 8. Functions included in corporate headquarters

Function	% of companies including function within headquarters							
	FRA	GER	NL	UK	USA	JPN	CHL	Europe
General corporate management	100%	90%	95%	93%	95%	99%*	100%	94%
Legal & company secretary	89%	88%	100%	100%	100%	95%	82%	96% ***
Treasury	87%	87%	95%	97%	100%*	100%*	98%	92% #
Taxation	89%	90%	92%	99%	95%	94%	73%	94% #
Financial reporting & control	97%	94%	100%	100%	91%	100%*	94%	98% #
Internal audit	89%	83%	64%	84%	93%*	95%	67%	81% *
Pensions/ payroll/ benefits administration	68%	60%	67%	92%	91%*	97%	49%	76% ***
Human resources/ career development	87%	79%	95%	81%	86%	100%*	63%	84%
Training & education	68%	67%	44%	56%	74%*	96%*	41%	58% #
Government & public relations	87%	92%	87%	85%	87%	96%*	61%	87%
Corporate planning/ development	87%	87%	72%	91%	94%*	66%*	71%	86% *
Research & development	39%	33%	41%	27%	40%	68%*	49%	33%
Marketing/ commercial services	45%	37%	33%	32%	58%*	67%*	53%	35%
Purchasing/ inbound logistics	45%	52%	28%	32%	73%*	71%*	47%	38% *
Distribution/ outbound logistics	18%	12%	5%	7%	41%*	47%	39%	10%
Information systems & telecommunications	79%	69%	64%	67%	92%*	97%*	57%	69%

Significance levels: # p<0.1; * p<0.05; ** p<0.01, *** p<0.001.

Table 9. Function staffing levels

Function	Median headquarters staff per 1000 employees						
	FRA	GER	NL	UK	USA	JPN	CHL
General corporate management	0.43	0.93	0.51	0.56	0.48	1.14*	2.92
Legal & company secretary	0.80	0.63	0.67	0.52	0.94*	0.63	1.33
Treasury	0.36	0.40	0.40	0.33	0.63*	1.29*	2.00
Taxation	0.20	0.40	0.30	0.28	0.44*	0.56*	0.67
Financial reporting & control	0.93	0.80	1.08	0.81	0.42	1.51	2.36
'Obligatory' functions	2.08	3.62	3.20	2.59	3.40	5.33	10.00
Internal audit	0.49	0.34	0.37	0.40	0.48	0.66	1.50
Pensions/ payroll/ benefits administration	0.44	0.56	0.76	0.61	0.91	1.06	2.50
Human resources/ career development	0.74	0.61	0.57	0.45	0.61	2.01	1.71
Training & education	0.24	0.26	0.37	0.19	0.30	0.98*	0.95
Government & public relations	0.35	0.44	0.43	0.25	0.40	0.72*	0.82
Corporate planning/ development	0.35	0.38	0.42	0.32	0.40	0.51	1.91
Research & development	0.59	3.64	0.27	1.99	3.33	6.31*	2.86
Marketing/ commercial services	0.65	0.92	1.79	0.49	0.68	2.60*	3.88
Purchasing/ inbound logistics	1.33	1.65	0.53	0.45	0.70	2.17*	3.00
Distribution/ outbound logistics	1.25	7.65	1.55	0.25	0.75	1.59	4.00
Information systems & telecommunications	0.71	0.77	0.76	0.41	3.22*	5.66*	4.36
Other	3.01	1.40	0.80	0.81	3.00	7.65	5.07
'Discretionary' functions	7.55	2.75	5.43	3.71	10.00	32.04	17.50

Table 10. Corporate policies

	FRA	GER	NL	UK	USA	JPN	CHL	All
Number of companies	39	55	39	100	91	163	49	536
General planning influence (mean scales 0-3)								
Setting of budgets and financial targets	2.08	1.95	2.28	2.24	2.52	2.26	2.22	2.25
Major capital investments	2.33	2.13	2.41	2.35	2.61	2.14	2.76	2.35
Business strategy/ new business creation	2.64	2.35	2.24	2.29	2.22	2.07	2.20	2.23
General planning influence score (0-9)	7.05	6.42	6.91	6.88	7.36	6.46	7.18	6.83
SD of general influence score	1.56	1.81	1.80	1.83	1.86	2.14	1.80	1.93
Functional planning influence (mean)								
Human resources	1.74	1.33	1.46	1.45	1.69	2.01	1.61	1.68
Research and development	1.31	1.37	1.21	0.92	1.63	1.65	1.37	1.39
Marketing	1.21	1.04	0.87	0.92	1.25	1.40	1.43	1.19
Purchasing/ logistics	1.00	1.30	0.79	0.91	1.54	1.17	1.27	1.17
Information technology	1.87	1.75	1.64	1.60	2.20	2.09	1.27	1.85
Functional planning influence score (0-15)	7.13	6.79	5.98	5.79	8.35	8.31	6.97	7.29
SD of functional influence score	3.63	3.93	3.67	3.92	4.09	3.34	4.37	3.92
Assessment method								
Flexible strategic	33%	25%	56%	30%	29%	52%	58%	40%
Tight strategic	49%	62%	38%	59%	60%	39%	31%	49%
Tight financial	18%	13%	5%	11%	11%	9%	10%	11%
	100%	100%	100%	100%	100%	100%	100%	100%
Linkages among divisions (mean)								
Provision of products and services	1.33	1.26	1.31	1.35	1.26	0.80	1.98	1.21
Dev. of product/ process technologies	1.33	1.27	1.28	1.23	1.40	1.00	1.79	1.26
Dealings with customers	1.15	1.00	0.87	1.06	1.07	1.25	1.57	1.15
Linkage score (0-9)	3.82	3.53	3.46	3.64	3.72	3.05	5.34	3.62
SD of linkage score	2.58	2.63	2.39	2.69	2.64	2.45	2.51	2.62
Relatedness score								
Mean	4.23	4.28	3.97	4.23	4.43	5.14	4.42	4.55
SD	2.48	2.64	2.63	2.56	2.40	2.21	2.52	2.45

Appendix 1. Variable definitions

Variable	Definition
<i>Headquarters staffing and structure</i>	
Proportion of employees working in headquarters	Log(number of headquarters staff per 1000 employees)
Obligatory staff	Total staff in five functions included in most headquarters.
Discretionary staff	Total headquarters staff - obligatory staff.
Change in headquarters staff	Scale (-1 to +1) indicating level of staff compared to five years ago: -1 = lower; 0 = same ($\pm 10\%$); +1 = higher.
<i>Corporate portfolio</i>	
Number of employees	Log(total company employees).
Industry sector	Categorical (12 values).
Geographical spread	Scale (1-4): 1 = operates in one country; 2 = one continent; 3 = two continents; 4 = three or more continents.
Relatedness of divisions	Score (0-9) based on extent of similarity of divisions in three areas: products/services, product/process technologies, and customer bases.
<i>Corporate structure</i>	
Span of control	Scale (1-4) indicating the number of divisions reporting directly to corporate headquarters: 1 = 1 to 3; 2 = 4 to 10; 3 = 11 to 30; 4 = more than 30.
Organizational layers	Scale (1-5): 1 = single business unit; 2 = dominant business unit; 3 = divisionalized, single BU divisions; 4 = divisionalized, multi-BU divisions; 5 = matrix of divisions.
<i>Corporate policies</i>	
Financial control emphasis	Scale (1-3): 1 = flexible strategic control; 2 = tight strategic control; 3 = tight financial control.
General planning influence	Score (0-9) based on strength of corporate influence in three areas: setting of budgets, major capital investments, and business strategy/ new business creation.
Functional planning influence	Score (0-15) based on strength of corporate influence in five functional areas: human resources, R&D, marketing, purchasing/ logistics, and information technology.
Linkages between divisions	Score (0-9) reflecting extent of operational linkages between divisions in the provision of products/ services, development of technologies and dealings with customers.
Shared services emphasis	Scale (1-3): 1 = less than 20% of HQ staff provide services to business divisions; 2= 20 to 40%; 3 = more than 40%.
<i>Ownership and regulation</i>	
Privately owned	0 = no; 1 = yes.
Government owned	0 = no; 1 = yes.
Regulated, public	Publicly owned, but subject to statutory regulation of competition/ prices: 0=no; 1=yes.
Privatized	Previously owned by national or local government: 0=no; 1=yes
Country	Categorical (FRA, GER, NL, UK, USA, JPN, CHL).
<i>Performance</i>	
Overall effectiveness	Scale (1-3): 1 = needs improving in many areas; 2 = Needs improving in some areas; 3 = good in most areas.
Cost effectiveness	Scale (1-3) as above.
Return on capital employed	Profit before interest and tax/ (Total assets – Current liabilities) averaged over previous five years.
Shareholder return	(Increase in share price + Gross dividend)/ Initial share price averaged over previous five years.
Growth in sales turnover	Percentage increase in sales turnover, average annual rate over previous five years.

Appendix 2. Corporate portfolios

	FRA	GER	NL	UK	USA	JPN	CHL	All
Number of companies	39	55	39	100	91	163	49	536
Industry sector								
Mineral extraction and processing	5%	2%	3%	4%	7%	4%	10%	5%
Building and construction	-	2%	10%	7%	1%	11%	2%	6%
Chemicals and pharmaceuticals	8%	7%	3%	6%	7%	13%	4%	8%
Manufacturing	21%	13%	38%	21%	29%	37%	10%	27%
Industrial services	8%	4%	23%	9%	11%	17%	6%	12%
Retailing, transport & consumer services	18%	13%	8%	20%	31%	10%	10%	16%
Telecommunications networks	5%	-	-	2%	2%	2%	4%	2%
Electricity, gas and water utilities	3%	7%	3%	4%	1%	5%	12%	5%
Commercial financial services	-	9%	3%	3%	3%	1%	8%	3%
Retail financial services	18%	9%	5%	14%	4%	-	2%	6%
Diversified/ conglomerate	10%	22%	3%	9%	1%	-	10%	6%
Other	5%	13%	3%	1%	3%	-	20%	4%
	100%	100%	100%	100%	100%	100%	100%	100%

Span of control	(scale value)								
1 - 3 divisions	(1)	18%	13%	10%	24%	30%	14%	33%	20%
4 - 10	(2)	67%	53%	59%	65%	54%	49%	65%	57%
11 - 30	(3)	10%	22%	31%	10%	12%	29%	2%	18%
> 30	(4)	5%	13%	-	1%	3%	8%	-	5%
		100%	100%	100%	100%	100%	100%	100%	100%
Missing		-	-	-	1	1	20	-	22
Divisional complexity	(scale value)								
Single business unit	(1)	3%	4%	-	3%	-	2%	6%	2%
Dominant business unit	(2)	8%	9%	-	9%	15%	28%	31%	17%
Single BU divisions	(3)	10%	11%	42%	38%	47%	28%	31%	31%
Multi-BU divisions	(4)	56%	64%	55%	48%	30%	32%	33%	41%
Matrix of divisions	(5)	23%	11%	3%	2%	8%	11%	-	8%
		100%	100%	100%	100%	100%	100%	100%	100%
Missing		-	2	1	-	-	7	-	10
Geographical spread	(scale value)								
One country	(1)	15%	35%	13%	31%	36%	NA	51%	32%
One continent	(2)	21%	22%	21%	8%	9%	NA	45%	18%
Two continents	(3)	5%	9%	10%	19%	11%	NA	2%	11%
Three or more continents	(4)	59%	35%	56%	42%	44%	NA	2%	39%
		100%	100%	100%	100%	100%	NA	100%	100%
Missing		-	-	-	-	-	163	-	163