TRANSCENDING BORDERS WITH INTERNATIONAL TOP MANAGEMENT TEAMS: A STUDY OF EUROPEAN FINANCIAL MNCs

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Abstract

This paper investigates how changes in firm degree of internationalization (DOI) are associated with the configuration of top management teams (TMT) based on a dataset of 41 large European firms in the banking and insurance industry, including detailed career profiles of the 264 executives that were serving on the TMTs of these firms at year-end 2002. Our findings suggest firms tend to match top executive profiles to their strategies. Entry into new foreign markets and new cultural zones was found to be associated with higher levels of international capacity at TMT level, whereas changes in international posture per se are not related to TMT international capacity. We discuss the interplay between firm strategies and internal structures in the context of firm internationalization and suggest directions for future research on TMTs.

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Keywords: top management teams, firm internationalization, nationality diversity, international experience

1. Introduction

The key to successful international expansion and long-term growth are decisions made at the headquarters of multinational companies (MNCs). Vermeulen and Barkema (2002) show that the ideal combination of speed, dispersion and regularity in the internationalization process is determined by the information-processing capabilities at corporate headquarters. As the central decision-making unit of MNCs, the TMT is faced with increasingly complex decisions as the firm expands its presence abroad through its foreign subsidiaries (Ghoshal, 1987). This complexity requires a corresponding degree of information-processing capacity among TMT members to effectively manage the expansion of foreign operations (Sanders & Carpenter, 1998).

The association between top management configuration and the firm internationalization process has been explored in a rather extensive body of research (Athanassiou & Nigh, 2002; Barkema & Shvyrkov, 2007; Herrmann & Datta, 2005; Lee & Park, 2006; Reuber & Fischer, 1997; Sambharya, 1996; Tihanyi, Ellstrand, Daily & Dalton, 2000). However, most previous studies have focused on the influence of TMT characteristics on firm internationalization. Only a few notable works address the opposite relationship, i.e. the extent to which factors in the firm internationalization process are antecedents to TMT composition (Athanassiou & Nigh, 1999; 2000; Sanders & Carpenter, 1998). Moreover, earlier TMT research has to a large extent neglected the different types of expansion strategies that firms employ. The magnitude of changes in a firm's international posture is a source of both complexity and uncertainty. The complexity of foreign operations is magnified by frequent and substantial changes to the geographical posture of the firm. Due to the high costs of entry into foreign markets (Zaheer, 1995), the establishment of operations in new countries is associated with higher levels of uncertainty. We therefore argue in this paper that the pursuit of more expansive

internationalization strategies requires the firm to possess or obtain corresponding capacities to simultaneously process more complex information and deal with the uncertainty of the foreign market entry process. According to the notion of "matching managers to strategies" (Gupta & Govindarajan, 1984; Szilagyi & Schweiger, 1984), we explore the extent to which companies adjust the international composition of their top management teams as a response to their internationalization strategies. Most previous TMT studies focus on international experience as a key source of TMT capabilities in a firm internationalization context. In a pioneer study of the relationship between TMT nationality diversity and firm internationalization, Heijltjes, Olie and Glunk (2003) documented a significant increase in the degree of nationality diversity in the top management teams of European firms over the period 1990-1999. However, they also found that TMT nationality diversity had not progressed to the same level as companies' overall internationalization levels. The authors called for further exploration of the factors that explain the phenomenon of TMT internationalization and suggested various aspects of firm degree of internationalization as potentially important determinants, such as internationalization of the workforce, foreign sales, and geographic diversification (p. 93). In this paper, we explore the phenomenon of TMT internationalization along two distinct dimensions, i.e. diversity of TMT member nationalities and diversity of top managers' international experience. We propose that firms pursuing more geographically expansive internationalization strategies face greater information-processing demands at corporate headquarters and therefore require more international capacity within the TMT. We subsequently test whether changes in three dimensions of firm degree of internationalization (DOI) are associated with greater nationality and experiential diversity at TMT level.

The contribution of this paper is twofold. First, we investigate the relationship between changes in firm degree of internationalization and TMT internationalization across different types

of foreign expansion strategies. We argue that following "the principle of requisite variety" (Ashby, 1956), MNCs persistently strive to balance the international capacity at corporate headquarters with the demands of the international operations. Requisite levels of cognitive and experiential diversity at TMT level enable firms to recognize problems in the internationalization process at an earlier stage and develop fast and effective responses to complex competitive challenges and uncertain contexts (Ferrier, 2001). Based on the argument that corporate-level information-processing demands are greater under conditions of high complexity and uncertainty, we propose that a more expansive international strategy, penetrating into new geographical and cultural areas, will be associated with a more internationally diverse configuration of the TMT. At the same time, we suggest that expansion of operations in foreign markets per se will not be directly associated with the level of TMT international capacity.

Second, in order to measure the international diversity of TMTs, we separate between cognitive and experiential team diversity. The upper echelons literature distinguishes between two major categories of top managers' personal characteristics that have an impact on managerial choices (Finkelstein & Hambrick, 1996: 45): the first category encompasses managers' values, cognitive models and other personality elements, whereas the second set of characteristics refers to observable dimensions of a person's experiences. In this study, we employ nationality as a representation of cultural values, cognitive models and personality elements associated with a particular national culture. In order to capture the diversity of knowledge and expertise accumulated throughout executive careers, we compile detailed data on the international experience of individual executives and aggregate this data at the team-level.

The paper has the following structure. First, we introduce a theoretical framework that allows us to investigate TMT composition in the context of firm internationalization and develop

our hypotheses. Then, we present our sample and methods, followed by an overview of our findings. Finally, we discuss our results and suggest directions for future research.

2. Theoretical perspectives

Foreign operations pose significant challenges to a firm and its management. The internationalization literature discusses a number of obstacles related to the internationalization process of the firm. Hymer (1960) first introduced the concept of *costs of doing business abroad* in order to explain the disadvantages that MNCs have compared to local firms. Scholars have further explored this concept by focusing on the costs associated with the institutional distance between the home and host country, also known as *liability of foreignness* (Zaheer, 1995). When entering new countries, firms need to cope with local customers, institutions, and legal systems that are different from those of the home country, as well as face costs related to the establishment of legitimacy in the host country environment. In order to overcome some of the disadvantages that foreign entrants have compared to local firms, the MNC needs to acquire or develop knowledge that facilitates the entry process. Different ways of internalizing such knowledge exist, e.g. by entering into cooperative entry mode arrangements with local partners or by hiring individuals with country-specific knowledge.

The classical Uppsala model of the firm internationalization process (Johanson & Vahlne, 1977) emphasizes the use of experiential knowledge. Through their operations in a particular country, companies gain market-specific knowledge as well as more general knowledge of doing business abroad that can be transferred from one country to another (Clark, Pugh & Mallory, 1997). In the internationalization process model, knowledge about the foreign market entry process is vested within the decision-making structures of the firm. The internal demand for such knowledge increases with the speed and scope of the expansion strategy, as the firm's capacity to

absorb fast and dispersed expansion is limited by its information-processing capabilities at corporate headquarters (Vermeulen & Barkema, 2002).

A central tenet of the information-processing perspective of the firm (Galbraith, 1974; Tushman & Nadler, 1978) is that increased environmental uncertainty and complexity will be accompanied by more extensive information flows, thereby raising the firm's need for information-processing capacity. The dynamic nature of information-processing needs suggests that firms will respond to changing environmental demands by establishing internal structures that are capable of dealing with increasing levels of uncertainty and complexity (Tushman & Nadler, 1978). Appropriate internal structural configurations will manifest themselves at different levels of the organization, depending on the type of decision and the nature of the decision-making context (Egelhoff, 1982). For instance, expansion within existing geographical boundaries of the firm (e.g. introducing a new product line within an existing geographical market) requires a corresponding capacity to process new information at the subsidiary or business unit level. Meanwhile, changes in geographical posture (i.e. entry into or withdrawal from one or more geographical markets) constitute a shift in the firm's boundaries and imply corresponding changes to the magnitude and complexity of information flows at the corporate level.

The international posture of a firm has often been employed as a proxy for environmental complexity, determining the information-processing demands facing the firm and its top managers (Calori, Johnson & Sarnin, 1994; Carpenter, 2002; Sanders & Carpenter, 1998). Luo (2005) discusses the potential to reduce information-processing costs in the firm internationalization process by establishing culturally diverse teams in the upper tiers of the organization. In particular, he refers to the presence of foreigners at senior management and board level and the international experience of directors as two potential sources of information-

processing capacity for the firm. Capable top managers of diverse national backgrounds, who know and understand the logic and dynamics of foreign markets, have been identified as a critical success factor for internationalizing firms (Bartlett & Ghoshal, 1989; Perlmutter & Heenan, 1974). In addition, several empirical studies confirm the benefits of top managers' international experience for multinational firms (Athanassiou & Nigh, 1999; Carpenter, Sanders & Gregersen, 2001). Extensive experience from foreign countries results in unique knowledge that enables a manager to better understand different local markets and to make sound managerial decisions. In essence, a diversity of mindsets and experiences provide TMTs access to a broader set of data sources in the information-seeking process allowing TMTs to draw upon a larger number of reference points in the decision-making process (Harrison & Klein, 2007).

Nationality can be regarded as a proxy for executives' cultural values and cognitions. Numerous conceptual and empirical works address the manner in which nationality impacts a person's personality (for a review, see Triandis & Suh, 2002). Meanwhile, the impact of nationality at the team level has been conceptualized to explore the effects of diversity in team members' national origin on team dynamics and performance (Hambrick, Davison, Snell & Snow, 1998). Diversity in national backgrounds of TMT members can be considered a proxy for the actual diversity in cultural values and cognitions. Thus, nationality diversity can serve as an important source of understanding of cultural and institutional differences across borders. Nationality diversity also signals commitment to the firm's international stakeholder communities and serves as a motivating factor for the international workforce, as foreign-based employees observe that foreign nationals can rise into the top ranks of the firm. Therefore, we suggest that nationality diversity at the TMT level increases the firm's ability to overcome the liability of foreignness in the internationalization process and to establish legitimacy in foreign markets and subsidiaries.

Nationality diversity, however, captures only the impact of cultural origin(s) and does not *per se* consider the influences of other cultures to which the person has been exposed. Focusing on nationality alone emphasizes the fact that some foreign TMT members may be very knowledgeable or well-networked *within* one particular country or region. However, some managers may have extensive experience from a *variety* of countries and regions. The latter may be lacking some deep-level country-specific knowledge of certain foreign markets, but instead are likely to offer a seasoned perspective on the global marketplace attained through many years of international experience from various countries and cultural areas. Indeed, some scholars suggest that nationality is not a deterministic factor for a person's cultural knowledge and orientation. A person's cultural values and cognitions are formed not only by the influence of the national culture, but are also influenced by other factors such as "how typical the person's life experiences have been, relative to other members of that nationality [...]; the amount of international life experiences of the person […]; and the degree to which the person has been socialized by an employing organization with a culture similar to (or different from) the person's national culture" (Hambrick, et al., 1998: 184). Nationality diversity does not incorporate such additional influences.

International experience, on the other hand, captures a person's past interactions with foreign countries and the breadth of exposure to various cultural environments, which translates into a learned ability to process diverse information more effectively. Hence, the nationality diversity and international experience diversity of TMTs represent two distinct dimensions of international capacity at corporate headquarters. TMT nationality diversity is suggestive of the firm's ability to establish legitimacy in foreign markets and draw upon a geographically dispersed network of external resources when dealing with the complexities of the firm internationalization process. At the same time, the international experience diversity of TMT members is an indicator

of information-processing capability when a firm is facing the contextual uncertainty and environmental complexity associated with increasing firm internationalization. Both dimensions represent a continuous effort of companies to match the composition of the top management team to firm internationalization strategies.

3. Hypotheses

An increase in the extent and dispersion of international operations will lead to an increase in the amount of environmental complexity that the firm is facing (Sanders & Carpenter, 1998; Stopford & Wells, 1972). Under such conditions, TMT members with characteristics, skills, or experiences that help to reduce liability of foreignness and facilitate the establishment of legitimacy in new foreign markets become increasingly valuable for the firm. The concept of matching managers to strategies (Gupta & Govindarajan, 1984; Szilagyi & Schweiger, 1984) has frequently been called upon in upper echelons studies (explicitly or implicitly), as many important facets of the international strategic capabilities of a company ultimately derive from the knowledge, skills and behaviors of top managers (Murtha, Lenway & Bagozzi, 1998). However, the cross-sectional studies that dominate the upper echelons research stream often implicitly invoke this concept when in fact static relationships between TMT characteristics and firm strategic posture are being examined, thereby confusing strategic posture at a given point in time with the pursuit of a particular strategy during a certain period. By investigating the relationship between the magnitude of strategic pursuit (i.e. change in DOI) along different dimensions of internationalization and the international capacity of the TMT, we add a new dimension to the understanding of the relationship between firm behavior and managerial profiles and the process of adjusting executive make-up to firm strategies.

Changes in DOI and the creation of internationally capable top management teams are not necessarily concurrent events. Due to temporal and structural rigidities that restrict the emergence of international executive labour markets (Ruigrok & Greve, 2008) adjustments in TMT composition are unlikely to result directly from changes in DOI or entry into specific foreign markets. Instead, we expect that the international capacity of the TMT will evolve over longer periods of time via multiple time-dispersed TMT appointments, in line with the firm's propensity to pursue more or less expansive internationalization strategies.

Following the initial decision to expand into foreign markets, the internationalization process is an incremental process of environmental adaptation and organizational learning (Johanson & Vahlne, 1977). Entry into foreign markets can be facilitated through experience from one or more related foreign markets as such previous experience eases the acquisition of market-specific knowledge in the new foreign market and accelerates the learning curve (Carlsson, Nordegren & Sjöholm, 2005). However, even if a firm's management prepares well and has experience in other foreign markets, the actual presence in a new foreign country will generate specific learning about this new market environment. Firms that pursue geographically expansive strategies to increase the scale and scope of their foreign operations are particularly exposed to high levels of uncertainty and complexity. These firms require adequate information-processing capabilities at corporate headquarters in order to accelerate the learning process and achieve more effective handling of liability of foreignness issues.

There is some evidence that firms are matching "strategies to managers". In a recent study of a large number of foreign expansions over a thirty-year period, Barkema and Shvyrkov (2007) found that diversity in top management team members' backgrounds increases the propensity to enter geographically and culturally new markets. In this paper, we argue that the opposite logic

also holds. TMTs may influence both the liability of foreignness a firm faces as well as the firm's ability to handle such issues. Major changes in the firm's geographical posture (i.e. entering new foreign markets and new cultural zones) will therefore increase information-processing demands within the central decision-making structures of the firm, thereby giving rise to a need for corresponding levels of international capacity within the TMT. Due to the costs of exploration and learning, the initial entry into a new foreign market will be more demanding on the organization than subsequent further expansion within the same country which allows the emergence of exploitation mechanisms and routines (Eriksson, Johanson, Majkgård & Sharma , 1997; Johanson & Vahlne, 1977; March 1991; see also Delios & Beamish, 2001).*Hypothesis 1: Changes in geographical posture (GEO) are positively associated with the degree of nationality and experiential diversity of TMTs.*

Cultural zones are clusters of countries which have small within-group cultural variance and common denominators along several dimensions of culture (Ronen & Shenkar, 1985). Firms expanding into increasingly distant foreign markets in new and unrelated cultural zones will be particularly vulnerable to a liability of foreignness. Firms entering new and culturally unrelated foreign markets will face a strong need to acquire international capabilities in order to process new information effectively, speed up learning, and deal effectively with the large cultural and institutional distance between corporate headquarters and the new subsidiaries. Entry into new cultural zones is therefore expected to have a similar impact on TMT composition as entry into new geographical markets.

Hypothesis 2: Changes in cultural zone posture (CULT) are positively associated with the degree of nationality and experiential diversity of TMTs.

In principle, the more resources a firm commits to foreign markets, the greater the need will be for international capacity at the top of the organization. However, due to the increasing returns to organizational learning and knowledge acquisition during the internationalization process (Chang, 1995), the need for international capabilities at corporate headquarters will not increase when firms expand their operations within existing geographical boundaries only. This view is corroborated by the liability of foreignness perspective, which primarily addresses the need to overcome liabilities that are associated with the first entry into a new geographical market. Further expansion within the existing geographical posture is associated with increasing returns to organizational learning about the foreign markets, and therefore constitutes a less severe strain on the upper tiers of management. Thus, we hypothesize that increases in foreign market involvement, represented by the ratio of foreign employees to total employees (FETE), will not be directly associated with higher levels of international capacity at TMT level.

Hypothesis 3: Changes in workforce internationalization (FETE) are not associated with the degree of nationality and experiential diversity of TMTs.

4. Research methods

4.1. Sample

A sample of financial services firms (primary SIC codes 60xx and 63xx) from 13 Western European countries was identified based on the Thomson Analytics (now Thomson ONE Banker) database. We selected our initial sample based on two firm size criteria: a market capitalization of at least one billion U.S. dollars and at least one thousand employees at year-end 2002. The

size criteria were imposed as financial services sector firms below a certain size tend to have a very limited geographic scope, and a large number of such locally oriented firms would be likely to skew our sample towards firms with little or no international activities.

By imposing this restriction we obtained a sample population of firms which we consider to be suitable for the purpose of this study. The sample firms are all relatively large while at the same time covering the entire range of international activity levels. Our selection criteria resulted in a population of 76 banking and insurance firms with headquarters in the following countries: Austria, Belgium, Denmark, Finland, France, Germany, Luxembourg, the Netherlands, Norway, the Republic of Ireland, Sweden, Switzerland, and the UK.

The decision to focus on the financial services industry was made for several reasons. First, firms from a single industry face similar pressures in the internationalization process, while patterns of internationalization across industries may differ substantially. Hence, focusing on one particular industry allows the researcher to isolate industry effects and to draw better comparisons (Tihanyi, et al., 2000). Second, many previous studies have rather focused on manufacturing industries and excluded the financial services sector, for instance due to difficulties to compare regular sales data with revenue data provided by financial services firms.

Data on top managers' nationalities and international experience was primarily collected from companies' websites and annual reports. In addition, we consulted two biographical publications with focus on Europe (*Who's who in European Business and Industry* and *Directory of Directors in UK companies)* as well as articles in the *Financial Times* and other media sources from the *Factiva* database for additional information on executives. Only those firms for which complete information on nationalities and career backgrounds was available for all TMT

members were included in the analysis. Complete data on nationalities and international experience could initially be compiled for 32 firms. Subsequently, we sent a request for the required information to the remaining 44 firms and received nine usable responses, bringing the total number of firms in our dataset up to 41. There are no firms from Luxembourg and the Republic of Ireland in our final sample, due to the incompleteness of TMT data for any of the initially identified firms from these two countries. Hence, the 41 financial services firms in our final sample are spread across 11 European countries.

We compiled a database comprising complete information on the nationalities and careers of the 264 TMT members in these 41 firms at year-end 2002. This data was used to compute the team-level variables required for the analysis. The 41 firms in our dataset represent approximately 54% of our initial population of 76 firms. A t-test showed that the mean size of the 41 companies in the sample does not differ significantly from the population mean. While this sample is small, it is only slightly smaller than in previous single-industry studies in this field (e.g. Reuber & Fischer, 1997). Firm-level DOI data was extracted from company annual reports.

4.2. Variables

The top management team was defined as the executives who are full members of the executive committee as per the companies' own definitions. In order to account for differences in governance and reporting systems across the countries in our study we decided to focus exclusively on the highest tier of management. This follows the commonly employed definition of the TMT as the most important group of decision-makers in a company (Murray, 1989; Pettigrew, 1992).

Nationality diversity (NATDIV) in a top management team was computed using Blau's (1977) index, $1 - \Sigma p_i^2$, where p is the percentage of top management team members with nationality i. *Average international experience diversity* (INTEXPDIV) was operationalized by applying a formula developed by Bunderson & Sutcliffe (2002), representing an adaptation of Blau's (1977) index, $\Sigma [1 - \Sigma p_{ij}^2]/n$, where p is the percentage of years worked by manager i in the j^{th} country and n is the number of team members. This operationalization is equivalent to first computing a Blau index for the country-level diversity of each individual TMT member's career and then taking the average of the individual career diversity indices for all TMT members.

Some previous studies on international experience use simple measures, such as the average number of years that the top managers have spent abroad or dummy variables for international experience (Carpenter, et al., 2001; Sambharya, 1996). However, more recent works address the advantages of using indices accounting for both the duration of individual experience in a particular country and the geographic dispersion of the TMT members' experiences abroad (Athanassiou & Nigh, 2002). In addition, our operationalization captures the distinction between a single long international experience in one country and shorter but more numerous experiences in different countries, as discussed by Daily, Certo and Dalton (2000). Most importantly, however, the diversity index measures serve as accurate representations of variety as they do not incorporate the notion of a home country. Alternative operationalizations based on a distinction between domestic versus foreign nationalities and experiences lead to stronger correlations between the dimensions and are therefore less desirable in this context. By employing the diversity indices we ensure that the two operationalizations of TMT international capacity (i.e. nationality diversity and international experience diversity) are determined by separate dynamics in the team configuration process.

As pointed out by Sullivan (1994), measuring the *degree of internationalization* of a firm is not a precise science. Most recent empirical research involving the measurement of DOI has employed composite multi-item constructs in order to account for the complex and multi-dimensional nature of the extent to which a firm is international. However, in the context of our study we adopt an alternative approach and focus on single-item measures, as our main objective is to examine how specific dimensions of DOI are related to the internal configuration of firms. Indeed, our examination of distinct dimensions of DOI highlights the fact that aggregation of individual DOI items into composite measures may in some cases disguise subtle elements of the underlying data that in disaggregated form would lead to a more detailed understanding of internationalization strategies and processes.

DOI is operationalized using three different single-item measures, i.e. the geographic dispersion of operations, the cultural dispersion of operations, and the ratio of foreign employees to total employees. We focus on the structural dimension of international activities only, in order to account for the fact that our study is set in the financial services industry. We deliberately avoid the use of measures related to the financial dimension of internationalization, often represented by the ratio of foreign sales to total sales in previous research, as the production and sales of financial services is not inherently attached to physical locations. Moreover, the choice against the use of financial measures of internationalization in this study is influenced by considerations such as varying accounting policies across countries and inter-firm differences in definitions and reporting of turnover, sales, and income.

The *geographic dispersion of firm operations* (GEO) is a measure of the number of countries in which a firm has subsidiaries, divided by the highest number of countries with subsidiaries among the sample firms. With this method, the sample firm with subsidiary presence in the

largest number of countries is assigned an internationalization ratio of 1, constituting maximum internationalization. All other companies have a ratio between 0 and 1, benchmarked against the firm with subsidiaries in the highest number of countries. This method was adopted from the work of Sanders & Carpenter (1998).

The *cultural dispersion of firm operations* (CULT) captures the regional variety in the geographic distribution of a firm's operations. It is measured as the extent to which a firm has operating subsidiaries in the nine cultural zones defined by Ronen & Shenkar (1985), with each zone counted as 0.1, as previously used in similar research contexts (Barkema & Shvyrkov, 2007; Carpenter & Fredrickson, 2001). We added Central and Eastern Europe as a tenth cultural zone in order to account for world geopolitical changes since Ronen & Shenkar's (1985) study. For both GEO and CULT, country presence refers to countries in which the firm has at least one consolidated operating subsidiary with at least one permanent employee.

The *ratio of foreign employees to the total number of employees* (FETE) is employed to represent the human resource dimension of firm internationalization. We consider the ratio of foreign employees to total employees as an indicator of the relative structural significance of foreign and domestic markets within the firm.

When interpreting our findings, we need to take particular notice of the scale and inter-relatedness of our DOI measures. While our DOI measures have all been designed to take values between 0 and 1, they are based on different underlying scales. GEO is an intra-industry relative indicator, taking the firm that is dispersed across the largest number of countries as a benchmark for the other sample firms. It can be interpreted as a general indicator of the cultural and institutional variety of the firm's operations (Sanders & Carpenter, 1998). GEO and CULT are

related by the fact that they are based on the same underlying data on firms' country presence. Whereas GEO is particularly sensitive to individual changes in geographical posture, CULT is an absolute measure of dispersion of firm operations based on a categorization of the world into ten main cultural regions and is therefore less sensitive to single cross-border moves, unless such moves imply entry into new cultural regions. As GEO and CULT are based on the same underlying data, they correlate rather strongly (0.88) and ought to be viewed as two different ways of gauging the geographical dispersion of a firm's operations rather than as discrete DOI measures with distinct associations to the dependent variables in our study.

FETE, on the other hand, represents a different class of structural DOI measurement, as it is an indicator of the relative magnitude of domestic versus foreign operations, measured in terms of human resource deployment. Thus, FETE is insensitive to single cross-border moves or incremental changes in the geographical boundaries of the firm per se, unless such moves are on a sufficiently large scale to substantially impact the overall geographical distribution of the workforce between domestic and foreign locations. Obviously FETE is not entirely unrelated to GEO and CULT, as a move into a new country or cultural region per definition requires the addition of at least one employee in a foreign location. However, the weak positive correlations between FETE on the one hand and GEO and CULT on the other hand suggest that the magnitude and dispersion of operations are only moderately related and that distinct patterns between different operationalizations of DOI and the dependent variables are conceivable.

We collected data on firm internationalization for the year-ends 2000 and 2002. The changes in different dimensions of DOI over a two-year period are employed as proxies for the firm's international strategy in that period. In our empirical model, we suggest that strategies are related to the international capacity level of the TMT at the end of the given period. The explanatory

variables *change in GEO* (Δ GEO), *change in CULT* (Δ CULT), *and change in FETE* (Δ FETE) were computed as the value of each internationalization variable at year-end 2002 minus the corresponding value at year-end 2000. Due to the non-availability of some internationalization data, our analyses were based on 34, 32, and 30 firms (for GEO, CULT, and FETE respectively)[1]. As the impact of changes in firm international posture may differ depending on the stage of the firm internationalization process we controlled for the respective dimension of initial firm DOI in the year 2000.

Firm size has previously been found to correlate with both the international experience (Sambharya, 1996) and nationality diversity of top management teams (Heijltjes, et al., 2003). We therefore controlled for firm size by using logarithms of total employees figures, a measure that is applied in a number of other TMT internationalization studies (Carpenter & Fredrickson, 2001; Tihanyi, et al., 2000). We further controlled for *top management team size*, measured as the logarithm of the total number of TMT members, and average *top management team tenure*, measured as the logarithm of the average number of months of TMT membership. We control for team size as larger TMTs have more flexibility to experiment with atypical member profiles and need to fill vacancies more frequently, potentially facilitating the responsiveness of TMT composition to environmental and strategic pressures. Average TMT tenure is included to control for the fact that longer-tenured teams are associated with more established structures at the top of the organization, rendering it less likely that TMT configuration will be responsive to external conditions.

[1] The difference in data completion between GEO and CULT is attributable to the fact that two sample companies only reported the number of countries in which they have operating subsidiaries in narrative form, hence we were unable to assign a value to their cultural dispersion of operations.

As this is a cross-national study, we incorporate country-level effects by following the example of van Veen and Marsman (2008) and employ Hall and Gingerich's (2004) coordination index (CI) score of varieties of capitalism as a proxy for country effects. This index score distinguishes between liberal market economies (LME) and coordinated market economies (CME). It captures cross-national differences in institutional arrangements and governance regimes by devising an index for the extent to which economic relations within a country are influenced by political economic institutions. The CI is particularly important in the context of our study, as the economic systems of LMEs encourage employees to invest in skills and capabilities that are valuable across different work contexts (e.g. international experience) and facilitate inter-firm mobility in managerial labor markets. CMEs, on the other hand, provide employees with incentives for the acquisition of specialized skills and long term firm loyalty, effectively discouraging diversity of individual abilities and backgrounds. We therefore control for the *LME-CME score*, which takes values from 0 to 1 and increases with the extent to which a country has the characteristics of a CME (0 implying maximum liberalization and 1 implying maximum coordination). Van Veen and Marsman (2008) find that the LME-CME score is negatively associated with the level of TMT internationalization in their study.

4.3. Method of Analysis

Each hypothesis was tested using a standard ordinary least squares regression procedure estimating the following models:

(a) $NATDIV = \alpha + \Delta DOI + DOI + \text{firm size} + \text{team size} + \text{TMT tenure} + \text{LME-CME} + \varepsilon$

(b) $INTEXPDIV = \alpha + \Delta DOI + DOI + \text{firm size} + \text{team size} + \text{TMT tenure} + \text{LME-CME} + \varepsilon$

We first established a baseline model (Model 0) containing the control variables firm size, TMT size, TMT tenure, and LME-CME score only. Subsequently, the hypothesized predictors as well as the corresponding DOI indicators were introduced in Models 1-3, testing the proposed relationships in Hypotheses 1-3 respectively.

We did not detect any substantial multicollinearity issues, as the variance inflation factors (VIF) remained within acceptable thresholds in all equations. Mean VIFs did not exceed 1.8 in any single equation. The highest VIFs were found for the DOI indicators GEO and CULT, which are both rather strongly correlated with firm size (see Table 1), with VIFs of 2.7 and 2.6 respectively. Further analysing our data, we found that omitting the firm size variable from our models did not have any material effect on the main hypothesized relationships while the respective VIFs for GEO and CULT fell to 1.2 and 1.3, suggesting that these minor multicollinearity issues are due to correlations between control variables that do not have a substantial impact on our main findings.

5. Results

*** INSERT TABLE 1 ABOUT HERE ***

The TMT data from our 41 sample companies enables us to draw some descriptive inferences about the international characteristics of top management teams in the European financial services industry. The average TMT in our sample comprised approximately 6.4 members, of which approximately 1.5 members were foreigners. The TMT members had on average approximately six years of international experience. About 59% of the firms had at least one foreigner in their TMT ranks. Seven out of 41 firms did not have any TMT members with professional experience from abroad.

An examination of country characteristics reveals that Swiss TMT members have the highest average number of years of international experience per TMT member followed by the UK, whereas German and French TMTs can be found at the lower end of this scale. French TMTs score relatively much higher on diversity of international experiences, while the opposite relative trend can be observed for British TMTs, suggesting that there are contrasting approaches to the accumulation of international experience in these countries. TMTs from the Nordic countries consistently display a similar trend to the French in this respect, whereas Dutch and Belgian TMTs exhibit near-average levels of international experience. Meanwhile, nationality diversity at TMT level is highest among Swiss and Dutch TMTs and lowest among German, French, and Nordic TMTs (with the exception of one Swedish TMT, which has the highest nationality diversity score of all sample firms).

In France, Belgium, and the Netherlands, we find the longest-tenured executives. The average TMT member in these countries has spent nearly 20 years within the company. This hints at a preference for internal recruitment to TMT positions in these countries. UK and Swiss firms are at the opposite end of the scale with average company tenures of around ten years. Swiss TMT members seem to face particularly high executive turnover rates, as the average TMT tenure is less than three years. German TMT members, on the other hand, appear to sit more comfortably in their executive chairs with an average TMT tenure of more than six years. German TMTs also exhibit the highest average age, together with the Dutch, whereas younger TMTs can be found in the UK, Switzerland, and in some of the Nordic countries.

*** INSERT TABLE 2 ABOUT HERE ***

Hypotheses 1 and 2 suggest that changes in geographical and cultural posture are positively associated with the levels of nationality diversity and international experience diversity among

TMT members. When testing Models 1 and 2, general empirical support is found for these hypotheses, at the 5% and 10% levels of significance for Models 1 and 2 respectively. On the other hand, no such relationship is found in Model 3, suggesting that changes in the magnitude of foreign operations, measured in terms of human resource deployment, are not associated with the level of TMT international diversity. This outcome is in line with Hypothesis 3. Overall, our findings suggest that higher levels of TMT international capacity are primarily associated with international strategies that involve entry into new foreign markets and previously unexplored cultural regions, i.e. strategies that imply shifts in the geographical boundaries of the firm. However, international strategies that lead to changes in the relative distribution of the workforce between domestic and foreign locations are not statistically associated with higher degrees of international diversity at TMT level.

Furthermore, we observe that these findings are valid for both operationalizations of the dependent variable, representing two distinct types of TMT international capacity which the firm can draw upon in order to overcome the liability of foreignness in the firm internationalization process. The control variables in our models are largely non-significant. However, the control variables consistently take on the expected directions (positive for DOI, firm size, and TMT size, and negative for average TMT tenure and LME-CME score), in line with previous findings (e.g. Daily, et al., 2000; Heijltjes, et al., 2003; Ruigrok & Greve, 2008; Sambharya, 1996; van Veen & Marsman, 2008). With the exception of average TMT tenure, previous studies find consistent statistical support for the significance of these variables using larger datasets. This suggests that the lack of statistical significance of the control variables in our study may primarily be ascribed to sample size limitations and that it is important to continue to include these control variables in future research. In addition, the models generally produce significant F statistics. These

characteristics of the empirical model suggest that our model specification is adequate for the purpose of this study.

We conducted various post-hoc analyses to determine the sensitivity of our findings to the use of sub-samples that arise due to the unavailability of certain DOI dimensions for some firms. We consistently find the same relative patterns between the three DOI dimensions regardless of how we break down the dataset and compare findings for subsets of the full sample. Under the assumption that our models are properly specified, we contend, on the basis of our empirical findings, that both the type and magnitude of firms' international strategies are associated with structural configurations at the top of the firm.

6. Discussion

This paper is a step towards a more comprehensive understanding of the determinants of top management team composition in the age of globalization. In essence, we find support for the notion that firms "match managers to strategies" in the context of firm internationalization. Our findings suggest that firms align top manager profiles with the strategies that they pursue and that both the complexity and scale of such strategies matter in this context. Strategies that involve entry into new foreign markets and unexplored cultural areas imply higher levels of complexity and uncertainty than expansion strategies within the existing geographical boundaries of the firm. At the same time, the magnitude of such strategies (i.e. the frequency and scope of expansions into new foreign markets) is an additional source of complexity and uncertainty. We find that firms pursuing geographically expansive strategies on a larger scale have higher levels of nationality diversity and greater variety of international experience within the TMT in order to match the challenges associated with such strategies, as more international capacity at TMT level

supports the firm in the process of overcoming liability of foreignness in new geographical markets.

We do not find support in our data for a generic relationship between the magnitude of international strategic expansion and TMT international capacity. In addition, we do not find consistent statistical support for a relationship between firms' international strategic posture and the international characteristics of TMTs. These non-findings underline the importance of geographical and cultural boundaries and suggest that it is the level of complexity of a firm's international strategies rather than the degree of internationalization per se that guides the internal structural configuration processes at corporate headquarters over time.

Our paper has important implications for future research. First, most TMT studies are based on the assumption of "matching strategies to managers" and derive the direction of causality from Hambrick and Mason's (1984) upper echelons perspective. Our research suggests that firms may also "match managers to strategies". There is no inherent reason why these logics may not co-exist. TMTs make strategic decisions based at least partly on their collective understanding of foreign markets. Subsequently, they adapt in order to meet rising information-processing demands and increase learning capacities, which allow for further exploitation of foreign markets. The causality of TMT composition and strategic decision-making needs to be further disentangled, and thus more research is needed to identify the key determinants of TMT composition. Hambrick (2007) argues that a focus on the antecedents of TMT composition as well as the consequences is vital in order to advance our understanding of the relationship between TMTs and the organizations they lead.

Second, the presence of foreigners at the TMT level has received little attention is previous research, aside from the exploratory study by Heijltjes et al. (2003) as well as recent attempts to model the antecedents of foreign presence on TMTs (Ruigrok & Greve, 2008; van Veen & Marsman, 2008). In this study we observe that TMT nationality diversity is related to the pursuit of particular international strategies, as firms with broader geographical ambitions establish multinational TMTs in order to better deal with the complexities of entry into new foreign markets. Our findings challenge the view that foreign nationals are rarely appointed to senior management positions due to a cultural glass ceiling at some level of the organization (Kopp, 1994; Perlmutter & Heenan, 1974). This widely held belief may be one reason why upper echelons research to date has largely ignored the issue of foreigners on TMTs. However, more recent research suggests that such notions are about to become obsolete, as executive and non-executive labor markets are becoming increasingly international (Ruigrok & Greve, 2008; Staples, 2007). This provides strong impetus for upper echelons researchers who focus on the international context to consider the nationalities of TMT members in future studies.

In light of the increasing presence of foreigners on TMTs in most countries, future research could aim at designing comprehensive models that explain the rise of cross-border movement of executives. This paper suggests that as firms enter new foreign markets and unexplored cultural areas they will adjust their TMT composition in order to cope with higher levels of complexity. Other potential antecedents from the current literature may include executive compensation levels, cross-border merger and acquisition activities, foreign ownership levels, and the size of culturally adjacent markets.

There are advantages and disadvantages of carrying out this study in a single-industry setting. The European financial services sector provides us with a relatively homogeneous

platform where all companies are faced with similar pressures from the external environment. However, studies limited to a single industry must pay close attention to the particular characteristics of that industry and interpret the empirical findings in light of such information. Banking and insurance is a heavily regulated industry, where strict restrictions on licensing and the type of services provided are imposed on units operating in foreign locations. Therefore, firms in this industry may be experiencing higher levels of liability of foreignness than for example firms in the manufacturing industries. Furthermore, whereas banks and financial services firms do not face tariff barriers (as no material goods are exported), they are more prone to non-tariff barriers such as government regulations. They are also heavily exposed to idiosyncrasies of the foreign environments in which they operate, including business, cultural and language differences (Rugman, 2005). As a result, top managers with particular knowledge of key countries and regions and access to local contact networks can play a crucial role in overcoming liability of foreignness in the financial services industry.

The primary purpose of this study has been to show how corporate strategies are related to executive team composition and that TMT capabilities constrain the scope of international strategies. We regard the interplay between firm strategies and corporate decision-making structures as a promising avenue for future upper echelons research. This study is based on a limited dataset from a single industry and its findings should therefore be viewed as exploratory and in need of further inquiry. Studies with more extensive longitudinal datasets could for example provide further insights into the interplay between strategies and internal structural configurations and empirically illuminate the differences between long-run and short-run adjustments, which we are only able to address on a speculative level in this study due to the limitations of our dataset. This research could also be extended beyond the context of firm

internationalization and for instance examine the relationship between TMT characteristics and different types of product diversification strategies in order to show whether the complexity of strategies per se is a driver of TMT capacity or whether this is a phenomenon specific to the internationalization context.

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TABLE 1

Descriptive statistics

Variable	N	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12
1. Nationality diversity (NATDIV)	41	0.26	0.25	1											
2. International experience diversity (INTEXPDIV)	41	0.16	0.11	0.61*	1										
3. Δ GEO	34	0.01	0.06	0.28	0.25	1									
4. Δ CULT	32	0.03	0.11	0.36*	0.35*	0.47*	1								
5. Δ FETE	30	0.00	0.08	-0.03	-0.06	0.11	-0.03	1							
6. GEO	34	0,34	0.32	0.33	0.31	-0.33	0.18	0.06	1						
7. CULT	32	0.60	0.30	0.41*	0.46*	-0.24	0.00	0.14	0.87*	1					
8. FETE	30	0.44	0.25	0.52*	0.32	0.06	0.32	-0.34	0.24	0.34	1				
9. Firm size (log)	41	4.35	0.60	0.46*	0.35*	-0.23	0.18	-0.24	0.74*	0.68*	0.43*	1			
10. TMT size (log)	41	0.78	0.17	0.38*	0.36*	-0.06	-0.04	-0.19	0.28	0.33	0.34	0.24	1		
11. Average TMT tenure in months (log)	41	1.73	0.23	-0.27	-0.19	-0.19	-0.29	-0.08	0.09	0.18	-0.20	-0.07	-0.43*	1	
12. LME-CME score	41	0.64	0.31	-0.26	-0.30	-0.16	-0.27	-0.30	0.06	0.19	0.21	-0.15	-0.06	0.27	1

Significance levels: * $p<0.05$

TABLE 2

OLS model of the effects of changes in DOI (2000-2002) on TMT international capacity

	Nationality diversity (NATDIV)				International experience diversity (INTEXPDIV)			
Independent Variables	Model 0	Model 1	Model 2	Model 3	Model 0	Model 1	Model 2	Model 3
Δ GEO		1.61*				0.63*		
		(0.68)				(0.30)		
Δ CULT			0.68♣				0.31♣	
			(0.39)				(0.17)	
Δ FETE				0.34				0.10
				(0.53)				(0.24)
GEO		0.18				0.06		
		(0.19)				(0.09)		
CULT			0.32				0.20*	
			(0.21)				(0.09)	
FETE				0.34♣				0.07
				(0.19)				(0.09)
Firm size	0.15*	0.11	0.00	0.13	0.04	0.04	-0.02	0.02
	(0.06)	(0.10)	(0.09)	(0.08)	(0.03)	(0.04)	(0.04)	(0.04)
TMT size	0.36	0.22	0.13	0.16	0.19♣	0.16	0.09	0.18
	(0.23)	(0.28)	(0.29)	(0.26)	(0.11)	(0.13)	(0.13)	(0.12)
Average TMT tenure	-0.11	-0.06	-0.03	-0.19	0.01	-0.01	-0.05	0.06
	(0.17)	(0.19)	(0.21)	(0.24)	(0.08)	(0.09)	(0.09)	(0.11)
LME-CME score	-0.13	-0.08	-0.11	-0.14	-0.09	-0.04	-0.06	-0.02
	(0.12)	(0.13)	(0.14)	(0.14)	(0.05)	(0.06)	(0.06)	(0.06)
Constant	-0.41	-0.32	0.03	-0.15	-0.14	-0.12	0.19	-0.17
	(0.44)	(0.62)	(0.61)	(0.54)	(0.20)	(0.28)	(0.27)	(0.25)
R^2	0.33	0.36	0.33	0.42	0.26	0.34	0.40	0.18
Adjusted R^2	0.25	0.21	0.17	0.27	0.18	0.19	0.26	-0.03
F	4.35**	2.48*	2.04♣	2.75*	3.19*	2.28♣	2.82*	0.84
N	41	34	32	30	41	34	32	30

Coefficient[level of significance]
(Standard error)

Significance levels: ♣ p<0.10
* p<0.05
** p<0.01

Appendix

Alphabetical list of the 41 firms included in this study:

Abbey National (GBR)
ABN Amro (NLD)
Aegon (NLD)
Allianz (GER)
Allianz Leben (GER)
AMB Generali (GER)
Aviva (GBR)
AXA (FRA)
Baloise (CHE)
Bayerische HVB (GER)
BHW (GER)
BNP Paribas (FRA)
Commerzbank (GER)
Credit Agricole (FRA)
Credit Suisse Group (CHE)
Danske Bank (DNK)
Deutsche Bank (GER)
Ergo Versicherung (GER)
Erste Bank (AUT)
Eurohypo (GER)
Fortis (BEL/NLD)
Hannover Rück (GER)
HSBC (GBR)
IKB Deutsche Industriebank (GER)
ING Groep (NLD)
Julius Bär (CHE)
KBC Bank & Insurance (BEL)
Lloyds TSB Group (GBR)
Nordea (SWE)
Northern Rock (GBR)
Provident Financial (GBR)
Prudential (GBR)
Sampo (FIN)
SEB (SWE)
Societe Generale (FRA)
Storebrand (NOR)
Swiss Life (CHE)
Swiss Re (CHE)
UBS (CHE)
Wüstenrot & Württembergische (GER)
Zurich (CHE)