

1. Executive international experience and firm performance: the moderating effect of country and regional match.

Abstract

Scant attention has been devoted to team international experience and firm performance. This paper offers a novel perspective by focusing on the relationship between top management team international experience and performance to study the moderating effect of the alignment of team international experience and firm international presence. Leveraging a dataset of Dutch and Swiss international companies over the five-year period from 2008-2012, for a total of 219 firm-year combinations, we found that firm performance has a U-shaped relationship with top management team international experience and changes concavity when the moderating effect of region TMT-firm match is included. These findings allow for a better understanding of international experience team dynamics and shed new light on the performance effects of international experience. Managerial and team diversity implications are discussed, together with opportunities for future research.

Keywords: Top management team; diversity; international experience; firm performance; TMT-strategy match

1.1. Introduction

Top management team (TMT) members' demographics in general (Finkelstein, Hambrick, & Cannella, 2009), and international experience (IE) in particular (Geletkanycz, 1997) affect team behaviours and, subsequently, firm performance.

The strategic leadership literature has often conceptualized IE as a resource for the firm, focusing on the individual/CEO level, who is the leader of the executive group and has a great deal of influence on TMT's function and performance (Carmeli, Tishler, & Edmondson, 2012). Daily, Certo, and Dalton (2000), for example, argue that CEO IE represents an exploitable resource for the firm, similar to Carpenter, Sanders, and Gregersen (2001), who leveraged their argument on resource-based and dynamic capability arguments. Moreover, Roth (1995) proposed that CEO IE matters more when firms have more international exposure. More recently, Patzelt (2010) supported the existence of a positive relationship between CEO international experience and the amount of venture capital acquired by a new technology venture, as well as investors' perception of the human capital of CEOs in conjunction with the rest of the TMT.

There are few recent papers that focus on the whole team, rather than on CEOs. First, Bouquet, Morrison, and Birkinshaw (2009) suggested focusing on how executives behave in action (Pettigrew, 1992), finding that firm-level effects of international attention may depend upon executive sources of cognitive capability: they highlighted the fact that there may be contingencies where TMT's abilities are not exploited to their full potential. Second, Oxelheim, Gregoric, Randoy, and Thomsen (2013) showed that nationality and international experience mutually complement each other and both represent a source of information processing capability. These examples show that the prior literature has looked at IE from a "resource" perspective: more coherently, international experience has been operationalized as a categorical variable, or a continuous variable that focuses on the number of years (or assignments) spent abroad, or the percentage of members with IE.

The previous literature has failed to incorporate how the international experience of individuals dovetails within the team, disregarding the importance of individuals' interaction and team dynamics (Castanias & Helfat, 1991; Hambrick, Humphrey, & Gupta,

2015). On the one hand, homogeneity of international experience may lead to a shared worldview and to decision-making routines, similar to education, functional background, or tenure homogeneity (Carpenter, 2002). Communication within the team will likely be efficient and rapid (Williams & O'Reilly, 1998) compared to the more difficult exchange of information in more diverse teams (Gong, Cheung, Wang, & Huang, 2012). Wiersema and Bantel (1992) found that demographic homogeneity leads to common understanding, effective communication, and integration among individuals. However, homogeneity has also been related to a lack of openness to alternative sources of information (Tuggle, Schnatterly, & Johnson, 2010). On the other hand, team diversity enhances breadth of perspectives, skill sets, and higher information-processing capability (van Knippenberg & Schippers, 2007). Diverse experiences open discussions among team members and enhance their creativity in decision making (Shin, Kim, Lee, & Bian, 2012). The strategic leadership literature should shift the focus from the individual to the team level to comprehensively understand the performance effects of international experience.

This paper aims at answering the following research question: how and under what conditions do firms benefit from TMT international experience? To address this question, the paper has a twofold objective. First, we aim at understanding the effects of international experience on firm performance. The performance effects of international experience remain mixed, with papers reporting inconclusive results (e.g., Daily et al., 2000; Nielsen, 2010). We argue that this is explained by the fact that the international experience of a whole TMT should be considered. Executives set up strategies based on behavioural factors rather than fully rational choices (Cyert & March, 1963; Hambrick & Mason, 1984): they are under heavy job demands and are “forced to take mental shortcuts and fall back on what they have tried or seen work in the past” (Hambrick, 2007, p. 336). Accordingly, when deciding on a firm’s strategy, the past experience of the whole top management team should be considered.

Second, despite the centrality of the strategic alignment or fit¹, there is dearth of research on its conceptualization and empirical testing (Carmeli, Gelbard, & Gefen, 2010; Zajac, Kraatz, & Bresser, 2000). Not only is the interrelation of members' IE important to advance our understanding of its firm-level effects, but also whether specific IE is more relevant than other types of IE, for example, in terms of countries or regions. Along this line of thinking, Hennart (2011) suggested testing whether firms with TMTs with more international exposure are more fit than less exposed ones. A company may improve its capability to deal with the international environment by appointing executives with specific characteristics, skills, or experiences that are relevant to the firm's internationalization process (Sanders & Carpenter, 1998). Accordingly, we analyse whether a particular set of international experience improves firm performance.

To answer to the above research question, we leverage the concepts of hybrid team culture (Earley & Mosakowski, 2000) and group learning (Wilson, Goodman, & Cronin, 2007). Accordingly, we argue in favour of a non-linear relationship between TMT IE diversity and firm performance. This is in line with Bowers, Pharmer, and Salas (2000), whose meta-analysis showed no superior performance for either homogeneous or very heterogeneous groups. At moderate values of IE diversity, though, team members suffer from stronger perceived differences among themselves and are affected by lack of a hybrid team culture, a feeling of membership, and lower group learning, resulting in decreased performance. When a critical amount of international experience diversity has been reached (Asmussen, 2009) the negative effects of faultlines are counteracted and firm performance improves.

This paper offers a number of theoretical contributions. First, we extend the strategic leadership literature by focusing on international experience at the team level. Leveraging hybrid team culture and group learning, our paper proposes a completely revised insight about international experience: we theoretically argue that international experience matters at the team level, where members share their previous experience abroad, integrate their knowledge, and implement it in firm routines.

¹ Herein alignment, fit, and match are used as synonyms.

Second, we exploit a team-level international experience construct to consider the dynamic interaction of members' knowledge acquired during experiences abroad, in line with the study of Athanassiou and Nigh (2002). Our findings imply that to have a sound understanding of IE, a more comprehensive operationalization needs to be exploited that takes into account subgroup formation based on members' experience abroad.

Third, since "strategic fit is a cornerstone of strategy and organization research" (Carmeli et al., 2010, p. 347), we propose a more objective conceptualization of internal fit and test the effects of the match between the portfolio of countries (regions) where a TMT has worked and where the firm is operating. More coherently, our research validates the idea that a balance between demand and supply of international expertise must exist to improve firm performance.

Finally, this paper offers practical implications about the firm performance effects of TMT IE. Based on our findings, firms should avoid moderate diversity in TMT composition and should hire executives whose international work experience fits a firm's strategy.

We test our theoretical framework of the performance effects of top management team international experience interpersonal diversity, and the moderating effect of fit, on a panel of 166 listed Dutch and Swiss companies in the five-year period from 2008-2012. In light of the above, our study aims at increasing understanding of the firm-level effects of the interaction of individual-level career capital.

The remainder of the paper is structured as follows. Section 1.2 provides theoretical grounding for the argumentation of proposed hypotheses, and Section 1.3 describes the sample and the variables exploited in this paper. Sections 1.4 and 1.5 discuss the results of our analysis and provide details about the performed robustness checks. Finally, sections 1.6 and 1.7 draw implications and propose future research opportunities, respectively.

1.2. Theoretical background

The previous literature has conceptualized international work experience mainly as an individual-level characteristic that represents a valuable source of knowledge, skills, and expertise about foreign markets and cultures. Leveraging on the resource-based theory of the firm and dynamic capabilities perspective, Carpenter et al. (2001) showed that CEO IE is particularly valuable under conditions of expansive global strategic posture, due to the fact that it allows them to manage international complexity, and because MNCs are willing to pay them higher compensation. A similar conclusion was reached by Roth (1995), who confirmed that CEOs with international experience positively affect firm performance, advancing that international experience possesses characteristics of relative rarity, inimitability, and non-substitutability. However, other scholars have noted that international experience represents a resource and will be of importance to the firms for which executives will be working in the future (Daily et al., 2000). Herrmann and Datta (2006) went a step further and targeted the entry-mode choices of internationally seasoned CEOs: they found that international experience provides these CEOs with a more risk-inclined and self-confident framework that favours entry modes characterized by greater commitment, and higher levels of information-processing needs. Finally, Patzelt (2010) advanced that investors perceive the human capital of internationally experienced CEOs not by itself, but in conjunction with the rest of the TMT. A similar argument was proposed by Carpenter et al. (2001), who contended that the international experience of the whole TMT excluding the CEO positively moderates the association between CEO IE and firm performance, thus strengthening the conceptualization of a resourceful IE. This stresses the importance of considering CEOs as well as their team members.

Few studies, though, have examined international experience at the team level. Leveraging the upper echelons theory, scholars have conveyed that international experience represents a powerful tool in the hands of TMTs facing increasing environmental uncertainty connected to firm internationalization.

In other words, spending years abroad allows executives to effectively perceive and interpret outside environments: accordingly, scholars have found several positive firm-level

outcomes related to IE (Carpenter & Fredrickson, 2001; Patzelt, zu Knyphausen-Aufseß, & Fischer, 2009; Reuber & Fischer, 1997; Tihanyi, Ellstrand, Daily, & Dalton, 2000)².

A different approach was implemented, more recently, by scholars trying to capture various types of internationality, juxtaposing executive nationality and international experience. On the one hand, Oxelheim et al. (2013) showed that board internationalization, as reflected by nationality and work experience, mirrors financial internationalization and geographical exposure, respectively. On the other hand, Nielsen and Nielsen (2011) argued that they are distinct characteristics that have different effects on internationalization decisions. Foreign nationality affects risk and uncertainty perceptions, thus leading to the preference for shared-control modes, while international experience favours foreign market knowledge and networks that result in higher confidence and, consequently, in the preference for full-control modes. Athanassiou and Nigh (1999) also found that international experience represents a powerful facilitator for accessing international networks. Since it is difficult to believe that CEOs decide on topics affecting firm performance entirely on their own, the focus should be the whole TMT (Reuber & Fischer, 1997).

We argue that the team, rather than the CEO alone, represents the appropriate level of analysis for understanding the performance effects of international experience. First, the top management team represents a firm's depositary of international knowledge: the added value of an internationally experienced CEO does not lay in the CEO alone, but in conjunction with the rest of the TMT (Patzelt et al., 2009). Second, when involved in complex decision-making processes, TMT members share and integrate their previous expertise, knowledge, and international experience, similar to what occurs for functional diversity (Bunderson & Sutcliffe, 2002), allowing for international human capital to emerge at the unit level.

The previous literature has, in fact, argued in favour of a tendency to stick to the old mental models and ways of dealing with issues (Hammer & Champy, 1994), especially when top managers lack specific experience (Beer, Voelpel, Leibold, & Tekie, 2005). Finally, when

² While the authors used differing implementations (e.g., inclusion of international education, percentage of years spent abroad, percentage of executives with IE), the theoretical underpinning refers to the upper echelons theory. For a more detailed review, please refer to Section **Error! Reference source not found.**

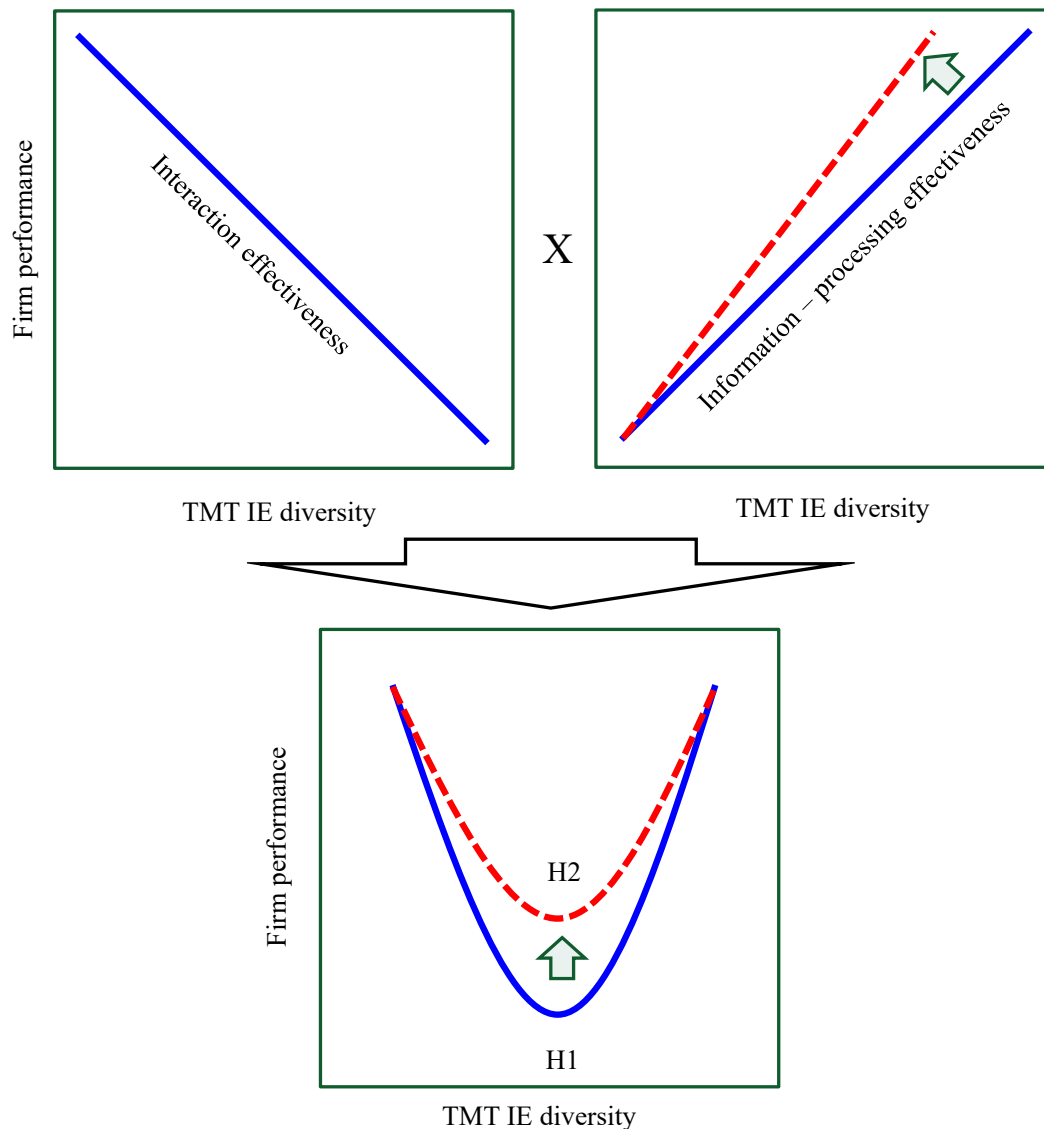
individual international experience is shared at the team level, it originates a learning effect that would be otherwise disregarded.

The concepts of group learning and team diversity as variety are relevant to our argument. We know that executives design and implement strategies based on behavioural factors and their perceptions (Cyert & March, 1963; Hambrick & Mason, 1984): they are under heavy job demands and are forced to rely on what they have seen work in their past experience (Hambrick, 2007). Leveraging the concept of social identification or group commitment, Van Der Vegt and Bunderson (2005) argued that the interaction among individuals with different knowledge, skills, and experiences fosters learning and cross-fertilization of ideas. Their definition of team learning consists of activities aimed at acquiring, exchanging, or combining task-relevant knowledge within team members (Argote, Gruenfeld, Naquin, & Turner, 2001; Van Der Vegt & Bunderson, 2005). Learning originates at the level of each TMT member and knowledge is incorporated at the team level when shared and included in firm's routines, procedures, and practices (Argote, 2012). Thus, group learning depends on the diversity of inputs rather than on "how much" input each member brings to the team. The theoretical perspective shifts from international experience as a resource, as suggested in the prior literature, to a source of learning. In other words, integrating group learning and diversity perspectives allows for a better understanding of the performance impact of team international experience. According to a classification that proposes three distinct types of diversity (i.e., separation, variety, and disparity), we contend that international experience diversity classifies as variety (Harrison & Klein, 2007), as it represents a source of relevant knowledge, expertise, and network ties. In any case, the performance effects of team experience diversity are mixed, reporting either positive, negative, or no relationship (e.g. Bantel & Jackson, 1989; Hambrick, Cho, & Chen, 1996; Murray, 1989; Simons, Pelled, & Smith, 1999; Williams & O'Reilly, 1998).

Leveraging the previous literature on team diversity, our theoretical argument is based on the interaction of two latent linear functions: a negative relationship linking interaction effectiveness and performance, and a positive relationship between information-processing

effectiveness and performance (*vid.* Figure 1). On the one hand, homogeneous teams are not affected by communication problems (Hambrick, Davison, Snell, & Snow, 1998) as individuals tend to interact more easily and frequently with similar individuals (Williams & O'Reilly, 1998). Moreover, they narrow their attention to established solutions at the expense of new unknown ones (Audia & Goncalo, 2007) and are characterized by low relational contrasts (Amabile, 1988). All in all, homogeneous TMTs are more suited to making routine decisions, when the number and variability of inputs is limited (Hambrick & Mason, 1984). On the other hand, TMT diversity provides team members with increased information availability and instruments to deal with it. TMT diversity provides multiple perspectives, which may not be available to homogeneous TMTs (Bantel & Jackson, 1989), thus avoiding the tendency towards groupthink (Hambrick & Mason, 1984). Moreover, research agrees that team diversity is associated with members' disagreement about task issues such as goals, procedures, and appropriate choices, which ultimately generate better decisions (Pelled, Eisenhardt, & Xin, 1999). All in all, there is evidence for a positive relationship between TMT heterogeneity and performance (Certo, Lester, Dalton, & Dalton, 2006).

Figure 1: Multiplicative combination of latent mechanisms resulting in a U-shaped effect



Source: Author

What happens when the team is characterized by a moderate level of diversity? As shown by Earley and Mosakowski (2000), homogeneous and heterogeneous teams outperform teams characterized by moderate levels of diversity. Leveraging the concept of faultlines (Lau & Murnighan, 1998), they argued that “given sufficient opportunity to work together, homogeneous and highly heterogeneous teams will be more effective than moderately heterogeneous ones” (Earley & Mosakowski, 2000, p. 27).

International experience represents a knowledge-based faultline, defined as the alignment of experiential characteristics: the members of a group can be split according to homogeneous subgroups of geographical experience (Bezrukova, Jehn, Zanutto, & Thatcher, 2009). Previous studies have studied subgroup formation in international expertise, which affects the way MNCs deal with internationalization challenges (Guadalupe, Li, & Wulf, 2014). The formation of subgroups represents an important issue as it influences how executives make choices that affect firm performance (Ndofor, Sirmon, & He, 2015). Moreover, increasing diversity in backgrounds and experiences tends to enhance social categorization and in-group biasing (Van Der Vegt & Bunderson, 2005). Teams characterized by strong subgroups (i.e., moderate levels of diversity) are more likely to experience separation among team members, behavioural disintegration (Li & Hambrick, 2005), and, ultimately, lower performance (Lau & Murnighan, 1998). The origination of new knowledge is maximized around the realm of existing knowledge (Autio, Sapienza, & Almeida, 2000) so we expect a turning point to exist, beyond which international experience will reduce the bounded rationality that affects TMT's valuation effectiveness (Asmussen, 2009). For example, the marginal effect of a one-year international experience in Japan within a team with homogeneous work experience in Switzerland will be very limited. This is in line with Edström and Galbraith (1977) who suggested that for effective communication to affect organizational patterns, a critical mass of international experience is needed. Beyond moderate levels of experience diversity, categorizing and stereotyping activities likely decrease, as subgroups rarely take shape (Earley & Mosakowski, 2000). At moderate diversity levels, the integration of each members' international experience is difficult because no common ground exists. This is the inflection point where Earley and Mosakowski (2000) argued that the team develops a hybrid team culture, defined as "a set of rules and actions work capability expectations [...] that members within a team develop, share, and enact after mutual interaction" (2000, p. 27). In our context, the higher the diversity of international experience developed by the team, the lower the subgroup formation: members are not labelled by their experience, which promotes feelings of membership and favours team members' interaction.

This perspectives' diversity within the team nurtures its learning (van Knippenberg, De Dreu, & Homan, 2005) because when international experience diversity increases sufficiently, the team experiences a higher level of sharing, storing, and retrieving of previous experiences, which results in better group learning (Wilson et al., 2007) along a virtuous cycle. Executive information-processing capability will be improved, resulting in an effective management of the environmental complexity due to the abundance of stimuli through selective perceptions and interpretations (Hambrick & Mason, 1984). Accordingly, we hypothesize:

H1: There is a curvilinear, U-shaped relationship between top management team international experience diversity and firm performance.

The previous literature has argued that the alignment of managerial characteristics with a firm's strategy leads to superior performance (Gupta & Govindarajan, 1984; Thomas, Litschert, & Ramaswamy, 1991). The concept of fit or alignment has long been discussed in business literature (e.g., Chandler, 1962; Miles & Snow, 1994). Scholars have argued that for organizations to be successfully competitive, they need to continuously align their organizational structure, strategy, culture, and leadership (Beer et al., 2005). The alignment can be either external or internal. While external fit relates to the environment in which a firm is competing, the latter focuses on the intra-organizational elements. This is the core of our focus due to the fact that an alignment between the internal resources of the firm and its strategy is unavoidable for successful competition.

Miles and Snow (1994) showed that missing fit between firms' resources and structure leads to strategy failures when they are not related to each other. This explains why the specific countries where TMT members have worked is important: it is because the firm can exploit this knowledge extensively. The matching can be performed by country (i.e., a TMT has worked in Switzerland and the US, and the firm is present exactly in these two countries), but also by region, leveraging the regionalization concept advanced by several scholars (Rugman, 2005).

Following the above thinking, Case A (a TMT that has worked in Switzerland and the US, and the firm is present exactly in these two countries) and Case B (a TMT that has worked in Germany and the US, and the firm is present in Switzerland and the US) would both lead to a perfect match. That is due to the fact that positive performance effects are derived from similarities across countries in the same region, similar to what happens at the firm level (Qian, Li, Li, & Qian, 2008; Rugman, 2005).

Fit directly as well as indirectly affects performance by leading to faster learning as the team can share, process, and apply previously acquired knowledge and expertise to routines, procedures, and practices that involve countries or regions where the firm is already present. Match conditions between the geographical presence of a firm and the countries (alternatively regions) experienced by TMT members compensate for the negative performance effects driven by strong subgroups, paired with separation among team members and behavioural disintegration (Harrison & Klein, 2007; Li & Hambrick, 2005).

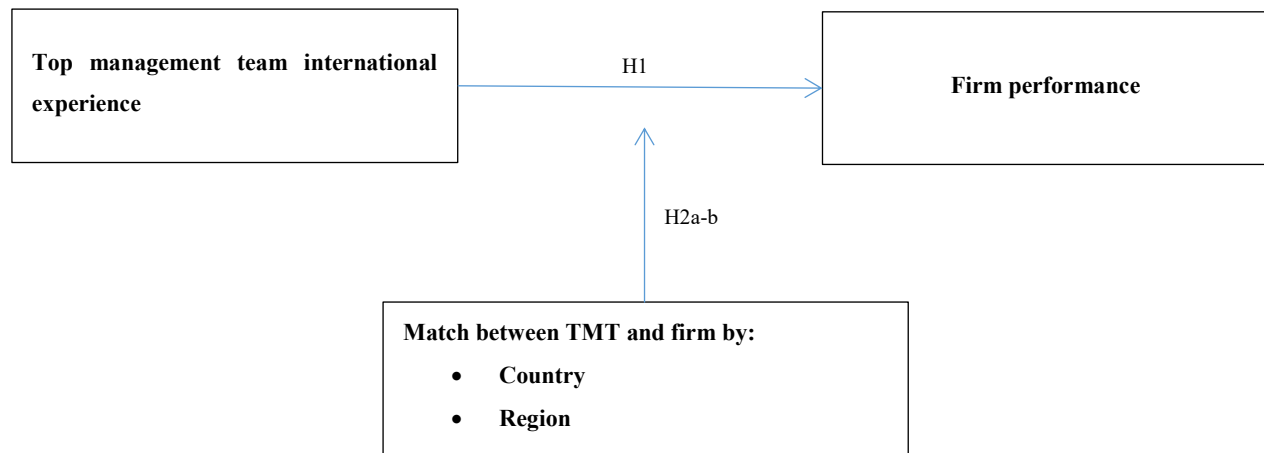
Better alignment between TMT IE and firm international presence may create a context in which learning is fostered by shared knowledge and expertise, which is similar to the situation in which strategic match acts as a mediator between innovation leadership and economic performance (Carmeli et al., 2010). When alignment is less, the executives lack relevant experience, make decisions based on old models, and are ultimately prevented from learning the underlying causes of eventual failure (Beer et al., 2005).

Accordingly, we explore the impact of the degree of match between the portfolio of countries (regions) in which the TMT has experience and the countries (regions) where the firm is present: a closer match leads to a more effective exploitation of the knowledge, skills, and expertise owned by the TMT, which positively moderates the main effect.

H2a: The curvilinear, U-shaped relationship between top management team international experience diversity and firm performance is positively moderated by country match.

H2b: The curvilinear, U-shaped relationship between top management team international experience diversity and firm performance is positively moderated by region match.

Figure 2: Theoretical model for Chapter 1



Source: Author

1.3. Methods

1.3.1. Sample

The sample of this study is based on 166 listed companies headquartered in two European countries (i.e., the Netherlands, and Switzerland) over the period five-year period from 2008-2012. The companies in this study were selected using five criteria to ensure that they were comparable in terms of size, complexity, and decision making and operated in industries that were exposed to different geographical regions. First, the listed companies in the Netherlands and in Switzerland at year end of each of the five years between 2008

and 2012 were identified. Second, these firms were ranked according to their market capitalization on December 31st and the following eligibility criteria were applied for each year of assessment.

First, small and medium enterprises, defined by the European Union (2015) as those with less than 250 full-time employees, Euro 50 million annual turnover, or Euro 43 million total assets were excluded.

Second, all the companies whose primary SIC code starts with the digits 67 were also excluded, as they represent primarily portfolio investors or investment vehicles. Finally, companies that were acquired or ceased operations during 2008-2012 were excluded. The remaining 166 companies (830 firm-year observations) represent the final balanced sample of companies that can make independent strategic decisions, with 63 Dutch firms and 103 Swiss firms.

These choices were made to create a sample of product- and service-based companies, active both locally and internationally, characterized by a certain degree of complexity, within a post-financial crisis time frame.

1.3.2. Variables

1.3.2.1. Dependent variable

Firm performance was accounted for using an accounting-based measure of performance, (i.e., return on assets, ROA) for a number of reasons. First, accounting-based measures of firm performance represent the quality of work and contributions of TMTs better than market-based measures of performance, due to the fact that the latter are influenced by investors' idiosyncratic opinions. ROA is defined as "net income" divided by "total assets" in the respective year and represents the efficiency with which the firm has deployed its asset base. Second, ROA is the most widely used measure of firm performance in the TMT demography literature (Certo et al., 2006; Hitt, Hoskisson, & Kim, 1997) and, specifically, the most pertinent measurement of TMTs' intellectual and social capital out of all accounting-based measures of firm performance (Kaczmarek & Ruigrok, 2013; Sveiby,

1997). To smooth annual fluctuations in the accounting data, we used a three-year average (Guthrie & Datta, 1997; Hitt et al., 1997), one-year lagged to prevent reverse causality issues.

1.3.2.2. Independent variables

The level of analysis is very important when designing demography studies (Athanassiou & Roth, 2006). Since the focus is on team learning, the *international experience diversity* measure was computed as TMT interpersonal diversity in international experience. To capture the full information potential and according to the partial isomorphism between individual-level international experience and human capital resources (Ployhart & Moliterno, 2011), which could lead to significant distortions (Bolino, 2007; Sommer, 2013), this paper computes the interpersonal diversity in international experience using the Blau (1977) index, whose value ranges from 0 to 1. Computing the sum of an individual's length of IE, number of assignments, or the average of individuals' Blau index scores would disregard country specifications and the eventual overlaps in terms of experienced countries among TMT members. So far, the literature has exploited different team measures of international experience, such as binary variables, average length of assignments, and average number of assignments. Computing the Blau's index at the team level allows gauging the extent to which the team as a whole possesses high international work exposure. This measure highlights the breadth and depth of international career experience advocated by Rivas (2012), as it takes into account both the number of countries in which the team has worked, and the length of time spent in each one. Moreover, it allows consideration of overlap in terms of countries among all the TMT members, which would be disregarded when computing averages of intrapersonal diversity measures of international experience. This measure has been computed only for those teams for which information is available for the whole career of all TMT members.

$$Blau\ Index_{Int_Exp} = 1 - \sum_{i=1}^n P_i^2$$

where n is the number of countries any team member has worked in, and P_i is the relative proportion of the total members' career spent in a country i (Bunderson & Sutcliffe, 2002; Engeler, 2013). Overlaps of countries among TMT members are taken into account; alternatively, years of experience can be summed, disregarding the changeability and malleability caused by the aggregation of individual KSAOs (knowledge, skills, attributes, and others) advocated by Ployhart and Moliterno (2011). For example, a top management team is comprised of two executives who spent their careers in Canada (3 years) and Italy (10 years), and Italy (1 year) and Switzerland (7 years), respectively. The TMT international career will thus comprise three countries: Canada (3 years), Italy (11 years), and Switzerland (7 years). TMT international experience will be computed this way:

$$Blau_Index_{IE} = 1 - \left[\left(\frac{3}{21} \right)^2 + \left(\frac{11}{21} \right)^2 + \left(\frac{7}{21} \right)^2 \right] = 0.59$$

Averaging individuals' Blau index scores would result in a TMT Blau index value of 0.29, underestimating the IE diversity of the team by almost 50%. Low values indicate that team members have concentrated their careers in few countries, while high values stand for a more diverse international experience. The Blau's index is not without drawbacks. For example, it attributes the same relevance to each career experience, disregarding that some experiences could weigh more heavily than others. Nevertheless, this measure has been used by several scholars involved in intrapersonal experience diversity research (Cannella, Park, & Lee, 2008; Dahlin, Weingart, & Hinds, 2005) and has been suggested as a proper measure of diversity as variety (Harrison & Klein, 2007).

The *degree of fit* between TMT and firm was operationalized as a continuous measure that compares the countries where the TMT has experience and the countries where the firm has subsidiaries. It represents the completion percentage of the countries where the firm has established a subsidiary. Values range from 0 (i.e., no match), between 0 and 1 (i.e., under-experienced), 1 (i.e., perfect match), to above 1 (i.e., over-experienced). The firm is the base for comparison, so that all the countries in which the TMT has had experience are disregarded if the firm has no subsidiaries there. In other words, the fit variable disregards the countries where TMT members have worked, unless they represent countries where the company has established subsidiaries. For example, if a TMT had experience in 2008 in Switzerland, Germany, and the US, and the firm has subsidiaries in Switzerland, Germany, and Great Britain, the fit index is $2/3$ (i.e., Switzerland and Germany vs. Switzerland, Germany, Great Britain, or under-experienced) and the US are disregarded as it does not appear in the denominator. Otherwise if the TMT has experience in a specific year in Switzerland, Germany, and Great Britain, and the firm has subsidiaries in Switzerland, Germany, and Great Britain, the fit index will be $3/3$ (i.e., experienced, or perfect match). Finally, if the TMT has experience in a specific year in Switzerland, Germany, Great Britain, and France, and the firm has subsidiaries in Switzerland, Germany, and Great Britain, the fit index will be $4/3$ (i.e., over-experienced). This way of measuring enhances coherence between international experience match (i.e., the company perspective) and the firm-level perspective of performance.

Regions have emerged as a relevant unit of analysis in international business (Rugman & Oh, 2013; Rugman & Verbeke, 2004): thus, this paper used both a country and a regional clustering. Because a firm having subsidiaries in more countries implies a lower likelihood that the TMT has experienced in all of them, a variation was computed that considers not single countries but geographical regions (Ronen & Shenkar, 2013). The zones are, namely, Anglo, African, Arab, Confucian, East Europe, Far East, Germanic, Latin America, Latin European, Near East, Nordic, and others.

1.3.2.3. Control variables

We also controlled for other variables that likely to affect firm performance.

First, to control for structural and other systematic differences among TMTs in our sample, we included *TMT size*, measured as number of TMT members (Finkelstein et al., 2009).

Second, according to the substantial prior literature on the multinationality-performance relationship, *prior firm internationalization* was controlled by computing a three-year average of foreign sales to total sales (FSTS, or DOI), which is coherent with the performance measure.

Third, following the suggestion of MacKay and Phillips (2005), we relied on *financial leverage* rather than industry dummies, in order to control for industry effects. Debt ratio (i.e., short-term and long-term liabilities to total assets) may also affect a firm's ability to expand, thus impacting its performance. Group learning is even more critical in less munificent environments, due to the fact that the lack of resources may enhance the consequences of poor resource management choices (Keats & Hitt, 1988). *Industry munificence* was computed as the rate of growth (regression coefficient of time on annual average sales for each industry) divided by the mean value of sales for the study period (Dess & Beard, 1984), similar to previous research (Nielsen & Nielsen, 2013).

Fourth, *prior performance* (i.e., ROA_{t-1}) was included to control for the path-dependency of performance (Guthrie & Datta, 1997).

Fifth, scholars have argued that nationality plays an important role in executives' international orientation (Caligiuri & Di Santo, 2001; Nielsen & Nielsen, 2010). Accordingly, *TMT nationality diversity* was calculated using the Blau (1977) index, which has been exploited already in previous studies (e.g., Carpenter, 2002; Greve, Nielsen, & Ruigrok, 2009). National origin affects individual personality, behaviour, how a person is perceived in a multinational team (Hambrick et al., 1998), and strategic decision making (Geletkanycz, 1997). Foreign executives possess a better information-processing system about their own country and are able to optimize this (Luo, 2005), both as individuals and

Gremmo, D., Greve, M., & Ruigrok, W. (2017) - working paper

as team members (Sanders & Carpenter, 1998). This index captures the dispersion of TMT members across all possible categories of a certain dimension (i.e., all different nationalities within a team). The equation is:

$$Blau\ Index_{Natio} = 1 - \sum_{i=1}^n P_i^2$$

where n is the number of individuals in the TMT, and P_i is the proportion of members sharing the same nationality. High values stand for nationally heterogeneous teams.

Sixth, although recently neglected (Fitza, 2016), strategic leadership scholars have developed the concept of the “CEO effect” (Hambrick & Quigley, 2014), which assesses CEO effects on performance. Accordingly, we controlled for *CEO international experience diversity*, computed as intrapersonal diversity in international experience, using the Blau (1977) index.

Finally, we used *country* and *year dummy variables* to control for all unmeasured country and performance year effects.

1.4. Results

We exploited a panel data set to test the hypotheses and thus the potential heteroskedasticity between panels and the autocorrelation within panels must be taken into account. We performed the Wooldridge test for autocorrelation in panel data by exploiting the “*xtserial*” command in Stata, as suggested by Drukker (2003). These results showed that there is first-order autocorrelation, which suggests the use of the generalized least squares (GLS) methodology. GLS is the most appropriate method because it overcomes the problems of cross-sectional heteroskedasticity and within-unit serial correlation (Kmenta, 1986).

In exploiting panel data samples, particular attention has to be paid to the choice between fixed- and random-effects (i.e., FE and RE, respectively) approaches. In cases in which variables that are invariant over time are included in the analysis (e.g., country dummy, TMT size), a random-effects approach is recommended (Greene, 2003). We conducted the Hausman specification test (Hausman, 1978) to identify the appropriate model, and the results revealed no significant correlation between our independent variables and firm-level fixed effects. Hence, we used random-effects models to test our hypotheses.

The computation of variance inflation factors (VIF) of independent variables for each model returned values below 3.21, well below the threshold of 10 (Hair, Black, Babin, Anderson, & Tatham, 2006), confirming multicollinearity is not an issue.

Table 1 presents the means, standard deviations, and correlations between the study variables. Of particular interest, the TMT IE diversity index presented a nearly normal distribution (Skewness -.2014, Kurtosis 2.0440), while both country match and region match are less symmetric, precisely to the right, and peaked (country match: Skewness 3.7296, Kurtosis 17.2962; region match: Skewness 2.8754, Kurtosis 10.6961). This supports that experienced (#26 cases) and over-experienced TMTs (#40 cases) are less frequent than under-experienced TMTs: the region match is closer to the normal distribution, thus stressing the importance of its use as an alternative to country match.

Not only is the match measure affected by the number of countries in which a company has established its subsidiaries, but it may also be linked to TMT size as well. However, correlation analysis shows that both coefficients reveal little if any correlation ($r=-0.0682$ and $r=0.0197$, for country match and region match, respectively). No statistically significant correlation was observed between country or region match and firm size ($r=-0.0346$ and $r=-0.0370$, respectively) but with DOI ($r=-0.34$ and $r=-0.27$, respectively).

The statistically significant high positive correlation between TMT international experience diversity and TMT nationality diversity ($r=.75$) is slightly higher but still coherent to results in previous studies (Greve et al., 2009; Nielsen & Nielsen, 2011): this can be explained by differences in measurements and sample settings, similar to the moderate positive coefficients with DOI ($r=.52$ and $r=.54$, respectively).

Table 2 shows the results of GLS regressions. Model 1 includes control variables only. Model 2 and model 3 display the non-significant linear relationship between TMT IE Blau and firm performance. Hypothesis 1 predicts a U-shaped relation between TMT international experience diversity and firm performance. Model 4 and model 5 yield significant coefficients, indicating that Hypothesis 1 is supported when controlling both for country match and region match.

The coefficient of the squared term is significant and of the expected sign (i.e., positive); moreover, the slope is sufficiently steep at both ends, and the turning point lies within the data range. To test Hypothesis 2, we included the interaction term between TMT IE diversity and country match (Hypothesis 2a) and region match (Hypothesis 2b). While the base relationship remains statistically significant in both cases, on the one hand Model 6 approaches statistical significance in the predicted direction but is not supported ($p=.116$), and Model 7 on the other hand, provides significant results for both interaction terms. Despite the non-significance, the control variables are theoretically relevant and should be kept in the model.

Table 1: Means, standard deviations, and intercorrelations among variables

Variable	Mean	S.D.	1	2	3	4	5	6	7	8	9	10
1. Firm performance	5.48	7.35	1									
2. TMT IE diversity	0.41	0.24	0.11	1								
3. Previous performance	7.61	13.28	0.35*	-0.08	1							
4. DOI	0.55	0.32	0.26*	0.52*	0.15*	1						
5. Financial leverage	3724	26936	-0.03	0.11	-0.04	-0.05	1					
6. Industry munificence	0.05	0.05	-0.06	-0.05	-0.07	-0.13	-0.10	1				
7. Country match	0.50	0.84	-0.09	-0.13*	-0.07	-0.34*	-0.03	0.45*	1			
8. Region match	0.62	0.67	-0.03	0.04	-0.05	-0.27*	-0.04	0.33*	0.86*	1		
9. TMT size	4.80	2.53	0.13*	0.52*	0.00	0.37*	0.14*	0.03	-0.07	0.02	1	
10. CEO IE diversity	0.23	0.24	0.06	0.46*	-0.06	0.11	0.07	-0.02	-0.10	-0.06	0.27*	1
11. TMT ND diversity	0.35	0.30	0.19*	0.75*	0.08	0.54*	0.11	-0.06	-0.22*	-0.08	0.56*	0.31*

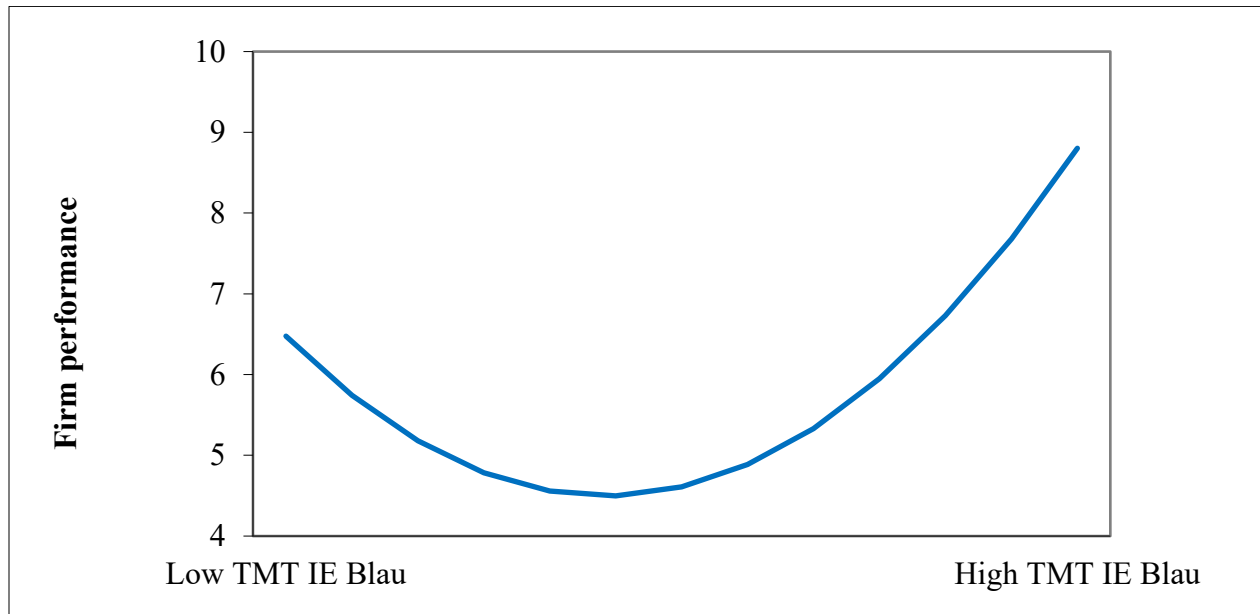
Observations: 219. * p<0.05. Source: Author

Table 2: Results of random effects GLS regression analysis

Firm performance	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Constant	6.22 † (3.76)	5.86 † (3.44)	5.89 † (3.46)	7.16 * (3.62)	7.23 * (3.66)	8.07 * (3.91)	8.94 * (4.23)
TMT IE diversity		-1.27 (4.55)	-1.12 (4.40)	-16.07 * (8.11)	-16.00 * (8.06)	-19.65 * (8.44)	-23.38 * (9.03)
TMT IE diversity SQ				23.26 ** (7.79)	23.42 ** (7.91)	26.51 *** (7.87)	30.52 *** (8.11)
Previous performance	0.01 (0.03)	0.01 (0.04)	0.01 (0.04)	0.01 (0.04)	0.01 (0.04)	0.00 (0.04)	0.00 (0.04)
DOI	1.76 (1.95)	2.05 (1.81)	2.03 (1.79)	1.64 (1.75)	1.60 (1.73)	1.43 (1.84)	1.16 (1.87)
Financial leverage	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Industry munificence	2.25 (22.62)	2.59 (22.4)	3.53 (22.48)	7.42 (22.82)	8.49 (22.96)	5.75 (23.57)	7.33 (24.21)
Country match	1.05 (1.66)	0.02 (0.17)		-0.01 (0.15)		-2.68 † (1.50)	
Region match	-1.73 (2.75)		-0.24 (0.41)		-0.33 (0.49)		-4.65 * (2.15)
TMT size	-0.22 (0.44)	-0.24 (0.42)	-0.23 (0.42)	-0.27 (0.38)	-0.26 (0.38)	-0.26 (0.39)	-0.26 (0.38)
CEO IE diversity	-0.41 (1.01)	-0.30 (0.86)	-0.27 (0.85)	-0.35 (0.76)	-0.32 (0.75)	-0.48 (0.79)	-0.48 (0.78)
TMT ND diversity	-0.65 (2.67)	-0.16 (4.01)	-0.27 (3.9)	-1.04 (3.88)	-1.18 (3.79)	-0.91 (3.92)	-1.15 (3.80)
TMT IE diversity X Country match						15.23 (9.39)	
TMT IE diversity SQ X Country match						-15.01 (9.54)	
TMT IE diversity X Region match							23.27 * (11.25)
TMT IE diversity SQ X Region match							-22.15 * (10.99)
Wald Chi2	93.09	87.97	106.60	138.65	192.85	181.06	302.78
R-square	.0514	.0704	.0698	.0743	.0741	.0839	.0820

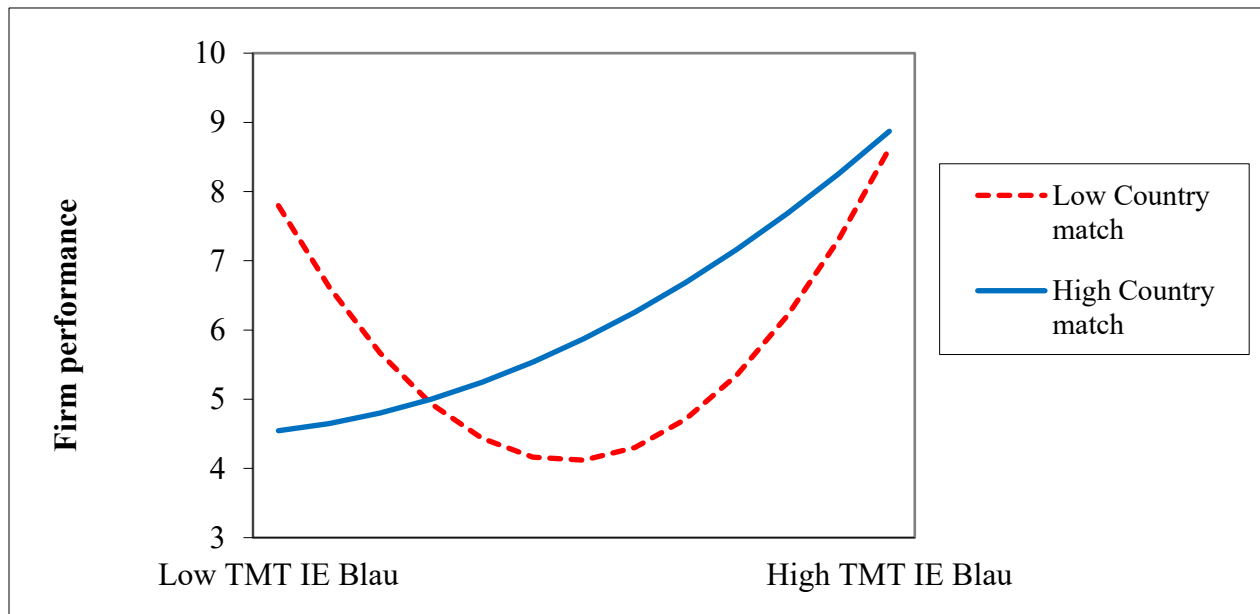
Observations: 219. Country and year dummies were included in all models, and results were statistically non-significant. Unstandardized coefficients are reported. Standard errors are reported in parentheses. † p<0.10, * p<0.05, ** p<0.01, *** p<0.001.

Figure 3: Curvilinear relationship between TMT international experience and firm performance



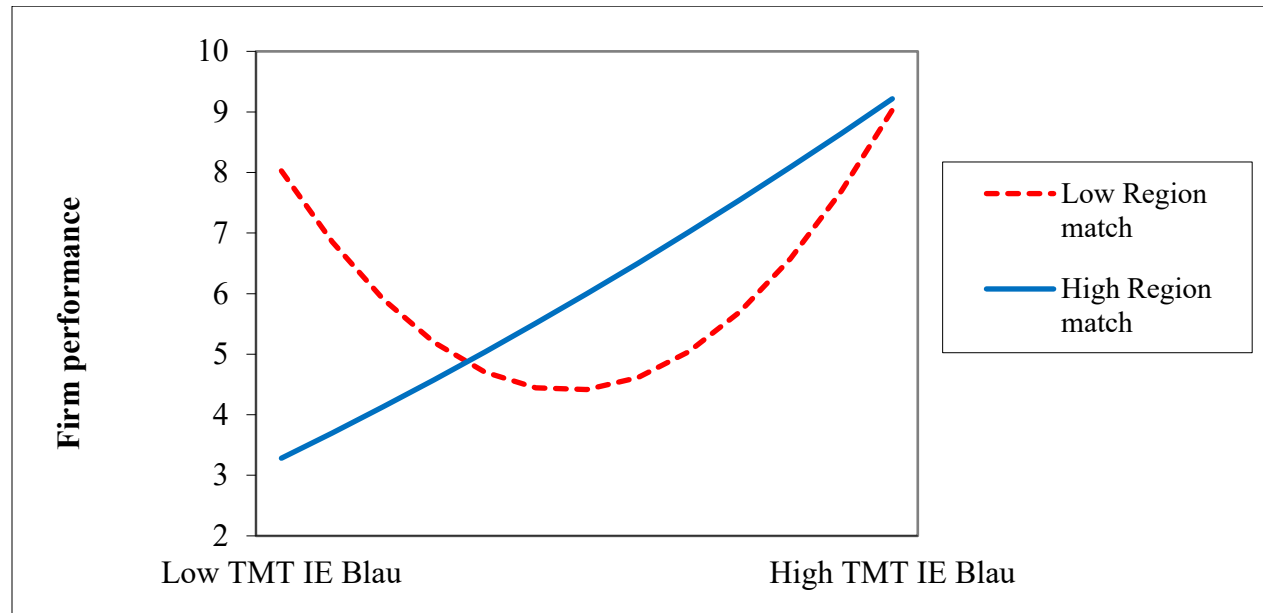
Observations: 219. Source: Author

Figure 4: Interaction effect of country match on the curvilinear relationship between TMT international experience and firm performance



Observations: 219. Moderating effects presented in Figure 4 are based on plus or minus 1.5 standard deviations, or inflection points (Dawson, 2014). Source: Author

Figure 5: Interaction effect of region match on the curvilinear relationship between TMT international experience and firm performance



Observations: 219. Moderating effects presented in Figure 5 are based on plus or minus 1.5 standard deviations, or inflection points (Dawson, 2014). Source: Author

1.5. Robustness checks

A number of checks were performed to test the robustness of the results displayed in section 1.6. First, we collected individual-level information and extracted financial and non-financial variables for firms we had to exclude from our analysis to test whether these firms were significantly different from the firms in our sample (Carpenter & Fredrickson, 2001). The results indicate that the firms in our sample do not significantly differ from the firms we had to exclude concerning international experience, subsidiary level information, as well as firm size.

Second, consistent results (*vid. Error! Reference source not found.*, Model 1A and Model 2A) were obtained when standardizing TMT IE and ND diversity variables at mean 0 and standard deviation of 1 (Aiken & West, 1991). Moreover, Cook's distance measure was used to test for potential outliers' effects: the results did not change materially, when

excluding observations with Cook's D values over 4/sample size (Bollen & Jackman, 1990). Most importantly, there was no change in either the sign or the significance levels of the coefficients.

Third, similar to other research settings, our results may have also been affected by endogeneity issues. While no paper in the literature review presented in Chapter **Error! Reference source not found.** addressed the direct relationship between firm performance and team international experience diversity, companies that perform better may be willing to hire more executives with international experience (Carpenter et al., 2001), leading to reverse causality and simultaneity. While a one-year lag between independent variables and the dependent variable was used to limit reverse causality issues, we exploited the two-stage least squares (2SLS) test to reduce endogeneity issues (Certo, Busenbark, Woo, & Semadeni, 2016). Endogeneity may turn GLS estimates problematic, mirrored in a non-zero correlation between error terms of equations (Sayrs, 1989). We predicted values for the supposed endogenous regressor (i.e., TMT international experience diversity) using TMT minus CEO international experience diversity as instrumental variable (IV). To avoid incorrect estimators (Nelson & Startz, 1988a, 1988b), IVs need to possess two characteristics to be regarded as effective: (a) they must correlate with the endogenous variable and (b) they must not correlate with the error term. Both model 2A and model 4A, presented in Table 3, display that the IV used is valid on the tests for under-identification, weak instrument, and over-identification (Staiger & Stock, 1997). Furthermore, we performed the Durbin test (Durbin, 1954) and the Wu-Hausman test of endogeneity (Hausman, 1978; Wu, 1974), which supported that IVs are indeed exogenous.

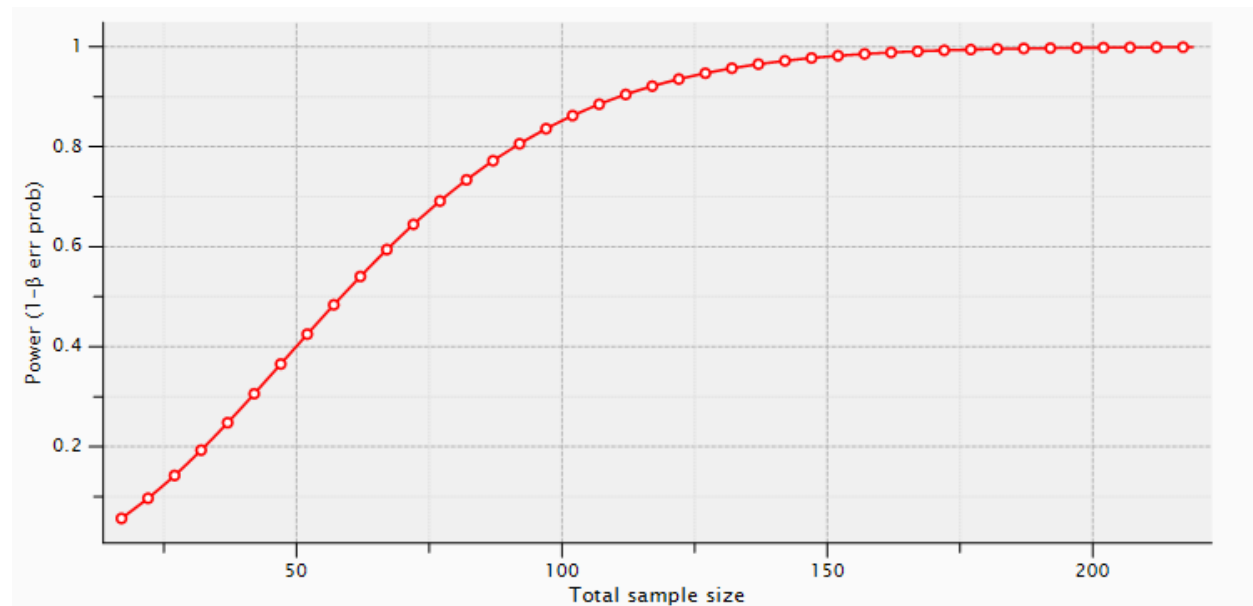
Finally, a post hoc power analysis (computed with the G*Power) reported an output of 0.99, which is the outcome of: squared multiple correlation ($R^2=0.1946$), effect size ($F^2=0.3186$), total sample size (219), and number of predictors (15).

Table 3: Second stage results of 2SLS

Firm performance	Model 2A	Model 4A
Constant	2.55 (1.85)	3.72 (2.05)
TMT IE diversity	3.49 (4.51)	-6.65 (9.34)
TMT IE diversity SQ		13.04 (9.87)
Previous performance	0.18 (0.04)	0.17 (0.04)
DOI	1.69 (2.01)	1.99 (2.02)
Financial leverage	0.00 (0.00)	0.00 (0.00)
Industry munificence	-3.48 (10.94)	0.40 (11.23)
Country match	-0.09 (0.67)	-0.16 (0.66)
TMT size	-0.10 (0.26)	-0.12 (0.26)
CEO IE diversity	-0.23 (2.36)	-0.25 (2.35)
TMT ND diversity	0.28 (2.97)	0.06 (2.94)
Under-identification test (Anderson canon. corr. LM statistic)	124.732 (p-val 0.000)	110.537 (p-val=0.000)
Weak identification test (Cragg-Donald Wald F)	293.152	110.002
Over-identification (Sargan statistic)	0.000	0.000
Wu-Hausman F test	3.02 (p-val=0.08375)	1.89 (p-value=0.15460)
Durbin-Wu-Hausman chi- sq test	3.23 (p-val=0.0725)	4.05 (p-value=0.13193)

Observations: 206, Country and year dummies were included in all models and results were statistically non-significant. Standard errors are reported in parentheses, except for Wu-Hausman and Durbin-Wu-Hausman tests of endogeneity. Source: Author

Figure 6: Results of power analysis



Source: Author

1.6. Discussion: theoretical contributions and managerial implications

Extant research on the effects of international work experience on firm performance has so far been inconclusive. The prior literature has mainly focused on the individual level, linking CEO international experience with firm performance (e.g. Daily et al., 2000; Roth, 1995) but disregarding the interplay among TMT members (Hambrick et al., 2015). We argued and empirically supported that international experience should be addressed at the team level, rather than the individual level. This finding will impact future research in that it accounts for integration of team members' overlapping international experience, embedding the emergence of international human capital at the unit level.

Our results contend that there is a U-shaped relationship between TMT international experience diversity and firm performance. Moderate levels of international experience diversity are detrimental for firm performance, in line with the results of the meta-analysis of Bowers et al. (2000). Simultaneously, we found that homogeneous internationally experienced teams and very heterogeneous teams provide better firm performance. This is

coherent with the faultlines argumentation proposed by Earley and Mosakowski (2000) and our argumentation regarding the existence of a threshold beyond which the learning derived from international experience diversity begins producing beneficial effects. Moreover, we found that TMTs characterized by high IE diversity slightly outperform homogeneous ones: our results reveal that IE diversity represents a lever that executive teams can proactively exploit to improve firm performance (*vid* Figure 3).

Counterintuitively, we found support for a negative moderating effect³ of the geographical match (i.e., the alignment between the portfolio of IE supplied by the TMT and the geographical presence of the firm). While having a country match between executives and subsidiaries did not prove statistically significant (but only just, *vid* Figure 4), shifting the focus to the region level provides a similarly shaped and statistically significant effect (*vid* Figure 5). The learning process associated with sharing individual knowledge, interpreting it at the team level, and incorporating it in procedures and practices (Cohen & Levinthal, 1990) is enhanced under conditions of regional match.

This provides support for the emergence of regions as an appropriate unit of analysis in international business (Rugman & Oh, 2013; Rugman & Verbeke, 2004) and shows that country peculiarities are disregarded in favour of region similarity. In other words, a TMT approximates the learning coming from experience gained in similar countries within the same region, rather than slavishly matching the knowledge country by country. Moreover, we found that low levels of TMT IE diversity paired with low levels of region match lead to better performance than high region match. An internationally homogeneous TMT applies knowledge regarding third regions and learns more than applying only the knowledge of the same region. This finding supports the fact that there is more discussion about a specific zone and, consequently, more effective knowledge integration. Our results expand the line of argumentation expressed by Wilson et al. (2007): a group confronted with a new but similar situation (i.e., a new country within the same region) retrieves and takes advantage of what it has learned in the past. At moderate to high levels of TMT IE

³ The graphical representation of this moderating effect and the coefficient in the Table 2 are only seemingly contradictory: the first derivative coefficients resemble a linear relationship.

diversity, high region match will foster learning capability and allow the homogeneity drawback be overcome, subsequently leading to higher performance.

All in all, our paper offers a number of theoretical contributions. First, we extended the strategic leadership literature by focusing on team-level international experience. Leveraging on hybrid team culture and group learning, this study completely revised our understanding of work experience abroad: we theoretically argued that international experience matters at the team level, where members share their previous experience abroad, integrate their knowledge, and implement it in firm routines.

Second, we exploited a team-level international experience construct to consider the interaction of members' knowledge acquired during experiences abroad, in line with the study of Athanassiou and Nigh (2002). The previous literature has conceptualized international experience as a resource and coherently operationalized it to answer the following research questions: Does this resource exist?; How many executives possess it?; How much of this resource does the firm possess?. Our findings demonstrate that for a comprehensive conceptualization, team operationalization that takes into account the overlaps of each member's foreign experience at the team level is needed.

Finally, leveraging on the concept of internal fit (Carmeli et al., 2010), our findings lend support for the moderating role of the alignment between the portfolio of regions where a TMT has worked and the regions in which the firm operates. Coherently, our research validates the idea that a balance between supply and demand of international experience has to exist to improve firm performance.

Moreover, this paper offers a novel managerial implication, linked to performance effects of TMT international experience. Based on our findings, firms should avoid moderate diversity in team international experience and should hire executives whose international work experience fits the firm's prospective strategy.

1.7. Limitations and future research opportunities

This study comes with limitations and offers related future research opportunities for scholars. First, as suggested by some scholars (Nielsen, 2009; Oxelheim et al., 2013), nationality and international experience are two distinct, though interacting characteristics. The present study did not provide evidence for such an interaction, but future research could improve our R-squared and complement the current study by addressing whether fit between the portfolio of regions where a TMT has worked and where the firm is operating can also be applied to nationality, along the path indicated by Greve et al. (2009).

Second, scholars could deepen the effect of copious subsidiaries on the fit measure. Low, if any, correlation coefficients between number of subsidiaries and country and region match variables were found low, if, any (coefficients equal to $-.2207$ and $-.1624$ respectively). Since we observed a high standard deviation in the number of subsidiaries (mean=57.47, SD=77.12)⁴, future research could consider adjusting for the number of subsidiaries, to bring the number of countries to a scale at which it is reasonable to expect that executives have the chance to experience. This could also positively affect the statistical significance of results in Model 6 (*vid.* Table 2).

Finally, the concepts of learning and performance have not yet been disentangled. While some authors have argued that lack of learning equates to no change in performance (Cook & Yanow, 1993), others have argued that learning may have actually occurred, but there has been no chance or capability to apply it (Wilson et al., 2007). Future research could try to unravel this relation, by isolating the effect of changing TMT IE Blau on delta firm performance.

In conclusion, this study takes a step towards a team-level conceptualization of international experience. Our theoretical argumentations and their related empirical results may spark scholars' interest in studying other conditions under which firms can benefit from team international experience. Finally, as the regionalization concept becomes

⁴ Not reported in the tables due to the fact that it did not fit the current argumentation. Results available upon request.

Gremmo, D., Greve, M., & Ruigrok, W. (2017) - working paper

increasingly relevant, we expect that international experience gained in regions where a firm operates will increase its strategic appeal.

References

- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage publications.
- Amabile, T. M. (1988). A model of creativity and innovation in organizations. *Research in Organizational Behavior*, 10(1), 123-167.
- Argote, L. (2012). *Organizational learning. Creating, retaining and transferring knowledge (2nd Ed.)*. Pennsylvania, PA: Springer Science & Business Media.
- Argote, L., Gruenfeld, D., Naquin, C., & Turner, M. (2001). Group learning in organizations. In M. E. Turner (Ed.), *Groups at work. Theory and research* (pp. 369-411). Lond and New York: Routledge.
- Asmussen, C. G. (2009). Local, regional, or global? Quantifying MNE geographic scope. *Journal of International Business Studies*, 40(7), 1192-1205.
- Athanassiou, N., & Nigh, D. (1999). The impact of US company internationalization on top management team advice networks: A tacit knowledge perspective. *Strategic Management Journal*, 20(1), 83-92.
- Athanassiou, N. A., & Nigh, D. (2002). The impact of the top management team's international business experience on the firm's internationalization: Social networks at work. *Management International Review*, 42(2), 157-181.
- Athanassiou, N. A., & Roth, K. (2006). International experience heterogeneity effects on top management team advice networks: A hierarchical analysis. *Management International Review*, 46(6), 749-769.
- Audia, P. G., & Goncalo, J. A. (2007). Past success and creativity over time: A study of inventors in the hard disk drive industry. *Management Science*, 53(1), 1-15.
- Autio, E., Sapienza, H. J., & Almeida, J. G. (2000). Effects of age at entry, knowledge intensity, and imitability on international growth. *Academy of Management Journal*, 43(5), 909-924.
- Bantel, K. A., & Jackson, S. E. (1989). Top management and innovations in banking: Does the composition of the top team make a difference? *Strategic Management Journal*, 10(1), 107-124.
- Beer, M., Voelpel, S. C., Leibold, M., & Tekie, E. B. (2005). Strategic management as organizational learning: Developing fit and alignment through a disciplined process. *Long Range Planning*, 38(5), 445-465.
- Bezrukova, K., Jehn, K. A., Zanutto, E. L., & Thatcher, S. M. (2009). Do workgroup faultlines help or hurt? A moderated model of faultlines, team identification, and group performance. *Organization Science*, 20(1), 35-50.
- Blau, P. M. (1977). *Inequality and heterogeneity - A primitive theory of social structure* (Vol. 7). New York, NY: Free Press.
- Bolino, M. C. (2007). Expatriate assignments and intra-organizational career success: Implications for individuals and organizations. *Journal of International Business Studies*, 38(5), 819-835.

- Bollen, K. A., & Jackman, R. W. (1990). *Regression diagnostics: An expository treatment of outliers and influential cases*. Newbury Park, CA: Sage Publications.
- * Bouquet, C., Morrison, A., & Birkinshaw, J. (2009). International attention and multinational enterprise performance. *Journal of International Business Studies*, 40(1), 108-131.
- Bowers, C. A., Pharmer, J. A., & Salas, E. (2000). When member homogeneity is needed in work teams. A meta-analysis. *Small Group Research*, 31(3), 305-327.
- Bunderson, J. S., & Sutcliffe, K. M. (2002). Comparing alternative conceptualizations of functional diversity in management teams: Process and performance effects. *Academy of Management Journal*, 45(5), 875-893.
- Caligiuri, P., & Di Santo, V. (2001). Global competence: what is it, and can it be developed through global assignments? *People and Strategy*, 24(3), 27-35.
- Cannella, A. A., Park, J.-H., & Lee, H.-U. (2008). Top management team functional background diversity and firm performance: Examining the roles of team member colocation and environmental uncertainty. *Academy of Management Journal*, 51(4), 768-784.
- Carmeli, A., Gelbard, R., & Gefen, D. (2010). The importance of innovation leadership in cultivating strategic fit and enhancing firm performance. *The Leadership Quarterly*, 21(3), 339-349.
- Carmeli, A., Tishler, A., & Edmondson, A. C. (2012). CEO relational leadership and strategic decision quality in top management teams: The role of team trust and learning from failure. *Strategic Organization*, 10(1), 31-54.
- Carpenter, M. A. (2002). The implications of strategy and social context for the relationship between top management team heterogeneity and firm performance. *Strategic Management Journal*, 23(3), 275-284.
- * Carpenter, M. A., & Fredrickson, J. W. (2001). Top management teams, global strategic posture, and the moderating role of uncertainty. *Academy of Management Journal*, 44(3), 533-545.
- * Carpenter, M. A., Sanders, W. G., & Gregersen, H. B. (2001). Bundling human capital with organizational context: The impact of international assignment experience on multinational firm performance and CEO pay. *Academy of Management Journal*, 44(3), 493-511.
- Castanias, R. P., & Helfat, C. E. (1991). Managerial resources and rents. *Journal of Management*, 17(1), 155-171.
- Certo, S. T., Busenbark, J. R., Woo, H. s., & Semadeni, M. (2016). Sample selection bias and Heckman models in strategic management research. *Strategic Management Journal*. doi:10.1002/smj.2475
- Certo, S. T., Lester, R. H., Dalton, C. M., & Dalton, D. R. (2006). Top management teams, strategy and financial performance: A meta-analytic examination. *Journal of Management Studies*, 43(4), 813-839.

Gremmo, D., Greve, M., & Ruigrok, W. (2017) - working paper

- Chandler, A. D. (1962). *Strategy and structure: Chapters in the history of the American industrial enterprise*. Cambridge, MA: MIT Press.
- Cohen, W. M., & Levinthal, D. A. (1990). Absorptive capacity: A new perspective on learning and innovation. *Administrative Science Quarterly*, 35(1), 128-152.
- Cook, S. D., & Yanow, D. (1993). Culture and organizational learning. *Journal of Management Inquiry*, 2(4), 373-390.
- Cyert, R. M., & March, J. G. (1963). *A behavioral theory of the firm*. Englewood Cliffs, NJ: Prentice-Hall.
- Dahlin, K. B., Weingart, L. R., & Hinds, P. J. (2005). Team diversity and information use. *Academy of Management Journal*, 48(6), 1107-1123.
- * Daily, C. M., Certo, S. T., & Dalton, D. R. (2000). International experience in the executive suite: The path to prosperity? *Strategic Management Journal*, 21(4), 515-523.
- Dawson, J. F. (2014). Moderation in management research: What, why, when, and how. *Journal of Business and Psychology*, 29(1), 1-19. doi:10.1007/s10869-013-9308-7
- Dess, G. G., & Beard, D. W. (1984). Dimensions of organizational task environments. *Administrative Science Quarterly*, 29(1), 52-73.
- Drukker, D. M. (2003). Testing for serial correlation in linear panel-data models. *Stata Journal*, 3(2), 168-177.
- Durbin, J. (1954). Errors in variables. *Revue de l'institut International de Statistique*, 22(1), 23-32.
- Earley, C. P., & Mosakowski, E. (2000). Creating hybrid team cultures: An empirical test of transnational team functioning. *Academy of Management Journal*, 43(1), 26-49.
- Edström, A., & Galbraith, J. R. (1977). Transfer of managers as a coordination and control strategy in multinational organizations. *Administrative Science Quarterly*, 22(2), 248-263.
- Engeler, M. (2013). *International experience diversity: Insights from the experiential composition of professional football teams*. University of St.Gallen, Switzerland, Gutenberg, Schaan. (Dissertation n. 4142)
- European Union. (2015). *SME definition*. Luxembourg: Official Journal of the European Union L 124, p. 36 of 20 May 2003: Publications Office of the European Union Retrieved from http://ec.europa.eu/growth/smes/business-friendly-environment/sme-definition/index_en.htm.
- Finkelstein, S., Hambrick, D. C., & Cannella, A. A. (2009). *Strategic leadership. Theory and research on executives, top management teams, and boards*. Oxford, GB: Oxford University Press.
- Fitza, M. A. (2016). How much do CEOs really matter? Reaffirming that the CEO effect is mostly due to chance. *Strategic Management Journal*, 38(3), 802-811.
- Geletkanycz, M. A. (1997). The salience of "culture's consequences": The effects of cultural values on top executive commitment to the status quo. *Strategic Management Journal*, 18(8), 615-634.

Gremmo, D., Greve, M., & Ruigrok, W. (2017) - working paper

- Gong, Y., Cheung, S.-Y., Wang, M., & Huang, J.-C. (2012). Unfolding the proactive process for creativity: Integration of the employee proactivity, information exchange, and psychological safety perspectives. *Journal of Management*, 38(5), 1611-1633.
- Greene, W. H. (2003). *Econometric analysis (Fifth edition)*. Upper Saddle River, NJ: Pearson Education Inc.
- Greve, P., Nielsen, S., & Ruigrok, W. (2009). Transcending borders with international top management teams: A study of European financial multinational corporations. *European Management Journal*, 27(3), 213-224.
- Guadalupe, M., Li, H., & Wulf, J. (2014). Who lives in the C-suite? Organizational structure and the division of labor in top management. *Management Science*, 60(4), 824-844.
- Gupta, A. K., & Govindarajan, V. (1984). Business unit strategy, managerial characteristics, and business unit effectiveness at strategy implementation. *Academy of Management Journal*, 27(1), 25-41.
- Guthrie, J. P., & Datta, D., K. (1997). Contextual influences on executive selection: Firm characteristics and CEO experience. *Journal of Management Studies*, 34(4), 537-560.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis (Vol. 6)*: Upper Saddle River, NJ: Pearson Prentice Hall.
- Hambrick, D. C. (2007). Upper echelons theory: An update. *Academy of Management Review*, 32(2), 334-343.
- Hambrick, D. C., Cho, T. S., & Chen, M. J. (1996). The influence of top management team heterogeneity on firms' competitive moves. *Administrative Science Quarterly*, 41(4), 659-684.
- Hambrick, D. C., Davison, S. C., Snell, S. A., & Snow, C. C. (1998). When groups consist of multiple nationalities: Towards a new understanding of the implications. *Organization Studies*, 19(2), 181-205.
- Hambrick, D. C., Humphrey, S. E., & Gupta, A. (2015). Structural interdependence within top management teams: A key moderator of upper echelons predictions. *Strategic Management Journal*, 36(3), 449-461.
- Hambrick, D. C., & Mason, P. A. (1984). Upper echelons: The organization as a reflection of its top managers. *Academy of Management Review*, 9(2), 193-206.
- Hambrick, D. C., & Quigley, T. J. (2014). Toward more accurate contextualization of the CEO effect on firm performance. *Strategic Management Journal*, 35(4), 473-491.
- Hammer, M., & Champy, J. (1994). *Reengineering the corporation: A manifesto for business revolution*. New York, NY: Harper Collins Inc.
- Harrison, D. A., & Klein, K. J. (2007). What's the difference? Diversity constructs as separation, variety, or disparity in organizations. *Academy of Management Review*, 32(4), 1199-1228.

Gremmo, D., Greve, M., & Ruigrok, W. (2017) - working paper

- Hausman, J. A. (1978). Specification tests in econometrics. *Econometrica*, 46(6), 1251-1271.
- Hennart, J. F. (2011). A theoretical assessment of the empirical literature on the impact of multinationality on performance. *Global Strategy Journal*, 1, 135-151.
- * Herrmann, P., & Datta, D. K. (2006). CEO experiences: Effects on the choice of FDI entry mode. *Journal of Management Studies*, 43(4), 755-778.
- Hitt, M. A., Hoskisson, R. E., & Kim, H. (1997). International diversification: Effects on innovation and firm performance in product-diversified firms. *Academy of Management Journal*, 40(4), 767-798.
- Kaczmarek, S., & Ruigrok, W. (2013). In at the deep end of firm internationalization. Nationality diversity on top management teams matters. *Management International Review*, 53(4), 513-534.
- Keats, B. W., & Hitt, M. A. (1988). A causal model of linkages among environmental dimensions, macro organizational characteristics, and performance. *Academy of Management Journal*, 31(3), 570-598.
- Kmenta, J. (1986). *Elements of econometrics*. New York, NY: Macmillan Publishers.
- Lau, D. C., & Murnighan, J. K. (1998). Demographic diversity and faultlines: The compositional dynamics of organizational groups. *Academy of Management Review*, 23(2), 325-340.
- Li, J., & Hambrick, D. C. (2005). Factional groups: A new vantage on demographic faultlines, conflict, and disintegration in work teams. *Academy of Management Journal*, 48(5), 794-813.
- Luo, Y. (2005). How does globalization affect corporate governance and accountability? A perspective from MNEs. *Journal of International Management*, 11(1), 19-41.
- MacKay, P., & Phillips, G. M. (2005). How does industry affect firm financial structure? *Review of Financial Studies*, 18(4), 1433-1466.
- Miles, R. E., & Snow, C. C. (1994). *Fit, failure, and the hall of fame: How companies succeed or fail*. New York: The Free Press.
- Murray, A. I. (1989). Top management group heterogeneity and firm performance. *Strategic Management Journal*, 10, 125-141.
- Ndofor, H. A., Sirmon, D. G., & He, X. (2015). Utilizing the firm's resources: How TMT heterogeneity and resulting faultlines affect TMT tasks. *Strategic Management Journal*, 36(11), 1656-1674.
- Nelson, C., & Startz, R. (1988a). The distribution of the instrumental variables estimator and its t-ratio when the instrument is a poor one *Technical working paper n.69*. Cambridge, Mass., USA: National Bureau of Economic Research
- Nelson, C., & Startz, R. (1988b). Some further results on the exact small sample properties of the instrumental variable estimator *Technical working paper n.68*. Cambridge, Mass., USA: National Bureau of Economic Research

- * Nielsen, B. B., & Nielsen, S. (2011). The role of top management team international orientation in international strategic decision-making: The choice of foreign entry mode. *Journal of World Business*, 46(2), 185-193.
- Nielsen, B. B., & Nielsen, S. (2013). Top management team nationality diversity and firm performance: A multilevel study. *Strategic Management Journal*, 34(3), 373-382.
- Nielsen, S. (2009). Why do top management teams look the way they do? A multilevel exploration of the antecedents of TMT heterogeneity. *Strategic Organization*, 7(3), 277-305.
- Nielsen, S. (2010). Top management team internationalization and firm performance. The mediating role of foreign market entry. *Management International Review*, 50(2), 185-206.
- Nielsen, S., & Nielsen, B. B. (2010). Why do firms employ foreigners on their top management team? An exploration of strategic fit, human capital and attraction-selection-attrition perspectives. *International Journal of Cross Cultural Management*, 10(2), 195-209.
- * Oxelheim, L., Gregoric, A., Randoy, T., & Thomsen, S. (2013). On the internationalization of corporate boards: The case of Nordic firms. *Journal of International Business Studies*, 44(3), 173-194.
- * Patzelt, H. (2010). CEO human capital, top management teams, and the acquisition of venture capital in new technology ventures: An empirical analysis. *Journal of Engineering and Technology Management*, 27, 131-147.
- * Patzelt, H., zu Knyphausen-Aufseß, D., & Fischer, H. T. (2009). Upper echelons and portfolio strategies of venture capital firms. *Journal of Business Venturing*, 24(6), 558-572.
- Pelled, L. H., Eisenhardt, K. M., & Xin, K. R. (1999). Exploring the black box: An analysis of work group diversity, conflict and performance. *Administrative Science Quarterly*, 44(1), 1-28.
- Pettigrew, A. M. (1992). On studying managerial elites. *Strategic Management Journal*, 13, 163-182.
- Ployhart, R. E., & Moliterno, T. P. (2011). Emergence of the human capital resource: A multilevel model. *Academy of Management Review*, 36(1), 127-150.
- Qian, G., Li, L., Li, J., & Qian, Z. (2008). Regional diversification and firm performance. *Journal of International Business Studies*, 39(2), 197-214.
- * Reuber, A. R., & Fischer, E. (1997). The influence of the management team's international experience on the internationalization behaviors of SMEs. *Journal of International Business Studies*, 28(4), 807-825.
- Rivas, J. L. (2012). Board versus TMT international experience: a study of their joint effects. *Cross Cultural Management: An International Journal*, 19(4), 546-562.
- Ronen, S., & Shenkar, O. (2013). Mapping world cultures: Cluster formation, sources and implications. *Journal of International Business Studies*, 44(9), 867-897.

Gremmo, D., Greve, M., & Ruigrok, W. (2017) - working paper

- * Roth, K. (1995). Managing international interdependence: CEO characteristics in resource-based framework. *Academy of Management Journal*, 38(1), 200-231.
- Rugman, A. M. (2005). *The regional multinationals: MNEs and "global" strategic management*. Cambridge, GB: Cambridge University Press.
- Rugman, A. M., & Oh, C. H. (2013). Why the Home Region Matters: Location and Regional Multinationals. *British Journal of Management*, 24(4), 463-479.
- Rugman, A. M., & Verbeke, A. (2004). A perspective on regional and global strategies of multinational enterprises. *Journal of International Business Studies*, 35(1), 3-18.
- Sanders, W. M. G., & Carpenter, M. A. (1998). Internationalization and firm governance: The roles of CEO compensation, top team composition, and board structure. *Academy of Management Journal*, 41(2), 158-178.
- Sayrs, L. W. (1989). *Pooled time series analysis (quantitative applications in the social sciences)*. Newbury Park, CA: Sage Publications.
- Shin, S. J., Kim, T.-Y., Lee, J.-Y., & Bian, L. (2012). Cognitive team diversity and individual team member creativity: A cross-level interaction. *Academy of Management Journal*, 55(1), 197-212.
- Simons, T., Pelled, L. H., & Smith, K. A. (1999). Making use of difference: Diversity, debate, and decision comprehensiveness in top management teams. *Academy of Management Journal*, 42(6), 662-673.
- Sommer, L. (2013). Measuring internationality of board members via secondary data-a comparison of methods. *Journal of Applied Business Research*, 29(1), 235-256.
- Staiger, D. O., & Stock, J. H. (1997). Instrumental variables regression with weak instruments. *Econometrica*, 65(3), 557-586.
- Sveiby, K. E. (1997). *The new organizational wealth: Managing and measuring knowledge-based assets*. San Francisco, CA: Berrett-Koehler Publishers.
- Thomas, A. S., Litschert, R. J., & Ramaswamy, K. (1991). The performance impact of strategy-manager coalignment: An empirical examination. *Strategic Management Journal*, 12(7), 509-522.
- * Tihanyi, L., Ellstrand, A. E., Daily, C. M., & Dalton, D. R. (2000). Composition of the top management team and firm international diversification. *Journal of Management*, 26(6), 1157-1177.
- Tuggle, C. S., Schnatterly, K., & Johnson, R. A. (2010). Attention patterns in the boardroom: How board composition and processes affect discussion of entrepreneurial issues. *Academy of Management Journal*, 53(3), 550-571.
- Van Der Vegt, G. S., & Bunderson, J. S. (2005). Learning and performance in multidisciplinary teams: The importance of collective team identification. *Academy of Management Journal*, 48(3), 532-547.
- van Knippenberg, D., De Dreu, C. K., & Homan, A. C. (2005). Work group diversity and group performance: An integrative model and research agenda. *Journal of Applied Psychology*, 89(6), 1008-1022.

Gremmo, D., Greve, M., & Ruigrok, W. (2017) - working paper

- van Knippenberg, D., & Schippers, M. C. (2007). Work group diversity. *Annual Review of Psychology*, 58, 515-541.
- Wiersema, M. F., & Bantel, K. A. (1992). Top management team demography and corporate strategic change. *Academy of Management Journal*, 35(1), 91-121.
- Williams, K. Y., & O'Reilly, C. A. (1998). Demography and diversity in organizations: A review of 40 years of research. *Research in Organizational Behavior*, 20, 77-140.
- Wilson, J. M., Goodman, P. S., & Cronin, M. A. (2007). Group learning. *Academy of Management Review*, 32(4), 1041-1059.
- Wu, D.-M. (1974). Alternative tests of independence between stochastic regressors and disturbances: Finite sample results. *Econometrica: Journal of the Econometric Society*, 42(3), 529-546.
- Zajac, E. J., Kraatz, M. S., & Bresser, R. K. (2000). Modeling the dynamics of strategic fit: A normative approach to strategic change. *Strategic Management Journal*, 21(4), 429-453.