COUNTRY INSTITUTIONAL DIFFERENCES AND MULTINATIONAL ADVANTAGE
IN BANKING

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Country Institutional Differences and Multinational Advantage in Banking

Abstract

(190 words)

In this paper, we seek to answer the following questions: “Do country-level institutional differences affect benefits of multinationality? If so, how?” Focusing on resource and knowledge transfers as the key source of multinational advantage, we argue that the degree to which multinationals can benefit from such transfers depends on the extent to which knowledge or other resources are applicable across units. We further argue that the greater the institutional similarity across different countries in which the MNE is present, the greater the applicability and transferability of resources across its units. Hence, we claim that the greater the institutional similarity, the greater the firm performance and, further, the greater the effect of multinationality on performance.

We test these arguments in a sample of 85 multinational banks using data from 2001-2002. We find that (1) institutional similarity significantly improves MNE performance, (2) multinationality does not have an independent effect on performance, and (3), contrary to our expectation, the positive effect of institutional similarity actually decreases with increasing levels of multinationality. Our paper contributes to the literature on multinationality, learning and resource transfer within MNEs, and the contingent resource-based theory of the firm.
Companies continue to expand beyond their home country through foreign direct investment (FDI). However, the evidence on performance benefits of multinationality is mixed (e.g. Grant, 1987; Morck and Yeung, 1991; Ramaswamy, 1995; Tallman and Li, 1996; Hitt et al, 1997; Gomes and Ramaswamy, 1999).

Although the literature has advanced different theoretical arguments for why FDI might be profitable, such as scale economies, resource transfer and risk diversification, most empirical research has tended to use multinationality as a proxy for all of them (Grant, 1987; Tallman and Li, 1996; Hitt et al, 1997; Gomes and Ramaswamy, 1999). Morck and Yeung (1991) is an exception where the authors separately tested four arguments for and against multinational advantage: leveraging intangible assets, risk diversification, tax and factor cost advantages, and managerial motives. Their results show that multinationality only creates a performance advantage when the firm possesses intangible assets, which it can leverage across its markets.

Despite Morck and Yeung’s (1991) early contribution, subsequent research has gone back to testing multinational advantage by measuring multinationality rather than the distinct theoretical sources of value (e.g. Tallman and Li, 1996; Hitt et al, 1997). Moreover, although Morck and Yeung (1991) provided some empirical evidence of the multinational advantage based on the transfer of intangible assets (such as technology and brand reputation) from home country to subsidiaries, which is only one type of intrafirm transfer, we believe there is a need to examine the advantages of intrafirm transfer in MNEs more generally. Researchers and practitioners have given increasing importance to intrafirm resource transfer and learning in MNEs as a source of MNE advantage (Bartlett and Ghoshal, 1986; 1989). However, despite some recent research on the organizational determinants of intra-MNE knowledge transfer (Ghoshal and Bartlett, 1988; Gupta and Govindarajan, 2000), little research has examined the
role of country differences in affecting the benefits from resource transfer more generally (we consider knowledge as a type of resource). We argue that the potential benefits of and effective possibility for engaging in resource transfer in a MNE depends on similarities across countries. The value of transferring resources across subsidiaries is heavily influenced by whether the resource developed in one subsidiary is applicable in another (Hu, 1995; Goerzen and Beamish, 2003).

In this paper, we focus on cross-country institutional differences because the benefits of resource transfer take for granted that an appropriate institutional infrastructure exists in the destination country to exploit the resource. However, countries vary in the degree to which property rights that enable economic exchange are established (North, 1990), or the degree to which they provide adequate protection for market participants (La Porta et al, 1998; Kaufman et al, 1999). By a country’s institutional environment we refer to institutions that enable economic transactions and thus the functioning of the market, that is, how well property rights are defined and enforced in a country (North, 1990). We argue that the more similar the institutional environment is across the countries in which a company is present, the more applicable the firm’s resources are across those countries. In addition, aside from the ability to transfer intangible assets (such as technology or brands), firms can build a capability to manage under a given set of institutional constraints, which they can then transfer to similar environments (Shaver et al, 1998; Cuervo-Cazurra and Genç, 2003; Henisz, 2003).

Further, we argue that multinationality will moderate the relationship between institutional similarity across countries and performance. Since a greater level of multinationality provides a broader platform across which resources can be transferred, we
expect that the greater the multinationality of a firm, the greater the positive effect of institutional similarity on performance.

We test our arguments on a sample of 85 multinational banks in the 2001-2002 period. Our results confirm that institutional similarity significantly enhances firm performance (ROA) but, surprisingly, they also show that multinationality negatively moderates the effect of institutional similarity: the greater the number of countries in which a firm is present, the smaller the positive effect of institutional similarity on performance.

Our paper contributes to three research streams. First, we extend the work on the link between multinationality and performance by introducing the institutional similarities and differences across countries. We see this as an important contribution because although theory argues that asset transferability depends on host country conditions, empirical studies have largely ignored this. Second, we add to the literature on resource transfer in MNEs by examining how (institutional) similarities and differences across countries determine whether a firm-specific asset is worth transferring and can be transferred effectively or not. Although a lot of research is being done on knowledge transfer within MNEs, this work focuses almost exclusively on knowledge and organizational characteristics as explanatory variables (Ghoshal and Bartlett, 1988; Gupta and Govindarajan, 2000), ignoring cross-country differences as determinants of intrafirm transfer (Hu, 1995). Finally, we extend the contingent resource-based theory (Miller and Shamsie, 1996; Brush and Artz, 1999), which examines how resource value changes across environments by studying how the value of the resources MNE possess varies across different institutional environments (Cuervo-Cazurra and Genç, 2003; Prahalad and Lieberthal, 1998).

The rest of the paper is organized as follows. In the next section, we briefly review the theory on the sources of multinational advantage, focusing on the internal transfer of tangible
and intangible resources, including knowledge. In Section 3 we build our main hypothesis. We then describe the data and our research methods in Section 4. Section 5 reports and discusses the results. We conclude with a discussion of the contributions, limitations and directions for future research.

**SOURCES OF MULTINATIONAL ADVANTAGE**

Whether international expansion improves firm performance has been an important research topic in the field of international strategic management. It has been argued that international expansion can improve performance in at least four ways. First and foremost, the theory of internalization (Buckley and Casson, 1976; Hymer, 1976) postulates that firms can increase their profits by leveraging their intangible assets (which includes technology, brand reputation as well as managerial practices) across borders through FDI. Firm-specific assets can exhibit increasing returns to geographic scope and allow firms to earn profits that exceed the added cost of operating in a foreign market (Hymer, 1976). In fact, from an economic perspective, the existence of such firm-specific assets and the difficulty of transferring them in the market are necessary conditions for the existence of a MNE (Buckley and Casson, 1976; Teece, 1977).

Second, in addition to the initial transfer of resources to set up operations in a foreign country, researchers have also claimed that MNEs can benefit from their presence in different countries by transferring practices across subsidiaries on an ongoing basis (Ghoshal, 1985; Bartlett and Ghoshal, 1989). Third, it has been argued that international firms can benefit from differences in factor conditions and tax rates across countries by flexibly relocating operations across its different subsidiaries as a function of the evolution of factor conditions in such
countries (Hirsch and Lev, 1971; Kogut, 1985). Finally, multinationals might benefit from geographical risk diversification if they are present in countries that have imperfectly correlated business cycles (Hirsch and Lev, 1971; Ghemawat, 2003).

Despite these four distinct theoretical rationales for internationalization and the performance benefits of multinationals, researchers have tended to empirically examine multinationals’ advantage by using a single construct – multinationality – measured either as geographical scope or percentage of foreign sales or assets (Grant, 1987; Ramaswamy, 1995; Tallman and Li, 1996). To our knowledge, only Morck and Yeung (1991) have attempted to simultaneously test the impact of different rationales, focusing on resource transfer, risk diversification, flexibility and arbitrage; finding that multinationality added value only when the firm possessed valuable intangible assets. Their study demonstrated the lack of benefits arising from risk diversification, tax arbitrage or factor cost differences.²

In contrast, studies that try to capture all the different benefits of internationalization through a single multinationality measure have yielded mixed results and cannot attribute them to any specific source of multinationality advantage or disadvantage. Although some find a positive relationship (Grant, 1987; Daniels and Bracker, 1989), others show no relationship at all, or even a negative relationship (Siddharthan and Lall, 1982; Kumar, 1984; Tallman and Li, 1996). More recently, researchers have also examined non-linear (curvilinear) relationships between multinationality and performance to capture the potentially increasing organizational costs of coordination that arise from greater multinationality (Hitt et al, 1997; Gomes and Ramaswamy, 1999). Gomes and Ramaswamy (1999) report an inverted-U relationship between multinationality and performance.

² The case for risk diversification seems to be especially weak. For instance, Reuer and Leiblein (2000) have showed that returns to multinationals are not less volatile than those of domestic firms.
multinationality and performance, suggesting that the benefits of multinationality disappear beyond a certain level of multinationality.

This brief review highlights several issues. First, despite extensive research, very few papers distinguish between different sources of multinationality advantage. Second, whatever evidence exists seems to be consistent only with the internalization theory and not other arguments for multinationality advantage. This is why in this paper we focus on one source of multinational advantage, the source Morck and Yeung (1991) found to have a positive effect of firm performance: resource transfer. And third, extant research has tended to operationalize multinationality using foreign sales or assets, without any attention to the differences in the nature of host countries in which a firm is present, although resources may not be equally valuable in all environments (see Goerzen and Beamish (2003) for a move in this direction). To overcome this difficulty, and since the differences across countries are important for the source of multinationality advantage we are investigating, we distinguish among different country environments. Interestingly, Morck and Yeung (1991) provided a first step in this direction as well. In one of their models, they decomposed the multinationality measure into number of developed countries, developing countries and tax havens. They found that their results about the value creating nature of intangible assets only hold for (the number of) developed countries. Although their test was motivated by a different objective, i.e. to test whether factor cost differences through the developing countries component or tax arbitrage through the tax havens component were sources of multinational advantage, their results are consistent with our argument: that resources are not equally valuable in all settings, and hence the nature of host countries is a determinant of the success of resource transfer.
Building on Morck and Yeung’s (1991) findings, we argue that whereas there might be
value creation potential in transferring intangible assets (including managerial practices) across
countries, the possibility of and success in doing so depends on the similarity of the country
environments among which the transfer is taking place. Surprisingly, there has been little
research on how country differences affect resource transfer and its supposed benefits. Most
research on the determinants of resource or knowledge transfer in MNEs has focused on
resource/knowledge characteristics and/or organizational characteristics either at the subsidiary
or at the headquarters level (Ghoshal and Bartlett, 1988; Kogut and Zander, 1993; Gupta and
Govindarajan, 2000). We address this gap by focusing on the degree of institutional similarity
across countries, which we will discuss in more detail below.

Moreover, a burgeoning literature in international strategy argues that other than
capabilities in marketing or R&D, one can also conceive of a capability of managing in a
particular institutional environment (Henisz, 2003). The central argument here is that firms that
grow and operate in a given institutional environment develop capabilities to manage in that
particular environment (Oliver, 1997). These capabilities can then become a source of advantage
when the firm expands into another country with a similar institutional environment (Cuervo-
Cazurra and Genç, 2003; Henisz and Delios, 2002; Henisz, 2003). Although these papers do
provide some encouraging evidence that hints at existence of such capabilities, more research in
this area is needed.

Host country characteristics also explain the added costs of multinationality. The
research stream on the liability of foreignness (Zaheer, 1995; Zaheer and Mosakowski, 1997) has
empirically demonstrated that compared to local, indigenous companies, foreign firms initially
experience difficulties when they enter a new country, because of their lack of understanding of
the local culture and institutions (economic, political and legal). Despite its usefulness, there is a need to unpack the different components or dimensions of the liability of foreignness such as national culture and legal, political and administrative institutions to examine which of them are most important for firm performance.

In that regard, there has been some research on how cultural differences across the host and home countries affect MNE behavior and performance in entering new countries (Kogut and Singh, 1988; Barkema, Bell and Pennings, 1996). In contrast, despite some theoretical treatments of the import of host countries’ institutional environments in affecting MNE behavior (Murtha and Lenway, 1994; Henisz, 2003), there has been less empirical research on how this drives the costs of these firms. Although studies of the relationship between multinationality and performance, especially those positing a curvilinear relationship, argue that managing in a diverse set of environments is the main driver of costs, these studies have not measured or tested how institutionally diverse the geographical scope of MNEs really is and how it affects MNE performance. That is our aim.

**HYPOTHESES**

Based on the preceding review, we argue that the potential and possibility for intrafirm transfers in MNEs depends on the particular shape of a firm’s international presence. Our central argument is that similar institutional environments will enhance the value of transferring and the transferability of resources among these countries. Before developing this argument, it is necessary to clearly define the concept of institutional environment, which is not well developed.

Institutions have traditionally been defined as social conventions or tacit and internalized agreements on what constitutes the appropriate behavior in a situation that lead to patterns of
routine or regularized behavior (North, 1990). This definition encompasses both formal and informal institutions, that is, institutions that are codified and embedded in law (formal) as well as those that remain tacit or implicit in the country’s culture (informal).

In this paper we want to focus on a more narrow notion of institutions and, in particular, legal and economic institutions and to separate it from culture which encompasses the values, assumptions, norms and rituals of a society (Hofstede, 1980). For instance, although North (1990) adopted a broad definition of institutions, in his empirical case studies he focused on the degree of definition and enforcement of property rights (see also Murtha and Lenway, 1994).

Recent research in economics has developed a consistent set of dimensions of the institutional environment which include the rule of law (i.e. definition and protection of private property rights, and enforcement of contracts), effectiveness of government policies (i.e. independence of bureaucracy, degree of regulatory burden) and the mechanisms through which politicians are elected and held accountable for their actions (Kaufmann, Kraay and Zoido-Lobaton, 1999). In this paper we focus on the first two, partly because the last of these dimensions deals with political stability, which has usually been associated with political risk, a separate though equally important construct (Kobrin, 1979). We focus on regulations and bureaucracy because these delineate permissible business practices, products and processes, hence defining what resources can be profitably transferred and whether they can be meaningfully used in the new environment. We also consider property rights because they define to what extent resources can be used to generate rents in the marketplace and to what extent those rents can be captured by the MNE.

Research on expansion patterns of MNEs shows that firms first enter into countries that are geographically, culturally and socially similar to their home country (Johanson and Vahlne,
1977). Similarly, we claim that the value of cross-fertilization among MNE subsidiaries is only possible among those subsidiaries that share a common institutional environment. From a property rights point of view, if two countries differ in their institutional environment it means that one has a well-defined system of property rights that are enforced whereas the other one is characterized by poorly, loosely defined property rights that are irregularly enforced. These differences are likely to make a successful practice in one country irrelevant for the other. For instance, methods to successfully deal with suppliers of equipment and security services in a country with poorly-defined property rights are of little use in contracting with the same type of suppliers in a country in which property rights are clearly specified and enforced, and vice versa. The context of the transaction, the degree of reliance on social ties and reputation versus a contract would also differ. Similarly, variance in regulations can make the transfer of resources meaningless. A marketing campaign carried out in one country might not be profitable to carry out in another where regulations do not permit the use of certain images, or the use of certain media for certain products on which the marketing campaign was based. Differences in regulations on technology transfer, such as the degree to which they require licensing of technology, prohibit use of certain technologies, or force a company to locate at a certain place where complementary location-specific assets required to take advantage of firm-specific resources do not exist, can also make transfer worthless and/or impossible. Several authors have recently provided anecdotal evidence supporting these arguments. Prahalad and Lieberthal (1998), for instance, document the difficulties developed country firms faced when they entered into less developed countries such as Brazil. More recently, Guillen (2001) shows that many resources developed at home may not apply in other countries due to different societal configurations or business-models. This argument about institutional differences works in both
directions; that is, regardless of whether the country where the resource to be transferred originates is institutionally developed or underdeveloped.

In addition to assets such as technology and marketing, we argue that institutional differences across the states in which a MNE is present can also affect the value and capability of transferring more intangible managerial practices and knowledge. Some managerial practices such as the way to deal with politicians, regulators and bureaucrats can be specific to a country. If a firm develops a capability to manage in an environment where market institutions are less developed (i.e. property rights are not well defined and enforced), it can successfully expand into other countries characterized by a similar level of institutional development (Henisz, 2003). As argued, the essence of the capability to operate in and manage the institutional environment focuses on the ability to deal with the political and regulatory actors and avoid political and contractual hazards as well as to lobby for favorable policy changes (Henisz, 2003). From this standpoint, government intervention in economic activity and protection of property rights are important elements of the institutional environment.

Government intervention can take the form of direct ownership of enterprises or excessive regulation, which can then be used with discretion, increasing dependence on the government. In such cases, the skill to manage relationships with those that hold decision-making power will be much more critical, since the firm’s fortunes are dependent on such skills. Once managers understand the concerns of policymakers and when they would be more or less likely to engage in adverse policies, not only the firm can avoid alienating policy makers or bureaucrats, but they can also transfer these skills to other environments characterized by such extent of regulation. Property rights protection is important because in absence of proper protections, firms will be increasingly dependent on the government’s goodwill (Kobrin, 1979;
Murtha and Lenway, 1994) in carrying out transactions as well as in gaining compensation when their rights are violated. Governments can force other parties to reach an agreement with the foreign firm, or to pay adequate compensation.

From a resource transfer standpoint, property rights protection and regulatory burden are important aspects of the institutional environment. Many of the skills developed in a well-developed institutional environment may not be valuable in a less-developed institutional environment, either due to lack of infrastructure necessary to implement those skills, or due to inappropriability of the rents that could be potentially derived from them. For instance, in the context of the industry studied here (i.e. banking industry), it is generally argued that credit-scoring techniques can be transferred across countries (Litan, Masson and Pomerleano, 2001). However, in many developing countries these scoring techniques may not work simply because the information necessary to evaluate someone’s creditworthiness does not exist or is not collected. Regulations can also hamper transfer of assets or practices. Goold and Campbell (1998) give the example of labeling regulations that prevented a firm from using the same bottle label across different countries. Further, risk assessment techniques that deliver proven results in countries with a sophisticated financial market are not necessarily applicable in countries with less sophisticated financial markets where there is much less customer financial information available.

These arguments build on the basic idea of the contingent value of a resource or a capability (Miller and Shamsie, 1996; Brush and Artz, 1999) which has also been applied to the international context and, in particular, to the extent to which MNEs from developing-countries have an advantage over MNEs from developed countries when they move in other developing countries (Cuervo-Cazurra and Genc, 2003). Here we extend this line of research by exploring
the effect of institutional similarity in the overall MNE on the potential for cross-subsidiary learning and resource leverage. To summarize the arguments above, we hypothesize that:

\textit{Hypothesis 1: The higher the degree of institutional similarity across the countries in which a MNE is present, the higher the MNE performance.}

Further, we argue that multinationality will moderate the relationship between institutional similarity across countries and performance. This follows directly from the arguments regarding the benefit of leveraging intangible assets across countries in which the MNE is present. Multinationality enhances performance because it allows the firm to earn increasing returns on its intangible assets (no matter where they are developed) by transferring them across subsidiaries. Since the firm doesn’t have to incur the cost of developing these resources every time they are transferred, the more multinational a firm is, the higher the returns it can earn on these resources. Therefore, the effect of institutional similarity should be amplified with increasing levels of multinationality, since now there are more countries where a given resource can be transferred to (or from). Thus, we contend that:

\textit{Hypothesis 2: The higher the degree of multinationality, the larger the positive effect of institutional similarity on performance.}

\textbf{METHODS}

We chose the banking industry as our empirical context, for several reasons. First, its service nature enables us to discard flexibility as one of the three possible sources of
multinational value, since most services have to be produced where they are consumed. (Despite
the recent diffusion of online banking, banks usually have to be physically present in the territory
to serve their customers). Second, the banking industry has undergone rapid worldwide
consolidation in the last decade: FDI in banking has soared since the early 1990s (Litan et al.,
2001). Financial crises that have increased the need to restructure have led to selling unhealthy
banks to foreign banks, and privatization of government banks has also accelerated this process.
As a result, both in Eastern Europe and in Latin America the foreign owned share of bank assets
have increased sharply (Guillen, 2001; The Economist, 2002).

Third and more importantly, despite this increasing internationalization of banking, the
benefits of global presence in this industry are not clear. Tschoegl (2002) argues that retail
banking is essentially a local business and expanding internationally does not pay off in general.
On the other hand, in other segments such as investment banking, a global reach seems to be
necessary (Litan et al., 2001). However, in a recent test of the extent of globalization in banking,
Berger, Dai, Ongena and Smith (2003) find that subsidiaries of MNEs usually prefer a host-
nation bank to a bank from their home country for cash management services, a set of services
that can be provided by both local and foreign banks. They argue that this may pose a limit on
the geographic reach of banks. Similarly, in a survey of globalization in banking, Berger,
DeYoung, Genay, and Udell (2000) find that in many European countries local banks are more
efficient than foreign banks (except for American banks), which suggests that there are limits to
globalization of the banking industry. Therefore, this is an appropriate industry to study the
effect of the degree of multinationality on MNE performance.
Sample

Our population being all commercial banks with foreign operations in 2001-2002, we constructed our sample in the following way. Following past research (Berger et al., 2000; Miller and Parkhe, 2002), we used BankScope, a comprehensive database of more than 11,000 banks that provides financial performance as well as ownership data. The database identifies two levels of bank ownership: direct and ultimate. Direct ownership indicates the percentage of shares a shareholder directly owns in a bank. Since in many cases the direct owners of a bank are themselves owned by other banks, the database traces the shareholding information (by focusing on the largest shareholder at each level) until it reaches an owner that is indicated as independent (a company in which no single shareholder owns more than 25%), in which case this firm is labeled as the ‘ultimate owner’. In other cases, a company is indicated as being the ultimate owner of a given bank without any specific shareholding structure being disclosed. The database uses various sources of ownership information including annual reports, personal correspondence, trade publications, and filings with regulatory authorities, among others.

Of the 11,000 banks we extracted information on all the commercial bank subsidiaries that we identified as majority-owned by foreign shareholders. We also excluded non-bank owners from the sample, which allows us to control for business diversification (e.g. Geringer et al, 1989; Hitt et al, 1997). This search resulted in 1571 commercial bank subsidiaries that are majority owned by foreign banks, 933 of which have an identified ultimate owner. We focus on majority-controlled subsidiaries because we believe banks cannot transfer resources across their organization unless they have managerial control (of the subsidiaries), which usually requires a majority ownership. There were 151 ultimate holding banks that constituted our initial sample, from which we eliminated 13 for which no consolidated performance data was available.
Next, we proceeded to gather the international footprint of each parent bank for 2001 by identifying those bank subsidiaries they controlled (i.e. had at least 50% of shares). First, we checked whether they were majority owners of the subsidiaries for which they were designated as ultimate owners. We discarded several of these subsidiaries because the ultimate holding banks were minority owners (i.e. less than 50%) or ownership information was not available. Second, for the sample of 138 banks for which we had consolidated performance data we proceeded to identify all foreign subsidiaries that did not have a reported ultimate owner and for which these banks were listed as direct owners (with majority control). With these two procedures we identified all the countries in which sample banks had majority-owned bank subsidiaries in 2001.

Measures

We measure the performance of multinational banks in 2002 using return on average assets and return on average equity, effectively allowing for one year lag between the dependent and the independent variables. These measures are in line with previous studies of multinationality and performance (e.g. Hitt et al, 1997; Gomes and Ramaswamy, 1999). To test for robustness, we also used net interest margin as alternative measures of performance. All these bank-level performance data come from BankScope. We describe the independent variables below.

Multinationality. Following past research and for purposes of comparability and cumulativeness (Tallman and Li, 1996; Gomes and Ramaswamy, 1999), we measured multinationality as the number of countries in which a sample bank operated in 2001, including
the home country (i.e. country where the headquarters are located). Countries where a sample bank operates are those in which it has one or more majority-owned subsidiary.

**Institutional similarity.** We measure the degree of institutional similarity across the countries in which a bank is present using the Heritage Foundation’s (2003) index of economic freedom, which assigns a score from 1 to 5 (1 being the most free) to a country on ten different dimensions and then uses the simple average of these scores to reach an overall economic freedom score for each country. Data is available for 155 countries. Following our theoretical discussion, we focused on two institutional similarity dimensions: regulatory environment as it pertains to the banking industry; and the level of property rights protection. The ‘banking and finance’ measure focuses on regulations in the banking sector such as ease of obtaining a banking license, whether regulations are applied uniformly, whether foreign banks can freely open branches and establish subsidiaries, and to what extent activities of banks are restricted. A low score indicates a country where banks can offer many products and compete freely, there is relatively free entry and little government influence over allocation of credit. The property rights measure captures how well property rights are defined and enforced. To measure the impact of the overall institutional environment that encompasses other dimensions that are relevant for resource transfer (labor regulations, foreign investment regulations and overall regulatory burden), we also test our models using the overall economic freedom score.

In our sample, there are only four banks for which institutional data is missing for a host country. This may have introduced a slight bias in calculating institutional similarity for these four banks. However, dropping these four observations does not affect our results.

We construct a measure of institutional similarity by calculating the standard deviation of scores for all countries in which a bank is present, including its home country, for the banking
and finance, property rights protection and overall scores. The higher the standard deviation, the more institutionally diverse are the countries in which a bank operates. Therefore a high standard deviation indicates institutional dissimilarity.

**Multinationality x institutional similarity interaction.** To test H2, we created a multiplicative interaction for multinationality and institutional similarity. However, to minimize the impact of collinearity which structurally arises from multiplicative interactions with their main effects, we centered both variables prior to creating the interaction term.

**Control variables.** Following past research, and to distinguish resource transfer from scale economies and other size-related effects, we control for firm size through natural logarithm of the banks’ total assets. We also controlled for a curvilinear effect of multinationality by including its square term. Past research has argued that the costs of multinationality can outweigh its benefits beyond a certain level of multinationality, largely due to coordination costs (Hitt et al, 1997; Gomes and Ramaswamy, 1999). Furthermore, a recent paper has argued that the form of relationship might be different in service companies, and found a U-shaped instead of an inverted-U relationship found in earlier studies (Capar and Kotabe, 2003). Finally, we include the home countries of the banks as a potential determinant of performance (Porter, 1990). Past research shows that American banks are more efficient than local banks as well as other foreign banks (Berger et al., 2000; Miller and Parkhe, 2002). To control for this argument, we created three dummies for banks headquartered in US, Japan and Europe, respectively. Data on the home country for the sample companies comes from BankScope.

After excluding observations for which either data for the dependent or the independent variables were missing, our final sample contains 85 banks. Table 1 shows the descriptive statistics for our variables. Table 2 displays the pairwise correlation matrix which shows that
there is no significant issue of bivariate collinearity, although the two institutional similarity scores we focus on (standard deviations of banking and finance regulation scores and overall economic freedom scores) are significantly and highly correlated.

*** TABLES 1-2 HERE ***

We then constructed a linear regression equation to test our hypotheses. The full model we estimated by performing a robust regression which uses a White-robust estimator that corrects for heteroskedasticity is as follows:

\[
Performance = B_0 + B_1 \times Size + B_2 \times \# \text{ of countries} + B_3 \times \text{Institutional similarity} + B_4 \times (\# \text{ of countries}) \times (\text{Institutional similarity}) + e
\]

RESULTS

Table 3 reports the results for the estimation of three models: the model with only the controls (model 1), the one with controls and main effects (model 2) and the full model (model 3), which is significant and has greater explanatory power than the two previous models. Inspection of variance inflation factors (VIF) does not reveal any multicollinearity problems (all VIF are well below 10, the usual cut-off).

Although we tested the results using three different institutional similarity measures (banking and finance regulations, property rights protection, and overall economic freedom), the results are qualitatively similar. We report results only for the models that used overall economic freedom variable and banking and finance as measures of institutional similarity, but for the sake of convenience, only discuss results for the models using overall economic freedom scores. Whenever the results differ materially, we report the differences.
We also tested models using the two different performance measures (ROA and ROE). Our models using return on equity were not significant, suggesting that there are other factors that drive the return on equity. This might be partly explained by the fact that banking is a highly leveraged industry and the amount of capital that a bank has to have differs significantly across countries (although recent agreements such as the new Basle Accord will reduce these differences in the near future). A bank’s capital also depends on the risk profile of its assets, although once again, countries differ in their regulations about which assets are classified into which risk group and how much capital has to be kept for assets in each risk group. Since banks can differ significantly in their risk taking behavior, their equity can also differ significantly, even within the same country. We therefore use ROA as our dependent variable.

*** TABLE 3 HERE ***

In model 1 we see that the effect on ROA of size (the logarithm of total assets) is negative and significant. This means that bigger is not better, but worse. This sign and size of this coefficient is consistent across all models. The size coefficient is the second most consequential, after the one for institutional dissimilarity in the full model. A 100% increase in size, for instance, reduces ROA by 10.5%.\(^3\) This result suggest that disadvantages of size dominate possible scale effects. Our results are consistent with the banking literature which shows that usually X-inefficiencies overpowers scale economies (Berger, Hunter and Timme, 1993).

Model 1 also shows that multinationality has a significant and positive effect on performance. However, this includes all the possible sources of advantages of multinationality and doesn’t allow us to distinguish among different explanations (Morck and Yeung, 1991). Expanding into one more country increases ROA about 3%, holding all else constant, although it
is important to recognize that size and multinationality are highly correlated. It is also important to note that the squared term is not significant, contrary to recent studies that showed a curvilinear relationship (Gomes and Ramaswamy, 1999).

Last but not least, none of the home-country dummies are statistically significant across all models. Following Porter’s (1990) argument, we expected that multinational banks which have their home base in economically developed countries such as the US, Japan and countries in Europe which are characterized by a sophisticated demand and intense supply would exhibit a greater ROA relative to banks which are headquartered elsewhere. The results show that banks headquartered in US, Japan or any European country do not significantly outperform banks based in less developed countries.

Model 2 incorporates the institutional similarity variable. We see that institutional similarity has a large and positive effect on performance. However, the coefficient is marginally significant. Actually, in models using other institutional similarity variables, this coefficient is not significant, although the sign is always negative and large. We also see that multinationality still exerts a significant and positive, linear influence on performance. This time, the coefficient of the multinationality square term is also significant and positive (not significant in models using banking and finance or property rights but still positive), suggesting a U-shaped relationship, supporting the results of Capar and Kotabe (2003). Finally, the explanatory power of the model increases from an R² of 0.13 to 0.22.

Moving to the full model which incorporates the interaction term (model 3), the picture changes dramatically. First, the results for the full model support our first hypothesis regardless of the measure of institutional similarity we use (the results for property rights protection are significant at the 10% level, and significant at 5% level for the other two variables). Regardless

\[ \Delta ROA = -0.152 \times \ln(2 \times \text{TOTASSET}) - \ln(\text{TOTASSET}) = -0.152 \times \ln 2 = -0.105 \]
of the number of countries a bank operates in, there is a statistically significant and positive association between institutional similarity and performance (note that since our variable measures dissimilarity, the coefficient is negative). This suggests that multinational banks that operate in dissimilar institutional environments have difficulties in transferring their practices across countries and thus successfully operating in them. In all cases the coefficient for institutional dissimilarity is the largest (-0.42 for banking and finance, -0.32 for property rights protection, and -0.78 for overall economic freedom), which suggests practical significance.

As for our second hypothesis, which stated that multinationality would enhance the value of institutional similarity, the results are opposite to those we predicted. Although the interaction term between institutional dissimilarity and multinationality is significant, its sign is positive instead of negative. This means that the more countries a firm is in, the less positive the effect of institutional similarity across countries on performance. This suggests that the significantly negative effect of operating in institutionally dissimilar environments on performance decreases as the geographical scope of the bank increases. In other words, increased multinationality mitigates the positive effect of institutional similarity on performance. This means that as a firm becomes more multinational, its dependence on institutional similarity as a driver of performance decreases. Highly multinational firms, therefore, can afford to operate in a diverse set of environments, unlike their less internationalized competitors.

The fact that multinationality decreases the effect of institutional similarity begs the question of whether there is a level of multinationality beyond which there is a negative relationship between institutional similarity and performance. It is important to note that the coefficient of the interaction term between institutional dissimilarity and multinationality (0.07) is very small compared to that of institutional dissimilarity (-0.78). Still, the first derivative of
ROA on institutional dissimilarity becomes positive when the number of countries exceeds 11 (-0.78 + 0.07 M > 0, M = 11.1; the corresponding figure is 9 countries for models using banking and finance or property rights as institutional similarity variables). This means that for a multinational that is present in 12 or more countries, it pays to expand into institutionally dissimilar countries. Given that this threshold level of 12 countries is well within the bounds of the multinationality measure in our sample (maximum of 24 countries), the moderating effect of multinationality on institutional similarity is capable of reversing the negative effect of institutional dissimilarity in several instances in the sample.

The fact that multinationality actually diminishes the detrimental impact of being present in institutionally dissimilar countries and can even overturn it could be due to the existence of clusters of institutionally similar countries within the broader international footprint of a bank. Learning from experience in clusters of institutionally similar countries through transferring practices within the cluster could allow such banks to cope with the liability of foreignness in these countries and, hence, exhibit greater performance. This is a real possibility in our sample. For instance, despite having a high value of institutionally dissimilarity (more than one standard deviation larger than the mean), the sixteen countries in which ABN AMRO Holding NV is present are clustered in three groups in terms of institutional similarity: four countries exhibit an overall index of economic freedom between three and four, seven other countries have an index score between two and three and, finally, five countries show an index below two. The role of multinationality comes from the fact that the greater the number of distinct states in which a bank is present, the more likely it is that there will be clusters of institutionally similar countries.

It is interesting to note that the direct effect of multinationality disappears when the interaction term is included in the model (this is true for all models). In conjunction with this, it
is noteworthy that the effect of the square term of multinationality is positive and significant, but very small (in other models, neither the square term nor the linear term are significant). These results cast doubt on the existence of a meaningful and significant direct relationship between multinationality and performance (e.g. Tallman and Li, 1996; Hitt et al, 1997; Gomes and Ramaswamy, 1999). Consistent with our expectations, multinationality has a significant effect on performance only when certain other conditions occur (Morck and Yeung, 1991), in our case, the presence of a bank in institutionally different environments.

To recap, we find that (1) institutional similarity across countries where a bank operates has a strong positive influence on bank performance; (2) this effect decreases with increasing multinationality; (3) multinationality does not improve performance in and of itself, (4) being more multinational improves performance only when the firm operates in diverse institutional environments and, (5) multinationals with a global footprint can even benefit from being present in more institutionally diverse countries.

CONCLUSIONS: CONTRIBUTIONS, LIMITATIONS AND FUTURE RESEARCH

This paper contributes to the literatures on multinationality, intraorganizational learning and resource transfer, and the resource-based theory of the firm. First, we isolate intraorganizational resource transfer from the other sources of multinational advantage and show that it is a function of the similarities across the countries in which the firm is present. More specifically, we demonstrated that up to a certain level of multinationality, international firms suffer from being present in different institutional environments. We interpret this as providing evidence that banks which operate in institutionally dissimilar countries have difficulties in transferring resources (including managerial practices and knowledge) across them. We believe
that this adds an important contingency to the discussion on intraorganizational learning and resource sharing in MNEs (e.g. Ghoshal and Bartlett, 1988; Gupta and Govindarajan, 2000). Our focus on the institutional dimension of country environments extends the literature on the effect of the institutional environment on MNE behavior and performance (Murtha and Lenway, 1994; Khanna and Rivkin, 2001; Henisz and Delios, 2002). This result confirms our contingent approach to the value of a firm’s resources in the sense that the benefits of being present in multiple countries are a function of the differences in the institutional environment across those countries. This extends the recent work on the contingent value of resources (Shamsie and Miller, 1996; Brush and Artz, 1999), particularly when applied to differences across countries (Cuervo-Cazurra and Genc, 2003) rather than periods or products.

Our second contribution lies in examining the performance effect of multinationality (e.g. Geringer et al, 1989; Tallman and Li, 1996; Hitt et al, 1997). We argued that multinationality should strengthen the positive performance effect of institutional similarity, since it would provide more opportunities to transfer resources. Our results are not consistent with this view. Although for firms with a very narrow international footprint it pays off to be present in institutionally similar countries, it is more beneficial for firms with a broader footprint to be in diverse institutional environments. Between two firms present in equally diverse environments, the one that is more multinational will have a better performance. We conjectured that greater multinationality increases the likelihood that firms would actually be present in several clusters of countries each of which consist of very similar institutional countries, allowing the firm to transfer resources within each cluster, although the stark differences between clusters would show a high overall level of institutional country diversity.
Third, we further contribute to the multinationality-performance literature by showing that there is not a clear direct relationship between the two. Although we find a statistically significant direct curvilinear effect on performance, we fail to replicate this relationship in different models, and the coefficient of the square term is very small. In fact, an F-test that tests the joint significance of both the linear and square term of multinationality indicates that both can be dropped from the equation ($p(H_0 \text{ holds}) = 0.17$). In contrast, we find that the effect of multinationality is contingent on other variables, in particular, institutional similarity. This is consistent with Morck and Yeung (1991) who showed that multinationality did not have a direct effect and suggests that multinationality does not provide advantages in the form of tax arbitrage or risk diversification. Most previous studies cannot arrive at these fine-grained conclusions because they have not examined different sources of multinational value, but instead used multinationality as a proxy for all the different sources of multinational advantage (Hitt et al, 1997; Gomes and Ramaswamy, 1999).

Finally, our results on the other control variables challenge conventional wisdom in two ways. First, the negative effect of size on performance points out to the existence of diseconomies rather than economies of scale in banking. Second, Porter’s (1990) theory of sophistication of home country as a crucial determinant of MNEs performance is not supported in our study.

**Limitations and Future Research**

We believe the main limitations of this paper are empirical. The first limitation comes from the relatively small sample. Unfortunately, at this point we were able to include only those banks that were designated as the ultimate owner of a foreign bank. Although this is a safe way
to proceed, it might have resulted in the exclusion of other multinational banks. Despite this limitation, we do not believe there is a systematic bias in our sample selection. We cannot think of a reason that would make banks that are ultimate holders behave and perform systematically different than the excluded banks.

The second limitation arises from measurement. By including only majority-owned foreign subsidiaries, we are probably underestimating the geographic scope of banks since some foreign banks might only operate in some countries through branches. However, branches usually do not offer the same breadth of services as a subsidiary (Clarke, Cull, Martinez-Peria, and Sanchez, 2001). Further, the institutional dissimilarity measure might also be imperfect. Arguably, the institutional environment of a country is a complex and multidimensional construct. However, there are not many empirical studies that measure institutions across countries, and we believe we used the best of what is available at this point. We took into account existing descriptions and existing measures of what is meant by an institutional environment (Henisz, 2003; Kaufmann, Kraay and Zoido-Lobaton, 1999). Future studies, though, should build more detailed measures of institutional environment that are comparable across countries.

A third limitation is that we did not include other country environment dimensions in our dissimilarity measures. For instance, differences in national culture (Hofstede, 1980) might have a stronger effect than institutional dissimilarity. Therefore, future research should consider differences across countries in culture in assessing the possibility of intraorganizational resource transfer within MNEs.
Finally, the generalizability of our findings is bounded by the nature of the sample examined. Thus, we caution extending the results to other periods as well as other industries. Future research should undertake such endeavor.

REFERENCES


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<th>Max</th>
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TABLE 2. Pairwise Correlation Matrix

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*, **, and *** indicate significance at 10%, 5% and 1% level, respectively.
### TABLE 3. Robust Regression Results for MNE Performance

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<th>Measure of institutional similarity:</th>
<th>Overall economic freedom</th>
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<td>Model 2</td>
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<tr>
<td>Dependent variable: ROAA</td>
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<tr>
<td>Logarithm of total assets</td>
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<td></td>
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<td># of countries</td>
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<td>0.028**</td>
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<tr>
<td></td>
<td>0.012</td>
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<tr>
<td># of countries squared</td>
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<tr>
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<tr>
<td></td>
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<tr>
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All independent variables are lagged one year, and hence refer to 2001 values. Numbers under the coefficients are White-Huber heteroskedasticity-consistent robust standard errors.