Top Management Team Internationalization and Firm Performance

The Mediating Role of Foreign Market Entry

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Abstract:

- This paper develops a multi-dimensional construct of top management team (TMT) internationalization reflecting TMT ability to deal with challenges of managing firm foreign operations in the process of ongoing globalization.
- Drawing upon upper echelons and firm internationalization theories, the relationships between TMT internationalization, foreign market entry and performance are empirically investigated in a sample of 165 Swiss listed companies.
- The results confirm the validity of the multi-dimensional construct and suggest that TMT internationalization leads to subsequent foreign market entries, which in turn are positively related to firm performance.

Keywords: TMT internationalization · Nationality diversity · International experience · Firm internationalization · Foreign market entry · Corporate performance · Executive effects
Introduction

The Uppsala internationalization process model (Johanson and Valne 1977) emphasizes the use of experiential knowledge in expanding and managing firm international operations. Consistently, the role of learning from experience in the process of gradually increasing firm international involvement has been investigated extensively in the internationalization literature (e.g., Andersen 1997; Barkema et al. 1996; Barkema and Vermeulen 1998; Melin 1992). Yet, in most of these studies emphasis is placed on firm level experience, whereas the impact of individual (managerial) level of knowledge and expertise remains largely unexplored. At the same time, upper echelons theory has long recognized the influence of managerial characteristics and experiences on firm strategic choices and behavior (Finkelstein and Hambrick 1996; Finkelstein et al. 2008).

Focusing on the team level of analysis, upper echelons theory suggests that the composition of the top management team (TMT) creates the basis for managerial decisions and ultimately firm behavior (Hambrick and Mason 1984). Over the past twenty years upper echelons research has provided coherent evidence for a link between TMT backgrounds and firm strategy/performance (for reviews see Carpenter et al. 2004; Certo et al. 2006; Finkelstein et al. 2008). However, only over the past decade has the discussion of the effects of top management team composition been extended to the context of MNCs and firm internationalization (Herrmann and Datta 2005).

A number of influential international business scholars argue the importance of having top managers who know and understand the logic and dynamics of firm foreign markets (e.g., Bartlett and Ghoshal 1989; Luo 2005). Extensive experience from a particular country helps a manager to better understand the local market and institutions and to make sound managerial decisions (Kobrin 1984). However, international assignment experience is often limited in time and regional scope and thus also limited in its impact (Caligiuri et al. 2004; Caligiuri and DeSanto 2001). Instead, Perlmutter and Heenan (1974) suggest the use of foreign nationals as top managers. With the increasing globalization and emerging markets opening up, foreign-born managers have become more prevalent among the leaders of the world largest multinationals (Greve et al. 2010; Staples 2007; van Veen and Marsman 2008).

The existing upper echelons studies dealing with international contexts (Athanassiou and Nigh 2002; Carpenter and Frederickson 2001; Carpenter et al. 2001; Herrmann and Datta 2005; Reuber and Fischer 1997; Sambharya 1996; Sanders and Carpenter 1998; Tihanyi et al. 2000) are based on North-American samples and focus primarily on top managers’ international experience as an important source of competitive advantage for multinational corporations. Only a few studies, mostly outside the US, address the nationality diversity in top management teams as related to firm internationalization (e.g., Caligiuri et al. 2004; Greve et al. 2010; Heijltjes et al. 2003; Nielsen and Nielsen 2008; Nielsen and Nielsen 2011). This article suggests that in the context of firm internationalization both top management team members’ national origins and international experiences are important sources of managerial competence and ability to deal with the complexity of foreign expansions of multinational corporations (MNCs).

Whereas nationality and international experience are two distinct sources of knowledge and expertise, both are associated with similar advantages pertaining to decision-making
related to foreign market entry. Yet, the ability of the top management team to deal with the challenges of firm international operations and make sound managerial decisions is a latent construct, which is not directly observable and therefore difficult to measure. The diversity in nationality and international experience of top managers are two possible indicators of this latent variable. This paper proposes a multi-dimensional construct of top management team internationalization and applies structural equation modeling to empirically test its validity.

The contribution of this article to the international business and upper echelons literatures is three-fold: first, by focusing on individual rather than firm level knowledge and experiences, it emphasizes the role of top managers in shaping firm internationalization strategy and performance. Second, it proposes and tests the validity of a new, multi-dimensional construct of TMT internationalization, comprised of both TMT international experience and nationality diversity. Third, this study introduces foreign market entry strategy as a mediator between TMT internationalization and firm performance. Methodologically, it responds to recent calls for increasing construct validity in upper echelons research (Carpenter and Reilly 2006) and makes strides towards addressing issues of causality between TMT and firm internationalization.

Theoretical Background

Uppsala Internationalization Process Model and Upper Echelons Theory

Firms expanding operations beyond their national borders face significant challenges related to increased environmental uncertainty and lack of knowledge about the local political, legal, tax, etc. systems. The Uppsala internationalization process model (Johanson and Vahlne 1977; Johanson and Widerheim-Paul 1975) argues that firms tend to initially expand into markets that are geographically and culturally close; once firms accumulate experience with operating abroad, they enter geographically distant markets. Hence, the model regards experiential learning as an important source of knowledge and expertise to deal with the uncertainty of entering new geographical markets (Eriksson et al. 1997). Grounded in the behavioral theory of the firm (Cyert and March 1963) and the growth theory of the firm (Penrose 1959), the Uppsala model emphasizes the bounded rationality of managerial choices and the uncertainty under which they are made.

Similarly, building on the behavioral view of the firm (Cyert and March 1963; March and Simon 1958) and strategic choice theory (Child 1972), upper echelons theory suggests that top managers’ human boundaries/limitations, such as limited field of vision, selective perception and interpretation bias, influence the strategic choices executives make (Finkelstein and Hambrick 1996). Hence, under high environmental uncertainty (such as expanding abroad) organizational choices and behavior are strongly influenced by the background characteristics and previous experiences of managers. As a result, firm strategic choices and behavior can be explained by the characteristics of the top management team (Child 1972; Hambrick and Mason 1984). In line with the logic of both Uppsala internationalization process model and upper echelons theory, the international backgrounds and experiences of TMT members can be expected to have a significant
influence on firm decision-making pertaining to foreign market entry strategies and ultimately on firm performance.

The Construct of Top Management Team Internationalization

National origin is an important aspect of a top manager’s international background and orientation. The cross-cultural psychology literature suggests that national origin influences individual personality (Triandis and Suh 2002), underlying orientations and values (Hofstede 1980). These nationality-derived qualities, in turn, affect a person's behavior as well as how the person is perceived in a multinational team (Hambrick et al. 1998). In the context of firm strategy, executives’ nationalities have implications not only for individual personalities and top management team dynamics but also for strategic decision-making (Elron 1997; Geletkanycz 1997; Kilduff et al. 2000). Top manager foreign nationality is a source of knowledge about doing business abroad. Foreign-born executives possess valuable knowledge about economic and market factors and institutions as well as about culture, behavior and norms of foreign countries, that may be invaluable in making decisions about a firm’s internationalization strategy. Luo suggests that “foreign natives have natural advantages in processing information pertaining to their home countries and in finding solutions that improve information processing.” (2005, p. 34).

Besides individual level knowledge, the diversity in executive nationalities is important for firm strategy. Sanders and Carpenter (1998) argue that, particularly in the context of firm internationalization, diversity in executive backgrounds increases the information-processing capacity of the top management team. Diversity in top management team members’ backgrounds leads to different perspectives on and interpretations of a particular situation, thus reducing the individual bias and group think and increasing the quality of the decision-making of the team. Diversity in top managers’ nationality is recognized as one of the emerging dimensions of top management team heterogeneity (Finkelstein and Hambrick 1996). According to the notion of requisite variety (Ashby 1956), the composition of a company’s top management team should reflect the complexity of its environment (Keck 1997). Hence, diversity in TMT national backgrounds may help the team as a whole to better understand and interpret the complexity of the firm’s international environment. In support of this reasoning, a practitioners’ oriented study conducted by the U.S. Conference Board found that successful global companies have multinational top management (Berman 1997).

The benefits of top managers’ international assignment experience for multinational firms are well established in the literature (Athanassiou and Nigh 1999; Carpenter et al. 2001). Top managers’ previous experience with foreign markets is viewed as a valuable resource, which increases the competitive advantage of the firm (Daily et al. 2000; Roth 1995). Important network contacts and access to sources of information are acquired through executive foreign assignment experience (Athanassiou and Nigh 2000). Moreover, international experience has an influence on managers’ perceptions and personalities and contributes to higher international orientation of top executives (Gunz and Jalland 1996). At the same time, while a number of empirical studies found support for a positive relationship between TMT international experience and firm internationalization, only
two provide evidence for positive effects of executives’ international experience on firm performance (Carpenter 2002; Carpenter et al. 2001).

Previous research has primarily used single proxies for top management team internationalization, i.e. either top managers’ nationality or international experience. Carpenter and Reilly (2006) note the lack of construct validity measures in upper echelons research and cite Cook and Campbell’s remark that “since single operationalizations both underrepresent constructs and contain irrelevancies, construct validity will be lower in single exemplar research than in research where each construct is multiply operationalized” (1979, p. 65). A major limitation of using nationality as a single proxy for top managers’ internationalization is that it only captures the impact of one country/culture and does not consider the influences of other countries/cultures to which the person has been exposed. International experience, however, is a dimension that takes into account a person’s exposure to various cultural environments. This article argues that top executives’ nationalities and international experiences are two distinct sources of the top management team’s ability to better understand and successfully deal with the challenges of firm international expansion. Such ability is an unobservable characteristic at the top management team level that is difficult to measure directly. Nationality diversity and international experience are two distinct dimensions of the construct of TMT internationalization reflecting different sources of expertise and knowledge that enable a TMT to effectively manage an internationalized corporation.

The use of multiple indicators of theoretical constructs is strongly advocated in social science research. Nunnaly and Bernstein argue that “because constructs concern domains of observables, a better measure of any construct is obtained by combining the results from a number of measures than by taking any one of them individually... Similarly, combining several observables provides greater construct validity and scientific generalizability in the domain as a whole relative to a single measure” (1994, p. 86). Furthermore, diversity researchers recently raised the argument that diversity dimensions within a team do not influence team dynamics and performance independently from each other (Jackson and Joshi 2004). Hence, top executives should be regarded as a “bundle of attributes” (Carpente et al. 2004; Kor 2003) and the effects of their background characteristics investigated simultaneously rather than studying single attributes or multiple characteristics independently. Thus, international experience bundled with the diversity in top managers’ national origin may form the ability of the TMT to deal with the challenges of firm foreign expansion and globalization.

TMT Internationalization and Firm Performance

In line with upper echelons theory (Finkelstein and Hambrick 1996; Hambrick and Mason 1984), top management team internationalization is an important factor that may influence firm strategic decision-making and ultimately performance. While TMT internationalization is regarded an ability to manage the complexity of firm foreign operations and cope with the challenges of globalization, it has additional effects on other aspects of executives work and strategic decision-making, which may not necessarily be advantageous. It is important to note that diversity in top managers’ international backgrounds and orientation has both positive and negative influences on team dynamics and strategic
decision-making (Elron 1997). Whereas a positive impact of top management team international experience on corporate performance is supported in the strategy literature (Carpenter 2002; Carpenter et al. 2001), the performance effects of nationality diversity are less straightforward (Elron 1997; Kilduff et al. 2000; Richard et al. 2004).

In the group effectiveness literature, diversity is often characterized as a “double-edged sword” which is beneficial only if managed successfully (Miliken and Martins 1996). Nationality diversity is associated with certain advantages, such as creativity and generation of more numerous and higher quality solutions (Cox et al. 1991). At the same time, diversity is often associated with increased team conflict (e.g., Simons and Peterson 2000) which in turn reduces performance. Interestingly, however, the negative consequences of nationality diversity on team processes and performance tend to diminish over time (Earley and Mosakowski 2000; Watson et al. 1993). Hence, top management team diversity may have both positive and negative influences on executive strategic decision-making and ultimately on corporate performance.

Finkelstein et al. (2008) suggest that the inconsistent findings emerging from studies that test for a direct relationship between TMT diversity and performance may be due to the omission of important organizational factors. Hence, while direct relationship between TMT internationalization and firm performance may be difficult to argue theoretically and establish empirically, according to upper echelons theory firm strategy may be an important mediator in this relationship. This work focuses on one aspect of firm strategy that can be expected to be directly influenced by the international capacity and orientation of top executives, namely foreign market entry.

TMT Internationalization and Foreign Market Entry

As top managers are the key decision-makers, ultimately responsible for firm strategic choices, the international backgrounds and orientation of the top management team is likely to have significant influence on firm internationalization strategy. Specifically, it can be expected that TMT internationalization will lead to higher international involvement because of the superior ability of TMTs with high nationality diversity and international experience to process complex information and to consider and evaluate different strategic alternatives pertaining to foreign market entry.

Empirical evidence supports the proposed positive association between top management team characteristics and different aspects of firm internationalization, such as overall degree of internationalization (DOI) (Athanassiou and Nigh 2002; Lee and Park 2006; Reuber and Fisher 1997; Sambharya 1996), degree of international diversification (Herrmann and Datta 2005; Tihanyi et al. 2000) and change in international diversification (Wally and Beccerra 2001). However, these studies fail to account for possible reverse causality, i.e. that firm internationalization may be a factor driving the internationalization of top management teams. In fact, several studies argue that TMT international experience and nationality diversity may be a response to firm internationalization strategies (e.g., Athanassiou and Nigh 1999, 2000; Heijltjes et al. 2003; Greve et al. 2010; Nielsen 2009).

The causal relationship between top management team internationalization and firm internationalization is an example of a complex temporal interaction of executive and
organizational attributes. Whereas managers are selected to fit a firm’s strategy (Szilagyi and Schweiger 1984), they subsequently have significant influence on the development of this strategy (Hambrick and Mason 1984). Over time, a reinforcing spiral probably occurs: managers select strategies that mirror their beliefs and preferences; successors are selected according to how much their qualities suit the strategy. Hence, a clear causal relationship between executive and organizational characteristics is difficult to establish.

Finkelstein, Hambrick and Cannella argue that given “the challenge and the reality of two-way causality... there is a need for an integrative theory that can model the dynamic nature of the covariation between executive and organizational characteristics” (2008, p. 115). Similarly, Carpenter et al. (2004) argue that the observance of recursive effects underscores the need for more comprehensive, if not dynamic, theoretical approaches in ensuing upper echelons research that bring to our attention the multi-directional nature of the upper echelons model.

In order to address the causality issue, this paper focuses on foreign market entry as an aspect of firm strategy that mediates the relationship between TMT internationalization and performance. Recognizing that both TMT nationality diversity and international experience may be influenced by prior internationalization, this investigation focuses on new foreign market entries as an outcome of TMT internationalization, while controlling for prior degree of firm internationalization and its effects on corporate performance. Remarkably, only one prior study has linked TMT composition to foreign expansion (Barkema and Chvyrkov 2007). Based on a longitudinal dataset of 2159 foreign market entries, the authors linked TMT tenure and educational diversity to the novelty of the geographic location of new foreign direct investments. Interestingly, however, the effect of TMT characteristics such as nationality diversity and international experience that are highly relevant in the process of firm internationalization was not explored.

TMT nationality diversity and international experience are two important sources of knowledge and expertise about foreign markets and conducting business abroad. In addition, TMTs with international backgrounds and orientations have extensive international networks that help them to adequately assess foreign environments and gather information relevant to future foreign market entries. Prior knowledge, expertise and network contacts represent a vital resource for strategic decision-making pertaining to foreign market entry, since such decisions are highly complex and uncertain and require cultural and strategic knowledge and careful consideration of different alternatives.

Diversity in top managers’ nationalities and international experiences may provide firms with greater sources of valuable information and superior capacity to process this information. First, such diverse TMTs are more likely to identify potential opportunities for foreign expansion via more thorough environmental scanning and careful evaluation of different options. Through their international network contacts and understanding of the international business environment, such managers may be alert to international investment opportunities and foreign market developments. Such information, in turn, serves as a valuable resource in international strategic decision-making. Second, given the bounded rationality and cognitive limitations of decision makers (Cyert and March 1963), TMT internationalization may help decision makers reduce the complexity of available information by filtering the abundance of stimuli through selective perceptions and interpretations (Hambrick and Mason 1984). As such, TMTs with high diversity in
nationality and international experience may draw on past experiences and the broader knowledge base and cognitive capacity in order to more effectively make complex and uncertain strategic decisions pertaining to foreign market entry. Moreover, Luo (2005, p. 34) suggests that increased nationality diversity at the top management team and board levels further facilitates the development and utilization of firm level experiences as suggested by the Uppsala internationalization process model (Johanson and Vahlne 1977).

In addition, executives’ strategic orientation is likely to determine their preferences for certain strategic actions (Finkelstein et al. 2008; Geletkanycz 1997). Accordingly, internationalized TMTs are likely to look favorable upon foreign direct investments as they perceive foreign expansion as being less risky compared to executives without such backgrounds and experiences (Herrmann and Datta 2006). Hence, internationalized TMTs are likely to engage in a high number of foreign expansions.

**Hypothesis 1:** Top management team internationalization is positively associated with the number of subsequent foreign market entries.

Beyond the natural preference of foreign nationals and executives with international experience to engage in more international activities, the diversity in top management team members’ national backgrounds and international assignment experiences is likely to enhance the decision-making pertaining to foreign direct investments. In order to increase the probability of successful foreign direct investments, top executives need to collect as much relevant information as possible through a variety of sources and carefully evaluate this information in order to reach a decision. The international backgrounds and experiences of the top management team will allow the TMT to select foreign market entries that are most beneficial to the firm.

The broader knowledge base and diversity in values and cognitions stemming from different nationalities and the network contacts and expertise resulting from international experience may contribute to the accurate assessment of the factors involved in foreign market expansion. For instance, internationalized TMTs are likely to draw on their experiences and multicultural backgrounds in evaluating potential risks and returns associated with particular foreign market entry options. As a result, nationally and experientially diverse TMTs are likely to generate more alternatives and make better judgments regarding which foreign market entry opportunities to pursue. Moreover, TMT internationalization may also enhance the process of contract negotiations with local partners, suppliers etc, as such TMTs have higher cultural and institutional awareness.

Foreign market entry is an important factor that transmits the benefits of top management team internationalization into better corporate performance. This logic is similar to prior research which demonstrated that nationally diverse TMTs are better at managing foreign subsidiaries as evidenced by improved subsidiary performance (Elron 1997; Gong 2006). Similarly, Roth (1995); Carpenter (2002) and Carpenter et al. (2001) found support for the arguments that the international experience of firm upper echelons results in superior performance for highly internationalized organizations. While the relationship between firm degree of internationalization and corporate performance is highly controversial (e.g., Contractor 2007; Hennart 2007; Verbeke et al. 2009), this paper suggests that foreign market entry decisions undertaken by internationalized TMTs are likely to positively influence subsequent firm performance (Fig. 1).
Hypothesis 2: Foreign market entry decisions undertaken by international top management teams are positively associated with corporate performance.

Methodology

Study Sample and Data Sources

From all 269 companies listed on the Swiss Stock Exchange (SWX) in September 2004, the sample was reduced to $n=165$ based on availability of information and the nature of the company (investments trust, local cantonal banks and state-owned energy companies were excluded from the sample as they would jeopardize the generalizability of this study's findings). Data was collected for a three-year period (2002–2004) resulting in a total of 495 company/year observations. Company level internationalization and performance data was obtained from the Datastream and the Worldscope databases. Data on foreign direct investment was collected from the SDC Platinum and the LexisNexis: Directory of Corporate Affiliations databases. Data on top management team composition and executive compensation was obtained from the companies’ annual reports. Information on top managers’ nationality and international experience was collected from executives biographies published on companies’ websites and in annual reports. Subsequently, individual manager's records were cross-checked across companies to complete missing records.

Variables

Independent Variables

The top management team of a company was defined as the officers who were members of the management board or executive committee as identified in the firm's annual report. The members of the extended executive committee were generally not included in the top
management team, following the commonly employed definition of the TMT as a group of the most important decision-makers in a company (Murray 1989; Pettigrew 1992).

Degree of nationality diversity in a top management team was calculated using a Blau index, a measure of group heterogeneity, which is commonly used in TMT research (Carpenter 2002; Finkelstein and Hambrick 1996). The Blau index captures the dispersion of team members across all possible categories of a certain dimension (i.e. all different nationalities represented on the top management team) using the formula

\[ B = \left[ 1 - \Sigma (p_i)^2 \right] \]

where \( p \) is the percentage of members in the \( i \)th group (i.e. nationality). The higher the value of \( B \), the greater is the heterogeneity on a particular variable. The nationality of the CEO was recorded as a dummy variable equal to one if the CEO did not have Swiss nationality and zero otherwise. Diversity in international experience was operationalized by applying a simple ratio measure of the proportion of top management team members who had previous work experience outside Switzerland. The international experience of the CEO is a dummy variable equal to one if the CEO has previously worked abroad and zero otherwise. While more precise measures of international experience, such as number of years of international assignment experience (e.g. Carpenter 2002) or intra-personal diversity in multiple countries in which each executive has experience (Greve et al. 2010), is desirable, such detailed information is not available for Swiss executives. At the same time, Sambharya (1996) reports that the percentage of TMT members with international experience is highly correlated (\( p=0.80 \)) with the number of years of international experience. \( TMT\ Internationalization \) was measured as a composite index of the two measures TMT nationality diversity and TMT international experience, with a possible range between 0 and 1.

Dependent Variables

Corporate performance was measured as the return index for each company and year, an objective measure of stock market returns.

Foreign Market Entry was measured as the number of foreign direct investments undertaken by a company in a particular year. From all greenfield investments, mergers and acquisitions and joint ventures that a company engaged in, only those outside the national borders were counted. In order to avoid problems with reverse causality and allow for sufficient time-lag between independent and dependent variables, TMT composition was measured on January 1 of the respective year, foreign market entries were counted for the duration of a calendar year (January 1 until December 31), and firm performance was measured at the year end.

Control Variables

A company’s prior degree of internationalization was operationalized using a multi-item measure based on Sullivan’s (1994) conceptualization. The composite measure accounted for the extent to which each company had international sales and assets as well as for the
geographical dispersion of the sales. The proportion of foreign sales to the total sales of a company (FSTS) was used as an indicator of the performance dimension of firm DOI. A measure of the dispersion of foreign sales was used in addition to the ones initially proposed by Sullivan (1994). The degree of geographical diversification was measured using the entropy measure (GSENTR) of firm diversification (Palepu 1985) similar to previous research in the upper echelons field (Jensen and Zajac 2004; Hoskinsson et al. 1993; Wiersema and Bantel 1992). The entropy measure is calculated with the formula

\[ \sum P_i [\ln(1/P_i)^2] \]

where \( P_i \) is the percentage of segment \( i \) sales of the total firm sales and \( (1/P_i) \) is a weight to account for the importance of each segment in the total sales of a company. Proportions were defined as sales per geographical segment. The ratio of foreign assets to the total assets (FATA) was employed to represent the structural dimension of the internationalization measure, as an indicator of firms’ resources invested abroad. Information on foreign employees is not available in the Thomson One Banker database. Furthermore, the foreign employees figure was not consistently reported in the annual reports of Swiss companies. Therefore, a measure of the proportion of foreign employees to the total number of employees (FETE) was not applied in this study.

Firm size is likely to influence both foreign market entry and corporate performance and was therefore included as a control variable. The total number of firm employees was used to control for firm size. The performance and firm size variables were transformed using a logarithmic function in order to meet normal distributions requirements. TMT size, measured as the count number of TMT members as reported in the company annual reports, was controlled for as suggested by Carpenter et al. (2004). Executive compensation data was collected from annual reports and measured as the average compensation of the top management team members (the total compensation divided by the number of TMT members, including the CEO). Executive compensation was controlled for as it may have important influences on both foreign market entry and corporate performance (Finkelstein et al. 2008).

As another factor influencing firm profitability, firm leverage was entered as a control and operationalized as the percentage of long-term debt to total capital (Geringer et al. 2000). In addition, product diversification, measured with the entropy measure of firm diversification (Palepu 1985), was used as a control. Operational performance is an important determinant of stock market performance and return on assets (ROA) was controlled for. Year dummies were entered in order to control for temporal effects. Finally, industry dummies were used to account for possible industry effects. Based on their SIC codes, the 165 companies were separated in five categories representing the largest industry groups: (1) Machinery & electronics; (2) Pharmaceuticals; (3) Banking; (4) Other services; and (5) Other manufacturing.

Data Analysis

Structural equation model (SEM) analysis was applied to test the multi-dimensionality of the proposed construct of TMT internationalization using the EQS software. SEM is
particularly suitable to test for the validity of latent (unobservable) constructs (Loehlin 2004). Panel data analytical technique was used for the hypothesis testing in order to utilize the time series dimension of the data. A random effects model was chosen over a fixed effects approach as the number of years of observations in this study is limited (Jensen and Zajac 2004). The graphical analysis and the White tests indicated the presence of heteroscedasticity in the data. Autocorrelation or serial correlation (correlation of error terms over time periods) is another common problem in time-series resulting from the fact that factors omitted from the regression are correlated across periods. The Durbin-Watson as well as the Box-Pierce Q tests indicated the presence of serial correlation in the dataset. Consequently, generalized least squares (GLS) correcting for heteroscedasticity and first order autoregression AR(1) was chosen for the analysis of the data (Stata 2003). This approach corrects for the autocorrelation in the data by calculating a unit-specific factor, which is then applied to transform each individual firm’s data. An autoregressive-heteroscedastic model for the pooled time-series cross-sectional data model was specified as follows: \[ Y_{it} = b_1 X_{it1} + b_2 X_{it2} + \ldots + b_k X_{ikt} + e_{it} \] where \( i \) equals 1,2,3 \ldots \( N \) and corresponds to the number of the cross-sectional units; \( t \) equals 1,2,3 \ldots \( T \) is the number of time periods; and \( K \) is the number of explanatory variables. The models with foreign market entry as the dependent variable were analyzed with random effects poisson regression, which is the appropriate analytical technique for count variables.

**Results**

Table 1 presents the means, standard deviations and the correlations between the observed variables.

The confirmatory factor analysis provided support for the multi-dimensionality of the top management team internationalization construct. The two diversity dimensions loaded significantly on the TMT internationalization construct (\( \beta = 0.75 \) for nationality diversity and \( \beta = 0.45 \) for international experience). The three items of FSTS (\( \beta = 0.90 \)), FATA (\( \beta = 0.72 \)) and GSENTR (\( \beta = 0.75 \)) loaded to a single factor that captures the internationalization of the firm in terms of operations abroad. The results supported the convergent validity of the measurement model as all freely estimated parameters had significant and high factor loadings. In support of discriminant validity of the latent constructs, the multivariate Lagrange-Multiplier (LM) modification tests suggested no cross-factor loadings. To further support the discriminant validity of the hypothesized factors, two alternative measurement models were assessed (Kline 2005).

The theoretical reasoning and the sequence of testing the measurement models was as follows. First, according to current research by Caligiuri et al. (2004) a first-order confirmatory factor analysis was conducted to test whether all items load to one construct (measurement model 1). Subsequently, according to upper echelons theory (Hambrick and Mason 1984), a distinction was made between upper echelons internationalization and firm internationalization (international strategy measured as the degree of commitment of resources and profits abroad) and a two-factor measurement model was tested (measurement model 2). The third measurement model (the result of which were presented above) tested the multi-dimensionality of the TMT internationalization construct.
Table 1: Means, Standard Deviations and Correlations

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<td>1 TMT internationalization</td>
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<td>3 Firm size</td>
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<td>4 Product diversification</td>
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<td>5 Return on assets</td>
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<td>6 Leverage</td>
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<td>7 Foreign market entry</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>8 Firm internationalization</td>
<td>0.56</td>
<td>0.39</td>
<td>0.37</td>
<td>0.22</td>
<td>0.43</td>
<td>0.20</td>
<td>0.02</td>
<td>0.00</td>
<td>0.16</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 Executive compensation</td>
<td>6.26</td>
<td>0.84</td>
<td>0.31</td>
<td>0.11</td>
<td>0.57</td>
<td>0.17</td>
<td>0.18</td>
<td>0.03</td>
<td>0.27</td>
<td>0.26</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>10 Firm performance</td>
<td>4.76</td>
<td>1.65</td>
<td>0.16</td>
<td>0.23</td>
<td>0.46</td>
<td>0.15</td>
<td>0.37</td>
<td>0.02</td>
<td>0.25</td>
<td>0.09</td>
<td>0.40</td>
<td>1</td>
</tr>
</tbody>
</table>

*All correlations above 0.10 are significant at p < 0.05
by distinguishing between nationality and international experience diversity that were considered separate dimensions (measurement model 3). This model recognized that firm internationalization and upper echelon internationalization are two separate yet correlated constructs. Table 2 reports the fit indices used to assess the fit of the measurement models or the extent to which the proposed models adequately describe the sample data (Byrne 2006).

χ² statistics is one of the conventional methods for assessing model fit. However, the sensitivity of χ² statistics to sample size has been extensively criticized (Byrne 2006; Kline 2005) and a number of alternative fit indices are proposed. Comparative fit indices measure the proportional improvement of the model fit by comparing the hypothesized model with a restricted, baseline model. The Normed Fit Index (NFI) (Bentler and Bonett 1980) ranges from zero to one and a value higher than 0.95 (or less conservative 0.90) is considered as a good model fit. The CFI index (Bentler 1990) is a revised version of the NFI index that takes into consideration sample size and has the same range of cut-off values. The Non-Normed Fit Index (NNFI) is also a modification of the NFI index that takes into account model complexity and can take values higher than one. The Root Mean Square Error of Approximation (RMSEA) has recently been recognized as one of the most informative criteria in structural equation modeling (Byrne 2006) as it is also sensitive to model complexity. Values lower than 0.05 indicate a very good model fit whereas values lower than 0.08 are acceptable and values between 0.08 and 0.10 are considered indicators of a weak fit.

Table 2: Fit Indices Comparison for Alternative Measurement Models

<table>
<thead>
<tr>
<th>Nr.</th>
<th>Model</th>
<th>Df</th>
<th>χ²</th>
<th>NFI</th>
<th>NNFI</th>
<th>CFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>One factor DOI</td>
<td>56</td>
<td>245.783</td>
<td>0.844</td>
<td>0.859</td>
<td>0.875</td>
<td>0.085</td>
</tr>
<tr>
<td>2</td>
<td>Two factors (UE &amp; INT)</td>
<td>55</td>
<td>109.875</td>
<td>0.930</td>
<td>0.958</td>
<td>0.964</td>
<td>0.046</td>
</tr>
<tr>
<td>3</td>
<td>Two factors (UE (NAT and EXP) &amp; INT)</td>
<td>53</td>
<td>45.735</td>
<td>0.971</td>
<td>1.006</td>
<td>1.000</td>
<td>0.000</td>
</tr>
</tbody>
</table>

As predicted in hypothesis 1 and shown in Table 3 (Model 1) the relationship between TMT internationalization and foreign market entry was positive and significant (b=1.47, p<0.01). In support of hypothesis 2, foreign market entry, in turn, was positively related to corporate performance (b=0.10, p<0.05 in Table 3, Model 3). Not surprisingly, no direct relationship was established between TMT internationalization and firm performance (Table 3, Model 2). The relationship between firm degree of internationalization was found to be curvilinear. In support of the S-curve hypothesis (Lu and Beamish 2004), the results suggest that the relationship between firm internationalization and performance is cubic. Specifically, the relationship was negative at low and high degrees of
internationalization and positive at medium levels of internationalization. The results further suggest that prior degree of internationalization is positively associated with the number of new foreign market entries.

Discussion

This study was stimulated by a recent trend in multinational corporations—the increasing internationalization of their top management teams. A multi-dimensional measure of top management team internationalization as a latent variable, capturing the upper echelon’s ability to deal with the challenges of firm international operations, was applied. The results suggest that the construct has strong validity and supported its relationships to foreign market entry and ultimately to corporate performance.

This paper makes a contribution to the international business literature by emphasizing the impact of managerial level knowledge and experience in the firm internationalization process and its subsequent effects on corporate performance. As noted by Hennart, superior management is one of the major sources of super-normal profits for firms; yet, the internationalization-performance literature has largely underplayed the role of managers (2007, p. 447). Furthermore, the majority of firm internationalization literature focuses

| Table 3: TMT Internationalization, Foreign Market Entry and Firm Performance |
|---------------------------------|------------------|------------------|------------------|
|                                | Foreign market entry | Firm performance |
|                                | Model 1           | Model 2           | Model 3           |
| TMT internationalization       | 1.47**            | −0.12             | −0.16             |
| TMT size                       | 0.02              | 0.02              | 0.02              |
| Executive compensation         | 0.00              | 0.10*             | 0.11**            |
| Firm size                      | 0.83***           | 0.47***           | 0.45***           |
| Firm internationalization      | 1.20***           | −3.37***          | −3.41***          |
| Firm internationalization¹     |                   | 4.61***           | 4.57***           |
| Firm internationalization²     | −1.93***          | −1.93***          | −1.88***          |
| Product diversification        | −0.14             | 0.03              | 0.03              |
| Return on assets               | 0.04*             | 0.02***           | 0.02***           |
| Leverage                       | 0.00              | 0.00              | 0.00              |
| Industry group 1               | −0.16             | −0.27**           | −0.42***          |
| Industry group 3               | −0.17             | 0.21              | −0.18             |
| Industry group 4               | −0.19             | −0.52***          | −0.69***          |
| Industry group 5               | −1.78             | −0.84***          | −1.03***          |
| Year 2002                      | 1.11***           | −0.39***          | −0.40***          |
| Year 2004                      | 0.02              | 0.19***           | 1.20***           |
| Foreign market entry           |                   |                   | 0.01*             |
| Constant                       | −9.20***          | 1.56***           | 1.78***           |
| Wald Chi²                      | 239.29***         | 1222.13***        | 1215.32***        |

***p<0.001; **p<0.01; *p<0.05
on firm level experience and mostly ignores or finds no support for the effects of previous international experience at the managerial level (e.g., Carlsson et al. 2005).

In contrast, this study shows that managers’ international backgrounds and experiences are positively related to foreign market entry. The evidence suggests that in the European context, top management team internationalization plays an important role in the firm internationalization process. Diversity in both international experience and top manager nationalities was found to be a reliable proxy for the international orientation of top management teams in Swiss multinational companies that leads to sound foreign market entry decisions, which in turn have a positive impact on firm performance.

At the same time, the relationship between firm internationalization and corporate performance is not as straightforward. As noted by Contractor (2007) firm internationalization does not always improve performance and existing theories point at a non-linear nature of the relationship. The empirical results of this study suggest that at high and low levels of internationalization, the degree of firm internationalization is negatively associated with firm performance, while at moderate levels of internationalization, it results in higher performance. These findings lend support to the S-curve hypothesis (Lu and Beamish 2004) which simultaneously accounts for the costs and benefits encountered in the process of firm internationalization. The present study illuminates the role of TMT internationalization in this context. Specifically, the results suggest that companies with low degrees of internationalization may benefit from internationalization at the TMT level, as the increased international ability of the upper echelons may propel the firm towards the threshold degree of internationalization, at which point the benefits outweigh the costs. By the same token, companies operating at the optimum level of internationalization, which have highly internationalized TMTs, may run the risk of over-internationalizing (that is increasing their international involvement beyond the profitable phase). This is consistent with the findings by Ruigrok et al. (2007) on a similar sample of Swiss firms who found that over-internationalized companies report weaker performance. Together, these findings point to the importance of establishing where a firm is on the internationalization curve before considering an increase in TMT internationalization. At the same time, it should be noted that it is unlikely that TMTs will be internationalized to extreme degrees as some embeddedness in the local home country cultural and business environment persists.

Finally, this study addresses the gap in research on international experience of top executives of European companies (Carpenter and Fredrickson 2001) and supports previous findings of the emerging research stream on nationality diversity of top management teams (Caliguri et al. 2004; Heijltjes et al. 2003; Greve et al. 2010; Nielsen and Nielsen 2008; Nielsen and Nielsen 2011). Switzerland was chosen as the primary context for the empirical investigation for a number of reasons. First, Switzerland is a preferred home base for many multinational companies (MNCs) due to its political stability, central location and tax advantages. Moreover, MNCs report that the second most important reason for location decisions is the presence of qualified managers (Swissinfo 2004). Switzerland is among the most competitive executive labor markets in Europe, with one of the highest percentages of foreign top executives and executives with extensive international experience thus offering a suitable context for studying TMT internationalization. In addition, as Switzerland is a small country, firms are more likely to expand abroad.
Hence, Switzerland can be seen as a country which is at the forefront of both firm and TMT internationalization (Greve and Ruigrok 2008). At the same time, the multicultural nature of the Swiss society could jeopardize the generalizability of the results beyond the Swiss context. However, since the majority of large Swiss firms are located in the German-speaking part of the country and their native executives are predominantly Swiss German, the risk of biasing the results seems minimal.

Like any other study, this work has several limitations. For instance, demographic variables are used as proxies for underlying psychological processes and team dynamics, which were not measured and accounted for in the theoretical model and the empirical analysis. Finkelstein et al. (2008) suggest that the inconsistent findings emerging from studies that test for a direct relationship between TMT diversity and performance may be due to the omission of important organizational factors as well as process variables. Future research needs to open the black box of organizational demography and provide explanation for some intervening mechanisms through which TMT composition influences firm level performance (Lawrence 1997; Priem et al. 1999). This is particularly important in the context of TMT internationalization, as the growing literature on multinational teams reveals that culturally diverse groups encounter significant process losses before being able to realize the potential benefits of diversity.

While trying to address the issues of causality between executive and organizational characteristics, the present study relies on very limited time series. Future research may apply longitudinal designs using cross-lagged correlations, change scores (or first-difference scores), and simultaneous equation modeling to shed clearer light on the degree to which executive characteristics give rise to organizational characteristics, as opposed to the reverse (Finkelstein et al. 2008). Hambrick (2007) suggests the use of instrumental variable that measures the likelihood (or expected value) of the independent variable and including that likelihood score in the regression analysis.

Moreover, while this study links TMT internationalization and foreign market entry to corporate performance, it was not possible to study the relationship to the performance of foreign subsidiaries (operations). As corporate performance has a significant domestic element, ideally TMT internationalization would be related to the foreign performance of the new market entries. Future research can possibly undertake such fine-grained inquiries.

While the multi-dimensional construct proposed in this study improves our understanding of the role of TMT internationalization for firm international strategy and performance, further refinements are needed. For instance, future research may explore the possible interaction effects between the two dimensions of TMT nationality diversity and TMT international experience. The two dimensions of the TMT internationalization construct may be complementary in building the top management team’s ability to deal with the complexity of firm foreign operations. Previous research on group diversity indicates that cultural diversity has some negative effects on group dynamics (Earley and Mosakowski 2000; Watson et al. 1993). Yet, these negative effects may be less pronounced contingent upon the level of international experience of the team members. For instance, the role that a foreign national plays in a TMT and the way his/her national characteristics influence team processes and performance may largely depend on the experience that the rest of the top executives have made with foreign cultures. The extent to which the other
top managers speak the language and are used to common beliefs and values of a foreign team member’s culture may have an impact on team interactions (Hambrick et al. 1998).

In addition, future research may consider other possible sources of top managers’ international orientation as additional dimensions of the TMT internationalization construct, such as different types of international experience (e.g. Takeuchi et al. 2005), international education (Kobrin 1984), the languages that executives speak as well as international network contacts (Athanassiou and Nigh 2002). Considering a bundle of relevant executive attributes (Carpenter et al. 2004; Kor 2003) and their cumulative effects in the team context may help advance the current understanding of what contributes to developing international capability at the upper echelons level of business organizations. A recent multi-level study by Athanassiou and Roth (2006) showed that both individual managerial international attributes and the MNC top-management-team’s international attribute profile have joint effect on a manager’s centrality in providing international business advice to the team. Similarly, an investigation of the combined effects of individual manager’s international profiles and the top management team international orientation may help advance our current understanding of the executive effects on firm internationalization and performance.

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References


