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Experience Teaches Slowly: Non-linear Effects of Top Management Teams' International Experience on Post-acquisition Performance

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Executives' international experience is commonly considered a critical asset for multinational companies. The underlying presumption is that individuals learn from international experience. We revisit this presumption and propose a conceptualization of learning from international experience that accounts for the process and challenges of such learning. We use this conceptualization to examine how the international experience of top management team (TMT) members affects firm performance following cross-border acquisition decisions of these TMTs. Empirical analyses addressing potential endogeneity concerns show that high, but not low, levels of TMT international experience have a positive impact, and that these effects are moderated by TMT nationality diversity.

Experience teaches slowly, and at the cost of mistakes.
James Anthony Froude (Short Studies on Great Subjects, 1877: 330)

Introduction

Top managers' international experience is commonly viewed as a valuable asset in international business (Carpenter, Sanders and Gregersen, 2001; Daily, Certo and Dalton, 2000; Le and Kroll, 2017). It has been argued that such experience provides executives with the knowledge and abilities needed for their firms to pursue international opportunities (Carpenter, Sanders and Gregersen, 2001; Le and Kroll, 2017; Nielsen and Nielsen, 2011). International experience has also been shown to influence firm-level strategies and outcomes, such as internationalization (Herrmann and Datta, 2005; Mohr and Batsakis, 2019; Sambharya, 1996), foreign entry strategies (Herrmann and Datta, 2006; Lee and Park, 2008; Nielsen and Nielsen, 2011; Piaskowska and Trojanowski, 2014) and performance (Daily, Certo and Dalton, 2000; Hsu, Chen and Cheng, 2013; Le and Kroll, 2017). Much of this research has presumed that executives' international experience readily transforms into the knowledge and abilities required to lead a successful internationalization of their firms.

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Despite the prevalent positive view of executives' international experience, a separate and significant body of research into how individuals learn from international experience highlights the complexities and challenges associated with such learning. For example, international experience requires extended exposure while often being a source of stress, job dissatisfaction and poor performance, ultimately causing individuals to end such learning experiences earlier than intended (Bhaskar-Shrinivas *et al*., 2005; Endicott, Bock and Narvaez, 2003; Le and Kroll, 2017; Ng, Van Dyne and Ang, 2009). Hence, a question arises: When and why does executives' international experience have a positive effect on firm performance following their internationalization decisions, such as those concerning cross-border acquisitions (CBAs), and when and why might this not be the case?

To address this question, we start by taking the upper echelons perspective, which highlights the key role of executives' values, knowledge and abilities in shaping strategic decisions and outcomes in firms (Carpenter, Geletkanycz and Sanders, 2004; Hambrick, 2007; Hambrick and Mason, 1984; Le and Kroll, 2017). Prior research in this area typically focuses on the demographic characteristics of executives and top management teams (TMTs) as proxies for their knowledge and abilities (Carpenter, Geletkanycz and Sanders, 2004). Comparatively less attention has been devoted to how individuals develop the knowledge and abilities ascribed to their international experience (Maitland and Sammartino, 2015b). To tackle this issue, we conceptualize the process and challenges of learning from international experience by drawing on research into experiential learning (Kolb, 2015; Kolb and Kolb, 2009) as applied to international experience (e.g. Fee, Gray and Lu, 2013; Le and Kroll, 2017; Ng, Van Dyne and Ang, 2009). The experiential learning process involves reflecting on and abstracting insights from recurring and novel experiences; however, inferential, attribution and transfer errors, as well as overconfidence, may arise in the process (Gary, Wood and Pillinger, 2012; Hånell *et al*., 2021; Sanchez and Dunning, 2018). These challenges are particularly likely early in the learning process, that is at low levels of experience, and delay the start of reliable learning, initially leading to negative outcomes (Musaji, Schulze and De Castro, 2020).

Building on this conceptualization, we argue that TMT international experience is likely to have a positive effect on firm performance following CBA decisions when levels of experience are higher rather than lower. We predict U-shaped relationships between two key dimensions of TMT international experience, namely its length and geographic scope (Le and Kroll, 2017; Wei *et al*., 2020), and post-CBA performance. We further hypothesize that TMT nationality diversity (Nielsen and Nielsen, 2013; Tasheva and Hillman, 2019) alleviates the negative performance effects associated with low levels of TMT international experience.

We test these predictions using a rigorous, three-stage U-shaped relationship testing procedure (Haans, Pieters and He, 2016; Lind and Mehlum, 2010) on a sample of 1,545 CBAs completed by the TMTs of 408 UK companies during the period 1999–2008. We also address potential simultaneity and selection biases by using the propensity score matching (PSM) technique (Majocchi *et al*., 2018; Rosenbaum and Rubin, 1983) and analyse both the operational and stock market performance of firms 1 year after their CBA. In practical terms we find that, on average, TMT members may need about 8 years of international experience and experience from at least two countries for it to be beneficial in terms of post-CBA performance. We also find some support for our prediction that the minimum levels of TMT international experience (in terms of its length and geographic scope) necessary for its beneficial effects to arise are lower for companies managed by more internationally diverse TMTs.

Our theorizing contributes to international business research, in particular in the upper echelons theory (UET) tradition, by revisiting a common presumption regarding the positive effect of executives' international experience on multinational company (MNC) performance (Carpenter, Sanders and Gregersen, 2001; Daily, Certo and Dalton, 2000; Hsu, Chen and Cheng, 2013; Le and Kroll, 2017). Building on UET and extending it with insights from experiential learning theory (ELT) (Kolb, 2015; Kolb and Kolb, 2009) as applied to international experience (Fee, Gray and Lu, 2013; Le and Kroll, 2017; Ng, Van Dyne and Ang, 2009), we provide a comprehensive conceptualization of learning from international experience that accounts for its process and challenges. This conceptualization enables us to explain when

and why executives' international experience might or might not lead to reliable learning, and therefore to better firm performance following strategic decisions regarding CBAs. In particular, we discuss the negative effects that some but limited TMT international experience can have; we also discuss why TMT nationality diversity may alleviate these effects. In providing these nuanced explanations, our study sheds light on the mixed findings in prior relevant research, which we review briefly in the next section.

Beyond these key contributions, we improve on prior research in two other ways. First, we focus on specific strategic decisions, namely those concerning CBAs, and consider all TMT members rather than just CEOs (Daily, Certo and Dalton, 2000; Hsu, Chen and Cheng, 2013; Le and Kroll, 2017). Such a focus is consistent with UET (Hambrick, 2007). The CBA context is particularly suitable for our study as CBAs are some of the most critical and complex strategic decisions that TMTs make (Piaskowska and Trojanowski, 2014).[1] Thanks to this focus, we provide new explanations for the often unsatisfactory performance outcomes of CBAs (Dikova and Sahib, 2013; Haleblian *et al*., 2009; Wei and Clegg, 2017; Xie, Reddy and Liang, 2017). Second, our study complements prior empirical research, which has typically used single, short-term performance measures and ignored possibilities of non-linear effects and endogeneity issues (Haleblian *et al*., 2009; Moeller and Schlingemann, 2005; Powell and Stark, 2005; Vaara *et al*., 2014).

Next, we briefly review the pertinent insights from UET research and complement these insights by conceptualizing how individuals learn from international experience. The hypotheses and empirical analyses follow.

Upper echelons theory

UET posits that executives' values, knowledge and abilities, shaped by their experiences and learning, influence how they scan their environments, identify opportunities and threats, process information, generate alternatives and make strategic decisions (Carpenter, Geletkanycz and Sanders, 2004; Hambrick and Mason, 1984; Le and Kroll, 2017). In this process, executives' international experience is a source of knowledge and abilities (Sambharya, 1996; Tasheva and Nielsen, 2020) that helps executives make informed decisions and manage risks associated with internationalization (Nielsen and Nielsen, 2011; Piaskowska, 2017; Piaskowska and Trojanowski, 2014). Because management and strategic decision-making in complex organizations such as MNCs are shared activities that require the collective input of multiple executives, the international experience of all TMT members influences organizational outcomes (Hambrick, 2007; Nielsen and Nielsen, 2011; Tasheva and Nielsen, 2020). At the TMT level, executives hailing from various national backgrounds can also bring diverse values and knowledge to their TMTs' decisions (Nielsen and Nielsen, 2013).

Consistent with this theory, prior research has found that executives' international experience and backgrounds influence internationalization decisions, including those regarding CBAs (Piaskowska and Trojanowski, 2014) and firm performance (e.g. Carpenter, Sanders and Gregersen, 2001; Daily, Certo and Dalton, 2000; Hsu, Chen and Cheng, 2013; Le and Kroll, 2017; Schmid and Dauth, 2014). However, the empirical findings focal to our study, that is about the effect of executives' international experience on performance, are mixed. Some studies found that executives' international experience had a positive effect on firm performance (Carpenter, Sanders

[1] Acquisitions are publicly observable discretionary investments initiated by management, and the success or failure of an acquisition is often attributed directly to the TMT of the acquiring firm (Scholten, 2005). A CBA decision involves multiple interdependent sub-decisions that have a cascading effect throughout the acquisition process (Pablo, Sitkin and Jemison, 1996). These sub-decisions concern, for example, the selection of the target country (Chakrabarti, Gupta-Mukherjee and Jayaraman, 2009; Kling *et al*., 2014; Li *et al*., 2020), the acquisition target firm (Kling *et al*., 2014), the acquisition stake (Piaskowska and Trojanowski, 2014) and the payment type (Reuer, Shenkar and Ragozzino, 2004). The appropriateness of such choices is influenced by managerial experiences, perceptions and risk propensities (Hambrick and Mason, 1984; Pablo, Sitkin and Jemison, 1996; Piaskowska and Trojanowski, 2014) and becomes reflected in the subsequent performance of the acquirer. This makes the CBA context particularly suitable for the study of the effects of executives' international experience on firm performance. The focus on post-CBA performance, rather than on specific sub-decisions throughout an acquisition event, allows us to capture how TMT international experience affects the CBA decision in its entirety. Moreover, the focus on post-CBA performance allows us to avoid making assumptions about the optimality of any specific CBA sub-decisions for a given acquirer.

and Gregersen, 2001; Daily, Certo and Dalton, 2000; Hsu, Chen and Cheng, 2013; Le and Kroll, 2017). Others reported negative or moderating effects of TMT international experience on firm or subsidiary performance (Carpenter, Sanders and Gregersen, 2001; Hutzschenreuter and Horstkotte, 2013; Wei *et al*., 2020). In a meta-analysis, Wang *et al*. (2016) found an insignificant relationship. Thus, prior empirical results do not consistently support a positive relationship between executives' international experience and firm performance.

To address these mixed findings, we focus on specific internationalization decisions, namely those regarding CBAs. This enables us to theorize the effects of TMT international experience when it should matter most. We begin by conceptualizing how individuals learn from international experience and identify the challenges involved, as discussed next.

Learning from international experience

Process

ELT (Kolb, 2015; Kolb and Kolb, 2009) posits that experience leads to knowledge and abilities through dialectical processes of grasping and transforming the experience. Experiential learning revolves in cycles, starting with concrete experiences and progressing through reflection and conceptualization to active experimentation. In this process, initial conceptualization developed from reflecting on an experience becomes refined with subsequent exposures to and reflections on similar experiences. Over time, a person develops knowledge from consistent patterns in interactions between themselves and their environments (Kolb and Kolb, 2009) and by observing and imitating the behaviours of others (Black and Mendenhall, 1991) in international work and non-work contexts (Lenartowicz *et al*., 2014; Li, Mobley and Kelly, 2013; Ng, Van Dyne and Ang, 2009; Rickley, 2019; Takeuchi *et al*., 2005). Thus, experiential learning requires exposure to and conscious processing of recurrent experiences that start and restart the learning cycle, together forming a 'learning spiral' (Kolb, 2015; Kolb and Kolb, 2009). As such, the duration of international experience (Le and Kroll, 2017; Takeuchi *et al*., 2005; Wei *et al*., 2020) and the recurrence of situations experienced while living and working internationally are key to learning from such experiences.

At the microlevel, the mental processes involved in learning from international experience allow an individual to develop networks of interconnected concepts in their memory, called schemas, that organize their knowledge (Endicott, Bock and Narvaez, 2003; Fee, Gray and Lu, 2013). International experiences present individuals with diverse, at times aversive, stimuli that arise from the unfamiliar rules, practices and behaviours individuals encounter in a foreign country (Barkema, Bell and Pennings, 1996; Xie, Reddy and Liang, 2017). Such stimuli trigger conscious processing, allowing individuals to develop and refine their schemas (Endicott, Bock and Narvaez, 2003; Fee, Gray and Lu, 2013). Gradually, their initial schemas become richer and increasingly interconnected; eventually, some individuals become experts (Dane, 2010; Endicott, Bock and Narvaez, 2003; Ericsson, Krampe and Tesch-Römer, 1993; Maitland and Sammartino, 2015a).

Challenges

The more novel an international experience is to an individual, the more difficult it is for them to process and absorb it (Fee, Gray and Lu, 2013). Faced with a novel experience, individuals tend to focus on those aspects that seem familiar or resemble familiar cues (Black and Mendenhall, 1991). As a result, individuals may make inferential and attribution errors, and miss learning opportunities (Dane, 2010; Gary, Wood and Pillinger, 2012). Individuals may also have a compelling sense of having learned even if they have made such errors (Hånell *et al*., 2021; Levitt and March, 1988). Furthermore, low but increasing levels of experience may cause a 'beginner's bubble', that is a situation when individuals become (temporarily) overconfident in their abilities after only a few learning experiences (Sanchez and Dunning, 2018). Such challenges may arise due to the difficulty of identifying causal relationships correctly and are particularly likely at low levels of experience when reliable learning may not have begun yet (Dahlin, Chuang and Roulet, 2018; Musaji, Schulze and De Castro, 2020).

Another potential challenge relates to the transfer of one's prior learning (Cormier and Hagman, 1987) to a new experience. Transfer can be positive, that is it can lead to an improvement in subsequent learning and performance, or negative. Arguably, in experiential learning, a positive

transfer occurs when a conceptualization derived from one experience is applied to and improves the outcome of another experience in a later learning cycle. Positive transfer is more likely when a new situation is similar or analogous to one experienced earlier (Gary, Wood and Pillinger, 2012; Gick and Holyoak, 1987; Maitland and Sammartino, 2015a). The more novel an experience is, the more difficult it is for an individual to transfer prior learning to it, and to do so accurately. Thus, limited similarity across experiences may hamper an individual's ability to learn from them, at least initially. With increasing experience, individuals can develop a repository of knowledge on which they can draw even when faced with novel experiences (Dane, 2010; Furr, Cavarretta and Garg, 2012; Maddux and Galinsky, 2009), improving both the likelihood and accuracy of transfer. International experiences across countries are particularly likely to pose such challenges – and opportunities – for learning. Thus, the spatial dimension of international experience, in addition to the time dimension, is key to learning from it (Le and Kroll, 2017; Wei *et al*., 2020).

Summary

An individual's learning from international experience can be conceptualized as a progression through cycles of grasping and transforming experiences. As individuals become exposed to a variety of experiences, they develop increasingly complex mental schemas. When experiences are novel and few, learning from them is hampered by learning errors and overconfidence. With increasing experience, these challenges become less pronounced. Eventually, individuals develop the advanced knowledge and abilities traditionally ascribed to internationally experienced executives. Next, we employ this conceptualization within the upper echelons framework to formulate our hypotheses.

Hypotheses

So far, we have established that by engaging in and processing international experiences over time and across countries, individuals develop increasingly rich mental schemas. Individuals rely on their schemas when making sense of new situations in an international context. In the case of executives, their schemas feed into collective TMT cognition (Hambrick, 2007) and guide information processing, problem solving and strategic decisions the TMT makes (Dane, 2010; Fee, Gray and Lu, 2013; Maitland and Sammartino, 2015a; Walsh, 1995), including decisions concerning CBAs (Piaskowska and Trojanowski, 2014). Thus, we expect that the international experience of TMT members, in terms of its length and geographic scope, affects firm performance following their CBA decisions.

Length of TMT international experience

When first living and working abroad, an individual experiences unfamiliar situations. While this provides opportunities for learning, initially – that is having spent a short time abroad, the likelihood of the individual making inferential errors and missing learning opportunities from such novel experiences is relatively high. This implies that the rate of learning is relatively low at first and increases over time. This assertion is consistent with research into international assignments, which shows that having to deal with unfamiliar situations may cause stress and take a psychological toll, eventually leading to a premature return from an international assignment (Bhaskar-Shrinivas *et al*., 2005; Black and Mendenhall, 1991). Hence, psychological adjustment is key to learning from international experience (Black and Mendenhall, 1991; Godart *et al*., 2015; Le and Kroll, 2017). The initial adjustment phase may take 6 to 12 months (Black and Mendenhall, 1991; Ward *et al*., 1998). A longer-lasting international experience allows for some recurrence of what become increasingly familiar encounters, providing opportunities to continue along a 'learning spiral', to try various responses and recognize patterns and causal relationships with greater accuracy (Kolb and Kolb, 2009; Ng, Van Dyne and Ang, 2009). For TMTs, the accuracy of their members' mental schemas about international environments is important in making good strategic decisions, such as those regarding CBAs, and achieving superior firm performance as a result (Gary and Wood, 2011). Yet it may take many years of international experience for executives to develop such schemas (Maitland and Sammartino, 2015a). While the exact length of time required is difficult to determine theoretically, research suggests that in other areas where complex knowledge and skills

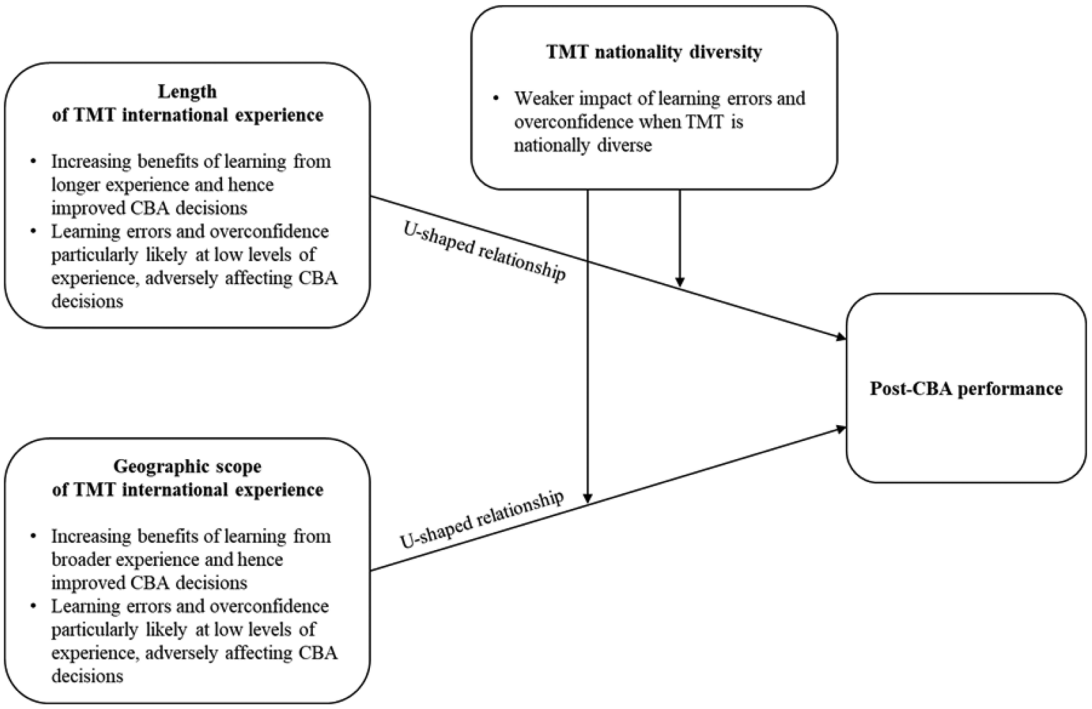

Figure 1. Summary of the hypothesized relationships

are needed, such as medicine and leadership, it may take a decade (Dane, 2010; Day, 2010; Ericsson, Prietula and Cokely, 2007).

Thus, we reason that international experience teaches slowly. When TMT members have relatively short international experiences and imperfectly developed schemas, they are likely to pay selective attention to clues in the host-country environments that are familiar to them and miss or misinterpret important cues, leading to an inaccurate picture of the CBA situation, and consequently to a suboptimal decision and suboptimal performance outcomes.

Furthermore, we discussed earlier that overconfidence resulting from experiential learning is particularly likely at low levels of experience. TMTs whose members have some, yet relatively short, international experience may overestimate their abilities, performance, level of control or chance of success (Moore and Healy, 2008). Such overestimation may display at the individual as well as the TMT level (Almandoz and Tilcsik, 2016), and may lead to bold (Nielsen and Nielsen, 2011; Piaskowska and Trojanowski, 2014) or even hubristic CBA decisions (Hiller and Hambrick, 2005; Vaara *et al*., 2014). When this happens, CBA decisions and their performance outcomes for the firm will be affected negatively.

The combination of the initially slow learning from international experience of TMT members and its negative effects due to learning errors and overconfidence, particularly at low levels of experience, leads us to hypothesize a U-shaped relationship (Haans, Pieters and He, 2016) between the length of TMT international experience and firms' post-CBA performance (see Figure 1).

H1: There is a U-shaped relationship between the length of TMT international experience and post-CBA performance.

Geographic scope of TMT international experience

Countries differ in terms of economic, political, social and cultural systems, practices and behaviours (Barkema, Bell and Pennings, 1996; Xie, Reddy and Liang, 2017). International experience gained from several countries exposes individuals to various manifestations of foreign environments, helping to amend and refine individuals' mental schemas (Maitland and Sammartino, 2015b) and providing knowledge and abilities that are

transferrable to various contexts. Individuals with broad international experience can also consider a wide range of solutions when approaching a decision problem (Godart *et al*., 2015; Sambharya, 1996) and recombine elements of their knowledge to create new insights and solutions (Maddux and Galinsky, 2009; Piaskowska, 2017; Rodan, 2002). This suggests an increasing-returns effect on learning at higher levels of the scope of one's international experience. At the TMT level, TMTs with a larger scope of international experience are likely to notice and interpret a wider range of environmental stimuli compared to TMTs whose members have narrower international experiences (Le and Kroll, 2017; Piaskowska, 2017; Sambharya, 1996). TMTs with a large scope of international experience may also consider more alternatives when deciding on CBAs compared with TMTs whose members have experiences from fewer countries, leading to a more comprehensive and thus a higher-quality CBA decision and better post-CBA performance.

However, there are also challenges associated with some but limited geographic scope in terms of international experience. At the individual level, moving to another country implies going through another adjustment process and being exposed to another set of novel experiences, which may be taxing on the individual (Bhaskar-Shrinivas *et al*., 2005; Black and Mendenhall, 1991) and impede their learning from such experiences. In the logic of ELT, a new 'learning spiral' may need to begin. In addition, when the individual has some but limited geographic scope of international experience, they may become (temporarily) overconfident (Sanchez and Dunning, 2018), as discussed earlier. Furthermore, because experiences from different countries are heterogenous, there is an increased risk that individuals erroneously transfer experiential knowledge gained in one country to an experience or decision concerning another country. This is because such heterogeneity increases the challenges of applying lessons learned in one context to another context (Boh, Slaughter and Espinosa, 2007; Gick and Holyoak, 1987; Lai, Chen and Song, 2019). Thus, when TMT members have a relatively low scope of international experience, the risk of misapplying their prior learning to a CBA decision is higher compared with when they have a large scope of international experience. The risk of erroneous transfers is therefore likely to wane as the scope of international experience increases. This underscores the negative impact that low levels of geographic scope of TMT international experience may have on firms' post-CBA performance.

At the TMT level, broad experience increases TMT members' awareness of cross-country differences (Tihanyi *et al*., 2000) and helps the TMT to discern what experiential knowledge they can and cannot draw on for a particular CBA decision. This helps avoid incorrect analogizing and erroneous transfer of prior learning (Gary, Wood and Pillinger, 2012; Gavetti, Levinthal and Rivkin, 2005). Thus, we expect that high levels of experience across countries help the TMT make well-informed CBA decisions, leading to improved post-CBA performance. However, some but limited scope of experience across countries may hamper the TMT's ability to apply prior experiential knowledge when deciding on a CBA, while increasing the risk of overconfidence. Thus, we predict the following U-shaped relationship:

H2: There is a U-shaped relationship between the geographic scope of TMT international experience across countries and post-CBA performance.

TMT nationality diversity

Recent research suggests that TMT members' characteristics, such as their international experience, combined with TMT demographic characteristics, such as nationality diversity, affect team- and firm-level outcomes (e.g. Díaz-Fernández, González-Rodríguez and Simonetti, 2015, 2020; Piaskowska, 2017; Tasheva and Hillman, 2019; Tasheva and Nielsen, 2020). We argue that TMT international experience may interact with TMT nationality diversity in its effect on post-CBA performance. An individual's national origin represents the cultural and institutional influences on how they perceive and act on stimuli, including how they solve problems and make decisions when in executive roles (Boone *et al*., 2019; Kaczmarek and Ruigrok 2013; Nielsen and Nielsen, 2013; Piaskowska and Trojanowski, 2014). Hence, TMT nationality diversity can be an alternative source of international knowledge at the team level. A nationally diverse TMT can draw upon each member's insights, which, at the TMT level, may compensate for low levels of international experience that individual members may bring to team decisions.

We discussed earlier that, in the early stages of one's learning from international experience, there is a heightened chance of learning errors and overconfidence, which may negatively affect the outcomes of strategic decisions. However, when the TMT is nationally diverse, each member contributes their 'national' experience to the team's decisions, allowing diverse perspectives, multiple interpretations and a broader range of issues to be considered (Nielsen and Nielsen, 2013; Sambharya, 1996). Prior research on teams has shown that the diversity of perspectives and preferences in a team is positively associated with information sharing, discussion, constructive dissent and reduced probability of groupthink and overconfidence in team decisions (Cox and Blake, 1991; Meissner *et al*., 2018; Scholten *et al*., 2007; Schulz-Hardt *et al*., 2002). Thus, we expect that, at the TMT level, nationality diversity will decrease the risk that the (temporary) overconfidence and the potentially incomplete or erroneous lessons from the (low levels of) international experience of each individual TMT member may lead to suboptimal CBA decisions. CBA decisions made by nationally diverse TMTs are also less likely to be negatively affected by poor transfer of TMT members' prior learning to CBA decisions. This is because increased information sharing, constructive dissent and discussions may allow nationally diverse TMTs to more accurately discern which experiential insights they can rely on, and which should be discounted.

Therefore, when TMTs are nationally diverse, firm performance outcomes connected with CBA decisions will be less affected by the challenges associated with learning from relatively short TMT international experiences. Likewise, TMT nationality diversity may alleviate the challenges associated with a limited geographic scope of TMT members' international experiences, weakening their potential negative impact on CBA decisions and consequent firm performance:

H3: TMT nationality diversity alleviates the negative effects on post-CBA performance associated with shorter TMT international experience.

H4: TMT nationality diversity alleviates the negative effects on post-CBA performance associated with TMT international experience of more limited geographic scope.

Data and methodology

To test our hypotheses, we began with an initial set of 2,632 firms and their TMTs obtained from BoardEx. We then selected those firms that completed CBAs during the sample period (1999–2008) using data from SDC Platinum (now Refinitiv Eikon Deals), and for which financial data were available from Thomson One Banker (now Refinitiv Eikon). This step yielded a sample of 2,801 acquisitions completed by 663 firms. To obtain TMT international experience measures for this sample, we needed to complement BoardEx CV data on executives' prior work and education with information on the geographic locations of these experiences. We manually searched, triangulated and coded such information using multiple sources, including the UK's Companies House and respective company directories in other countries, company websites, Bloomberg BusinessWeek executive profiles, LinkedIn and open internet searches. We supplemented these data with country-level data from the World Bank, Euromoney magazine and Hofstede's (2001) dataset. After the application of acquirer fixed effects and accounting for missing data, the final sample included 1,545 CBAs in 80 host countries completed by TMTs of 408 UK firms listed on the London Stock Exchange.

Variables

Table 1 provides the definitions and motivation for our choice of variables. To operationalize the dependent variable, post-CBA performance, we used three measures of firm performance 1 year after a CBA: buy-and-hold abnormal returns (BHAR), return on assets (ROA) and return on equity (ROE) (Brockman, Rui and Zou, 2013; Zollo and Meier, 2008). BHAR is particularly suitable for our study as it reflects the actual investor experience in the stock market (Tupper, Guldiken and Benischke, 2018).[2] To gain a holistic view of post-CBA performance (Schoenberg, 2006), it is

[2]We did not use the short-term event announcement returns (typically calculated over a few days around the event) as they may not accurately reflect the economic implications of strategic decisions such as acquisitions (De Beule and Sels, 2016; Zollo and Meier, 2008). Ex-ante capital market expectations also exhibit little correlation with corporate managers' ex-post assessment of performance (Schoenberg, 2006). We did not choose event periods exceeding 1 year due to measurement concerns associated with long-run event studies (Andrade, Mitchell and

Table 1. Variables

Variable name	Definition and motivation
Panel A: Dependent variables	
BHAR (%)	Generated following a long-run event study procedure (Lyon, Barber and Tsai, 1999) using FTSE all-share index as the benchmark portfolio. Calculated over a 1-year period following CBA deal completion announcement. For each acquirer's stock i for the time period τ_1 to τ_2 (measured relative to the acquisition announcement month), BHAR was calculated as$BHAR_{i\tau} = \prod_{\tau 1}^{\tau 2}(1+R_{i\tau}) - \prod_{\tau 1}^{\tau 2}(1+R_{b\tau})$ where $R_{i\tau}$ is the return for each such firm for month τ and $R_{b\tau}$ is the benchmark return for the same period based on FTSE all-share market index return. BHAR winsorized to minimize the effect of outliers, at the 1st percentile on the left tail and the 5th percentile on the right tail due to large values on the right.
ROA (%)	Net income divided by total assets. ROA values were winsorized to minimize the effect of outliers, at the 1st percentile on the left tail and the 5th percentile on the right tail due to large values on the right.
ROE (%)	Net income divided by common shareholders equity. ROE values were winsorized to minimize the effect of outliers, at the 1st percentile on the left tail and the 5th percentile on the right tail due to large values on the right.
Panel B: Independent and moderator variables	
Length of TMT international experience	The number of years of international education and employment averaged across the TMT members, lagged by 1 year to ensure that they temporally preceded the performance variables, in line with the predicted causality and to alleviate endogeneity concerns (Nielsen and Nielsen, 2013). The variable was mean-centred for the regressions to alleviate potential collinearity concerns (Aiken and West, 1991) and squared for the purpose of hypothesis testing.
Geographic scope of TMT international experience	The average number of countries in which TMT members had experience, lagged by 1 year to ensure that they temporally preceded the performance variables, in line with the predicted causality and to alleviate endogeneity concerns (Nielsen and Nielsen, 2013). The variable was mean-centred for the regressions to alleviate potential collinearity problems (Aiken and West, 1991) and squared for the purpose of hypothesis testing.
High TMT nationality diversity	Dummy variable equal to one if the Blau index of nationalities on the TMT (Nielsen and Nielsen, 2013) is greater than its median value, and zero otherwise.
Panel C: Acquisition-level control variables	
Full acquisition	Dummy variable equal to one when the focal acquisition involved at least 95% stake or zero otherwise, consistent with a common definition of fully owned foreign subsidiaries in prior research (e.g. Gaur and Lu, 2007).
Diversifying acquisition	Dummy variable equal to one if the acquisition was outside the firm's core macro industry or zero otherwise. Accounted for the potential synergies in acquisitions within the same industry, which may affect performance (Weitzel and Berns, 2006).
Deal value	Deal value in logged GBP millions. Accounted for the effect on the future size of the acquiring firm (Datta, Basuil and Agarwal, 2020; Dikova and Sahib, 2013).
Cash	Dummy variable equal to one if the acquisition was financed by cash and zero otherwise (i.e. for stock or the combination of both cash and stock along with debt financing). The method of payment has been shown to influence post-acquisition performance (Bi and Gregory, 2011).
Stock	Dummy variable equal to one if the acquisition was financed by stock and zero otherwise (i.e. for cash or the combination of both cash and stock along with debt financing). The method of payment has been shown to influence post-acquisition performance (Bi and Gregory, 2011).
Variable name	Definition and motivation
Panel D: Company-level control variables	
Acquisition experience	Count of all acquisitions completed by the acquiring firm over a 5-year period preceding a focal acquisition. Accounts for the impact of organizational experience with acquisitions (Haleblian and Finkelstein, 1999).
Firm size	The log of the 1-year lagged value of total asset in GBP millions.
Tobin's Q	Ratio of market value of acquirer and replacement cost of its assets. Used to control for the effect of Tobin's Q on CBA performance (Servaes, 1991).
Leverage	Proportion of long-term debt in the capital structure of acquiring firms. Used because high leverage may limit the effect of managerial discretion in CBA decision-making process (Jensen, 1986).
TMT size	The number of TMT members. Controlled for the range of opinions that may arise in the process of decision-making for reasons other than TMT international experience (Carpenter, Geletkanycz and Sanders, 2004).

Table 1. (Continued)

Variable name	Definition and motivation
Average TMT tenure	The average number of years TMT members served on the team. Included because tenure is associated with managerial influence on the collective TMT views and decisions (Tihanyi *et al*., 2000).
Average TMT age	The average age of TMT members; included to capture the effect of TMT members' age in decision-making process (Kavuşan, Ateş and Nadolska, 2020; Tihanyi *et al*., 2000).
TMT gender diversity	The proportion of female members in the TMT. Controls for the difference in perspectives while making decisions (Kavuşan, Ateş and Nadolska, 2020).
CEO time in role	The number of years spent by the CEO in his current role in the acquiring firm, which may affect his decision-making authority in the board and thus CBA performance (Kavuşan, Ateş and Nadolska, 2020).
Duality of CEO	Dummy variable equal to one if the CEO also serves as the board chair and zero otherwise. Included to capture CEO dominance, often linked with CBA performance (Jackling and Johl, 2009; Kavuşan, Ateş and Nadolska, 2020).
Female CEO	Dummy variable equal to one if CEO is female and zero otherwise. Included to capture the role of gender on CEO dominance on CBA outcomes (Datta, Basuil and Agarwal, 2020).
Panel E: Target country-level control variables	
Cultural distance	Kogut and Singh's (1988) index based on the original four cultural dimensions (Hofstede, 2001). Included as it may influence firm performance while expanding abroad due to its impact on integration costs and cultural conflicts (Dikova and Sahib, 2013; Stahl and Voigt, 2008).
Country risk	*Euromoney* magazine index converted such that high values represented high risk, to capture its impact on CBA decisions and outcomes (Piaskowska and Trojanowski, 2014).
GDP per capita	GDP per capita in USD thousands (lagged by 1 year). Included to account for the host country's level of development (Malen and Vaaler, 2017).
Country governance	Composite score computed by averaging the six dimensions of governance from the World Bank's Worldwide Governance Indicators (WGI): (I) Voice and Accountability; (II) Political Stability and Absence of Violence; (III) Government Effectiveness; (IV) Regulatory Quality; (V) Rule of Law; and (VI) Control of Corruption, following Dikova and Van Witteloostuijn (2007). WGI are based on data for over 215 countries and territories over the period 1996–2018 developed in Kaufmann, Kraay and Mastruzzi (2007). Included to capture the host-country governance quality, which is evidenced to impact CBA performance (Datta, Basuil and Agarwal, 2020; Li, Li and Wang, 2016).

important to also use operating performance measures. We chose ROA and ROE, as they reflect the economic benefits generated by acquisitions (Stahl and Voigt, 2008; Tuch and O'Sullivan, 2007). Our approach to measuring post-CBA performance is therefore both complete and robust. Panel A in Table 1 provides further details.

Panel B details the independent and moderator variables. Following Carpenter, Geletkanycz and Sanders (2004), we defined TMT as including all executive or inside directors on the board of a firm. The length and geographic scope of TMT international experience were measured as the average number of years and countries of TMT members' experiences abroad, respectively. TMT nationality diversity was a moderator binary variable equal to one if the Blau index of nationalities on a TMT was above median, and zero otherwise.

Following prior research, we controlled for multiple acquisition-, company- and country-level factors that could influence post-CBA performance. Panels C–E in Table 1 provide the full details.

Econometric methods

We tested our hypotheses by estimating ordinary and multilevel mixed effects regressions. For each of the dependent variables (BHAR, ROA and ROE), we estimated a baseline model with all the control variables and models to test each of the hypotheses. All ordinary regression models included year dummy variables to control for time fixed effects. We also included firm-level fixed effects to mitigate endogeneity concerns stemming from unobserved heterogeneity (Himmelberg, Hubbard and Palia, 1999). The mixed effects method accommodates both the fixed and random effects. It is particularly suited to dealing with the issue of clustering (McNeish and Kelly, 2019), which may occur in multilevel data like ours, where acquisitions

Stafford, 2001; Ang and Zhang, 2004; Barber and Lyon, 1997; De Beule and Sels, 2016; Lyon, Barber and Tsai, 1999).

are nested within the different host countries and within the acquiring firms, with the acquiring firms themselves being nested within industries (Nielsen and Nielsen, 2011; Piaskowska and Trojanowski, 2014). However, mixed effects models require several assumptions to be met, including that all relevant random effects are included in the model, and that residuals and random effects follow multivariate normal distributions and do not covary across levels (McNeish and Kelly, 2019). Considering these trade-offs, we present the results of both the ordinary and mixed effects regression models.

To test H1 and H2, we conducted a rigorous test for the predicted U-shaped relationships using a three-step procedure (Haans, Pieters and He, 2016; Lind and Mehlum, 2010). First, we tested whether the coefficients of the squared terms of the length and geographic scope of TMT international experience in the ordinary and mixed effects models were significant and of the expected sign. Second, we carried out Sasabuchi tests (Lind and Mehlum, 2010) on the estimates of the ordinary regressions to check whether each of the predicted U-shapes had sufficiently steep slopes at each end of the data ranges. Third, we checked whether the estimated turning points in the ordinary regressions were located within the data ranges. We also conducted a treatment effects analysis using PSM based on the ordinary regressions as a robustness check (described in the Robustness checks section).

We tested Hypotheses 3 and 4 in the following way: To the regressions used to test Hypotheses 1 and 2, we added interactions of a high TMT nationality diversity dummy with the linear and squared terms of the two TMT international experience variables. The estimates of the interactive effects provided direct tests for the significance of the difference in the effects that the length and the geographic scope of TMT international experience have on post-CBA performance in firms with high versus low levels of TMT nationality diversity.

Results

Table 2 reports means, standard deviations and correlations. Tables 3 and 4 present the baseline models and models testing H1 and H2 for each of the three post-CBA performance measures. Table 3 presents the ordinary regression results, while Table 4 presents the mixed effects regression results. Table 5 includes the results of further testing of the U-shaped relationships in H1 and H2. Finally, Tables 6 and 7 present the ordinary and mixed effect regressions, respectively, testing H3 and H4.

The results corroborated H1, postulating a U-shaped relationship between the length of TMT international experience and post-CBA performance. The coefficients corresponding to the quadratic terms of the years of TMT international experience were significant in Models 1B–3B and 1E–3E. The results indicate that only the most experienced TMTs see their firms benefit from TMT members' international experience in terms of post-CBA performance. The turning points of the estimated U-shaped effects range from 7.51 to 9.83 years of TMT international experience across the models presented in Tables 3 and 4. In practical terms, TMTs may need an average of about 8 years of international experience for its positive effects on post-CBA performance to emerge.

Two further steps to verify the U-shaped effects (Haans, Pieters and He, 2016; Lind and Mehlum, 2010) are reported in Table 5. First, we computed the 95% confidence intervals for the turning points in the U-curves estimated in the ordinary regressions and confirmed that these points lie within the data ranges. We then tested for the steepness of the U-shapes at the ends of the data ranges. All the models passed these tests.

The analyses also supported H2, predicting a U-shaped relationship between the geographic scope of TMT international experience and post-CBA performance. The coefficients corresponding to the quadratic terms of the geographic scope of TMT international experience variable were significant in Models 1C–3C and 1F–3F. These results indicate that the benefits of a larger number of countries from which TMT members have experience accrue to the most experienced TMTs. The turning points of the estimated U-curves range from 1.58 to 1.66 across the relevant models, indicating that post-CBA performance effects of the scope of TMT members' international experience improve when TMT members have experience from about 1.6 foreign countries on average.

As shown in Table 5, the turning points of the U-curves estimated in the main regression models lie within the range of the data. The models also passed the Sasabuchi test for the steepness of the upper and lower bounds of the U-curves as well as for the overall curve.

Tables 6 and 7 report the tests of H3 and H4. Figure 2 uses the results from Table 6 to

Table 2. Descriptive statistics and correlations

	Mean	St. dev.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)
(1) BHAR	−0.087	33.208																									
(2) ROA	3.331	12.974	0.36																								
(3) ROE	2.662	45.714	0.301	0.728																							
(4) Length of TMT international experience	4.949	4.867	0.029	0.033	0.033																						
(5) Geographic scope of TMT international experience	0.834	0.806	0.015	−0.03	0.014	0.78																					
(6) TMT nationality diversity	0.453	0.498	−0.002	0.049	0.082	0.374	0.395																				
(7) Full acquisition	0.798	0.402	−0.02	0.043	0.021	−0.131	−0.22	−0.084																			
(8) Diversifying acquisition	0.344	0.475	−0.036	0.003	0.01	−0.11	−0.071	−0.049	0.049																		
(9) Deal value	2.057	1.965	0.038	−0.024	0.007	0.157	0.199	0.064	0.018	−0.168																	
(10) Cash	0.608	0.488	0.093	0.095	0.103	−0.001	0.004	−0.054	−0.048	−0.028	0.352																
(11) Stock	0.032	0.177	−0.082	−0.25	−0.218	0.003	0.051	−0.03	0.008	−0.074	−0.003	−0.219															
(12) Acquisition experience	14.645	37.351	−0.049	0.119	0.036	0.22	0.289	0.163	0.019	0.027	0.06	0.017	−0.077														
(13) Firm size	6.329	2.429	0.096	0.222	0.191	0.467	0.485	0.357	−0.072	−0.089	0.293	0.074	−0.167	0.484													
(14) Leverage	28.293	29.292	0.051	0.222	0.08	0.041	0.025	0.182	0.051	−0.045	0.052	−0.035	−0.087	0.282	0.36												
(15) Tobin's Q	1.498	1.154	0.01	0.046	−0.016	−0.072	−0.095	−0.027	0.041	−0.007	−0.045	−0.113	0.054	−0.016	−0.219	0.072											
(16) TMT size	3.953	1.704	0.007	0.017	0.047	0.019	0.063	0.319	−0.012	−0.002	0.048	−0.04	−0.083	0.262	0.365	0.092	−0.074										
(17) Average TMT tenure	5.095	3.489	0.004	0.137	0.075	−0.061	−0.125	−0.136	0.007	0.08	−0.019	0.048	−0.053	0.063	0.047	−0.032	−0.009	−0.021									
(18) Average TMT age	5.388	4.417	0.107	0.221	0.201	0.281	0.194	0.217	−0.03	−0.049	0.015	0.055	−0.059	0.206	0.342	0.168	−0.096	0.135	0.245								
(19) TMT gender diversity	2.644	8.904	−0.035	−0.144	−0.074	0.013	0.082	0.041	−0.069	0.033	−0.038	−0.03	0.066	−0.109	−0.077	−0.11	0.001	0.049	−0.06	−0.133							
(20) CEO time in role	4.86	4.693	0.056	0.141	0.04	−0.104	−0.106	−0.168	−0.004	0.066	−0.064	0.046	−0.008	0.057	−0.075	−0.01	0.058	0.062	0.515	0.145	0.052						
(21) Duality of CEO	0.224	0.417	−0.05	−0.12	−0.088	0.049	0.015	0.098	−0.085	−0.069	−0.005	−0.024	−0.008	−0.079	−0.044	−0.044	0.001	0.271	0.029	0.065	0.072	−0.063					
(22) Female CEO	0.015	0.122	−0.018	−0.027	−0.016	0.158	0.189	0.11	−0.046	0.066	−0.003	−0.033	−0.023	−0.024	0.082	0.003	−0.03	0.014	−0.01	0.016	0.56	0.014	0.025				
(23) Cultural distance	1.441	1.572	0.015	−0.052	−0.012	0.182	0.238	0.117	−0.25	−0.122	−0.044	−0.065	0.035	0.141	0.131	−0.014	−0.026	0.065	−0.004	0.039	−0.024	−0.047	0.059	−0.048			
(24) Country risk	0.145	0.163	0.036	−0.06	−0.009	0.224	0.32	0.124	−0.308	−0.126	−0.059	−0.037	0.055	0.089	0.12	−0.049	−0.045	0.033	−0.003	0.062	0.065	−0.056	0.066	−0.008	0.575		
(25) GDP per capita	28.396	14.045	−0.034	0.064	0.038	−0.115	−0.226	−0.108	0.276	0.119	0.048	0.03	−0.033	−0.124	−0.109	0.02	−0.002	−0.159	0.063	−0.034	−0.025	0.065	−0.118	0.039	−0.521	−0.83	
(26) Country governance	1.143	0.639	−0.017	0.084	0.034	−0.211	−0.311	−0.112	0.273	0.076	0.014	0.021	−0.036	−0.087	−0.135	0.055	0.044	−0.025	0.024	−0.033	−0.07	0.075	−0.025	−0.022	−0.506	−0.869	0.711

Note: If the absolute value of correlation is greater than 0.048, the correlation is significant at the 0.05 level. If the absolute value of correlation is greater than 0.062, the correlation is significant at the 0.01 level.

Table 3. Ordinary regression analyses of the effects of TMT international experience variables on post-CBA performance

	Panel 1: BHAR			Panel 2: ROA			Panel 3: ROE		
Variables	Model 1A	Model 1B	Model 1C	Model 2A	Model 2B	Model 2C	Model 3A	Model 3B	Model 3C
Length of TMT international experience (A)		−1.711***			−0.551***			−1.676***	
		(−2.84)			(−3.95)			(−3.19)	
(A) Squared		0.175**			0.0836***			0.217***	
		(2.41)			(5.01)			(3.42)	
Geographic scope of TMT international experience (B)			−4.749			−2.028**			−6.706*
			(−1.18)			(−2.17)			(−1.89)
(B) Squared			6.790***			1.112**			4.025**
			(3.2)			(2.27)			(2.16)
TMT nationality diversity	1.541	3.764	3.772	−0.666	0.108	−0.222	−3.507	−1.264	−1.956
	(0.44)	(1.05)	(1.05)	(−0.82)	(0.13)	(−0.27)	(−1.15)	(−0.41)	(−0.63)
Full acquisition	0.0229	−0.0747	−0.0975	0.0509	0.0548	0.0564	1.534	1.487	1.522
	(0.01)	(−0.03)	(−0.04)	(0.09)	(0.1)	(0.1)	(0.72)	(0.71)	(0.72)
Diversifying acquisition	0.959	0.92	0.975	−0.311	−0.338	−0.295	0.645	0.598	0.703
	(0.46)	(0.44)	(0.47)	(−0.64)	(−0.70)	(−0.61)	(0.35)	(0.33)	(0.38)
Deal value	−0.331	−0.348	−0.371	−0.0837	−0.0825	−0.0881	0.0857	0.0892	0.0706
	(−0.65)	(−0.69)	(−0.74)	(−0.72)	(−0.71)	(−0.76)	(0.19)	(0.2)	(0.16)
Cash	3.315	3.158	3.471*	0.308	0.214	0.335	−0.144	−0.433	−0.0676
	(1.62)	(1.55)	(1.7)	(0.65)	(0.46)	(0.71)	(−0.08)	(−0.24)	(−0.04)
Stock	2.849	4.193	4.16	−8.507***	−7.867***	−8.213***	−25.59***	−23.95***	−24.57***
	(0.42)	(0.62)	(0.61)	(−5.43)	(−5.06)	(−5.24)	(−4.33)	(−4.06)	(−4.15)
Acquisition experience	−0.745***	−0.740***	−0.804***	−0.126***	−0.130***	−0.126***	−0.22	−0.227	−0.226
	(−4.05)	(−4.03)	(−4.35)	(−2.94)	(−3.04)	(−2.91)	(−1.35)	(−1.40)	(−1.38)
Firm size	−11.38***	−10.99***	−11.27***	−4.357***	−4.187***	−4.309***	−11.88***	−11.46***	−11.74***
	(−5.13)	(−4.96)	(−5.10)	(−8.45)	(−8.20)	(−8.37)	(−6.10)	(−5.91)	(−6.04)
Leverage	0.0117	0.0118	0.0336	−0.0202*	−0.0181	−0.0197	0.167***	0.169***	0.171***
	(0.22)	(0.23)	(0.64)	(−1.68)	(−1.52)	(−1.62)	(3.67)	(3.72)	(3.72)
Tobin's Q	−0.13	−0.338	−0.344	1.354***	1.252***	1.363***	5.067***	4.801***	5.089***
	(−0.08)	(−0.20)	(−0.20)	(3.48)	(3.25)	(3.5)	(3.45)	(3.28)	(3.46)
TMT size	−2.252**	−2.220**	−2.383**	0.268	0.32	0.216	1.716*	1.833*	1.551

Table 3. (Continued)

Variables	Panel 1: BHAR			Panel 2: ROA			Panel 3: ROE		
	Model 1A	Model 1B	Model 1C	Model 2A	Model 2B	Model 2C	Model 3A	Model 3B	Model 3C
	(−2.04)	(−2.01)	(−2.16)	(1.05)	(1.26)	(0.84)	(1.78)	(1.9)	(1.6)
Average TMT tenure	−0.321	−0.651	−0.511	0.449***	0.374**	0.393***	1.086*	0.813	0.899
	(−0.50)	(−0.99)	(−0.79)	(3.02)	(2.49)	(2.61)	(1.93)	(1.42)	(1.58)
Average TMT age	−0.193	−0.0374	−0.223	−0.209*	−0.177	−0.222*	0.0621	0.191	0.0102
	(−0.35)	(−0.07)	(−0.41)	(−1.65)	(−1.40)	(−1.76)	(0.13)	(0.4)	(0.02)
TMT gender diversity	0.0658	0.0514	0.0473	−0.326***	−0.333***	−0.321***	−0.676***	−0.695***	−0.660***
	(0.25)	(0.2)	(0.18)	(−5.50)	(−5.68)	(−5.40)	(−3.02)	(−3.12)	(−2.94)
CEO time in role	1.579***	1.486***	1.758***	0.152*	0.122	0.185**	−0.252	−0.348	−0.137
	(4.07)	(3.83)	(4.5)	(1.7)	(1.38)	(2.05)	(−0.75)	(−1.03)	(−0.40)
Duality of CEO	0.275	0.606	2.634	0.451	0.782	0.664	−1.761	−0.876	−0.802
	(0.06)	(0.13)	(−.56)	(0.41)	(0.72)	(0.6)	(−0.42)	(−0.21)	(−0.19)
Female CEO	5.285	0.0711	6.196	18.83***	16.25***	18.3***	44.80***	38.26**	43.39**
	(0.27)	(0)	(0.31)	(4.15)	(3.6)	(4.05)	(2.62)	(2.23)	(2.53)
Cultural distance	−0.507	−0.436	−0.524	0.1	0.115	0.105	0.673	0.726	0.686
	(−0.73)	(−0.63)	(−0.76)	(0.63)	(0.72)	(0.66)	1.12	1.21	1.14
Country risk	7.943	8.584	7.332	−2.524	−2.374	−2.261	14.98	15.64	15.67
	(0.51)	(0.55)	(0.47)	(−0.70)	(−0.66)	(−0.63)	(1.1)	(1.15)	(1.15)
GDP per capita	−0.0921	−0.0766	−0.0745	−0.0305	−0.0273	−0.0253	0.139	0.149	0.155
	(−0.58)	(−0.48)	(−0.47)	(−0.83)	(−0.75)	(−0.69)	(1)	(1.07)	(1.11)
Country governance	3.836	3.834	3.949	0.845	0.757	0.875	4.149*	4.01	4.235*
	(1.34)	(1.34)	(1.38)	(1.27)	(1.15)	(1.32)	(1.65)	(1.6)	(1.69)
Year fixed effects included	yes	yes	yes	yes	yes	yes	yes	yes	yes
Firm fixed effects included	yes	yes	yes	yes	yes	yes	yes	yes	yes
Constant	−8.722	−15.87	−10.38	32.16***	30.66***	31.35***	42.67	36.84	40.54
	(−0.23)	(−0.42)	(−0.28)	−3.69	−3.55	−3.61	−1.3	−1.12	−1.23
Adjusted R-squared	0.343	0.346	0.348	0.766	0.771	0.767	0.736	0.739	0.737
Number of observations	1,545	1,545	1,545	1,521	1,521	1,521	1,521	1,521	1,521

T-statistics in parentheses.
*p < 0.10,
**p < 0.05,
***p < 0.01.

Table 4. Multilevel mixed effects analyses of TMT international experience variables on post-CBA performance

	Panel 1: BHAR			Panel 2: ROA			Panel 3: ROE		
Variables	Model 1D	Model 1E	Model 1F	Model 2D	Model 2E	Model 2F	Model 3D	Model 3E	Model 3F
Length of TMT international experience (A)		−0.815**			−0.416***			−1.370***	
		(−2.27)			(−3.38)			(−3.08)	
(A) Squared		0.134***			0.0811***			0.204***	
		(2.93)			(5.32)			(3.68)	
Geographic scope of TMT international experience (B)			−2.356			−1.863**			−7.114**
			(−1.00)			(−2.28)			(−2.41)
(B) Squared			3.686**			1.202***			4.737***
			(2.53)			(2.61)			(2.84)
TMT nationality diversity	0.417	2.361	1.218	0.492	1.209	1.001	0.555	2.935	2.542
	(0.17)	(0.94)	(0.49)	(0.65)	(1.55)	(1.29)	(0.2)	(1.04)	(0.9)
Full acquisition	−0.613	−0.406	−0.538	−0.106	−0.066	−0.123	1.503	1.566	1.446
	(−0.28)	(−0.19)	(−0.25)	(−0.19)	(−0.12)	(−0.22)	(0.72)	(0.75)	(0.69)
Diversifying acquisition	−0.528	−0.411	−0.453	−0.417	−0.409	−0.386	0.591	0.65	0.73
	(−0.28)	(−0.22)	(−0.24)	(−0.84)	(−0.84)	(−0.78)	(0.33)	(0.36)	(0.4)
Deal value	−0.155	−0.113	−0.161	−0.041	−0.032	−0.041	0.069	0.098	0.076
	(−0.33)	(−0.24)	(−0.34)	(−0.34)	(−0.27)	(−0.34)	(0.16)	(0.22)	(0.17)
Cash	3.570*	3.512*	3.642*	0.099	0.009	0.119	0.196	−0.068	0.256
	(1.91)	(1.88)	(1.95)	(0.21)	(0.02)	(0.25)	(0.11)	(−0.04)	(0.15)
Stock	−7.574	−6.731	−7.134	−11.00***	−10.43***	−10.71***	−33.08***	−31.65***	−31.92***
	(−1.45)	(−1.29)	(−1.36)	(−7.32)	(−6.98)	(−7.11)	(−6.07)	(−5.82)	(−5.85)
Acquisition experience	−0.656***	−0.688***	−0.716***	−0.001	0.001	0.001	0.023	0.031	0.032
	(−4.37)	(−4.59)	(−4.70)	(−0.10)	(0.07)	(0.09)	(0.55)	(0.74)	(0.75)
Firm size	2.437***	2.714***	2.500***	−0.027	0.065	0.085	−1.188	−0.753	−0.789
	(3.5)	(3.71)	(3.4)	(−0.09)	(0.22)	(0.29)	(−1.18)	(−0.73)	(−0.77)
Leverage	0.052	0.053	0.061	0.006	0.009	0.007	0.186***	0.191***	0.192***
	(1.28)	(1.31)	(1.5)	(0.52)	(0.81)	(0.63)	(4.44)	(4.55)	(4.51)
Tobin's Q	1.937**	1.850**	1.908**	0.970***	0.909***	0.989***	3.953***	3.826***	4.039***
	(2.06)	(1.97)	(2.01)	(2.97)	(2.8)	(3.02)	(3.37)	(3.27)	(3.44)
TMT size	−0.863	−0.85	−0.816	−0.098	−0.031	−0.15	0.36	0.45	0.166
	(−1.11)	(−1.08)	(−1.03)	(−0.40)	(−0.13)	(−0.61)	(0.41)	(0.51)	(0.19)

Table 4. (Continued)

Variables	Panel 1: BHAR			Panel 2: ROA			Panel 3: ROE		
	Model 1D	Model 1E	Model 1F	Model 2D	Model 2E	Model 2F	Model 3D	Model 3E	Model 3F
Average TMT tenure	−0.554	−0.675*	−0.626	0.434***	0.393***	0.373***	0.845*	0.663	0.613
	(−1.38)	(−1.65)	(−1.52)	(3.27)	(2.94)	(2.77)	(1.76)	(1.37)	(1.26)
Average TMT age	0.039	0.05	0.004	−0.214**	−0.203**	−0.216**	0.329	0.393	0.317
	(0.14)	(0.18)	(0.01)	(−2.07)	(−1.98)	(−2.11)	(0.9)	(1.07)	(0.87)
TMT gender diversity	−0.036	−0.074	−0.046	−0.239***	−0.253***	−0.238***	−0.382**	−0.422**	−0.380**
	(−0.25)	(−0.52)	(−0.33)	(−4.82)	(−5.14)	(−4.81)	(−2.14)	(−2.38)	(−2.14)
CEO time in role	0.935***	0.986***	0.986***	0.168**	0.159*	0.199**	−0.023	−0.05	0.094
	(3.57)	(3.76)	(3.73)	(2.02)	(1.93)	(2.37)	(−0.08)	(−0.16)	(0.31)
Duality of CEO	−2.229	−1.566	−1.467	−1.645*	−1.285	−1.391	−6.958**	−6.030*	−5.863*
	(−0.81)	(−0.57)	(−0.53)	(−1.72)	(−1.35)	(−1.45)	(−2.02)	(−1.75)	(−1.69)
Female CEO	−0.077	−0.648	−1.087	12.71***	11.15***	12.41***	25.77*	22.27	24.67*
	(−0.01)	(−0.06)	(−0.10)	(3.31)	(2.92)	(3.24)	(1.87)	(1.61)	(1.79)
Cultural distance	0.105	0.123	0.069	0.053	0.062	0.053	0.524	0.551	0.509
	(0.16)	(0.19)	(0.11)	(0.32)	(0.38)	(0.33)	(0.88)	(0.91)	(0.84)
Country risk	15	16.6	13.78	1.453	1.634	1.664	20.9	21.73	21.24
	(1.05)	(1.16)	(0.96)	(0.39)	(0.45)	(0.45)	(1.55)	(1.61)	(1.57)
GDP per capita	−0.04	−0.035	−0.039	−0.006	−0.005	−0.002	0.159	0.166	0.174
	(−0.28)	(−0.24)	(−0.27)	(−0.16)	(−0.13)	(−0.04)	(1.15)	(1.2)	(1.26)
Country governance	4.223	4.257	4.249	1.396**	1.287*	1.416**	5.158**	4.928**	5.107**
	(1.58)	(1.59)	(1.59)	(2.05)	(1.9)	(2.08)	(2.07)	(1.96)	(2.03)
Time fixed effects included	yes	yes	yes	yes	yes	yes	yes	yes	yes
Constant	−28.45*	−35.23**	−29.56*	7.54	4.131	5.847	−44.21**	−56.11***	−50.29***
	(−1.91)	(−2.29)	(−1.93)	−1.42	−0.77	−1.1	(−2.32)	(−2.89)	(−2.62)
Random effects parameters:	−5.85	−5.701	−5.623	−6.826	−7.291	−6.575	−5.453	−0.535	−0.567
Target Country: ln(sd)	(−0.02)	(−0.02)	(−0.02)	(−0.02)	(−0.01)	(−0.02)	(−0.01)	(−0.08)	(−0.09)
Acquirer Industry: ln(sd)	1.505***	1.306*	1.514***	1.194***	1.108***	1.192***	2.477***	2.441***	2.503***
	(2.95)	(1.95)	(2.87)	(3.33)	(2.85)	(3.29)	(7.31)	(6.93)	(7.48)
Acquiring Firm: ln(sd)	2.865***	2.874***	2.894***	2.587***	2.584***	2.579***	3.816***	3.813***	3.806***
	(31.15)	(31.72)	(32.58)	(55.72)	(55.78)	(55.2)	(86.97)	(86.79)	(86.21)
Residuals: ln(sd)	3.340***	3.337***	3.334***	1.872***	1.862***	1.872***	3.173***	3.169***	3.173***
	(151.99)	(152.08)	(151.84)	(82.98)	(82.47)	(82.8)	(144.62)	(143.45)	(143.7)
Number of observations	1,545	1,545	1,545	1,521	1,521	1,521	1,521	1,521	1,521

T-statistics in parentheses.
*p< 0.10,
**p< 0.05,
***p< 0.01.
ln(sd): natural log of the standard deviation of the intercept.

Table 5. Statistical tests of U-shaped relationships

	Panel A						Panel B			
Model	Squared term significant	Turning point (centred)	Turning point (raw)	lCL	uCL	Within bounds	Lower bound: t (p)	Upper bound: t (p)	Overall t-statistic	Overall p-value
1B	yes	4.88	9.83	1.86	7.90	yes	−2.84 (0.00)	1.88 (0.03)	1.88	0.03
1C	yes	0.35	1.18	−0.12	0.82	yes	−2.35 (0.01)	3.40 (0.00)	2.35	0.01
2B	yes	3.29	8.24	2.06	4.52	yes	−4.96 (0.00)	4.61 (0.00)	4.61	0.00
2C	yes	0.91	1.74	0.24	1.58	yes	−2.43 (0.00)	1.80 (0.04)	1.80	0.04
3B	yes	3.87	8.82	2.01	5.72	yes	−3.61 (0.00)	2.97 (0.00)	2.97	0.00
3C	yes	0.83	1.66	0.15	1.51	yes	−2.21 (0.01)	1.80 (0.04)	1.80	0.04

Panel A reports whether the squared term is significant at the 0.05 level at least. Turning point (centred) – turning point in years (centred). Turning point (raw) – turning point in years (uncentred). lCL and uCL – the lower and upper confidence intervals for the turning point (centred), respectively, at 95% confidence level. Within bounds – whether the turning point is within bounds of the data, where the minimum and maximum values (centred) of the length of TMT international experience are −5.16 and 13.84 and the minimum and maximum values (centred) of the geographic scope of TMT international experience are −0.86 and 2.54, respectively. The turning point is within bounds if the lCL and uCL are above or below the minimum and maximum values. Panel B reports the results of the Sasabuchi test for presence of U-shaped relationship following Lind and Mehlum (2010). Lower bound: t (p) shows the t-statistic and associated p-value.

visualize the effects of the length and geographic scope of TMT international experience over the ranges of data in our sample, conditional on the level of TMT nationality diversity. The significant interactions of the high TMT nationality diversity dummy with the linear and squared terms of the length and geographic scope of TMT international experience (for ROA and ROE) have signs consistent with H3 and H4. As illustrated in Figure 2, TMT nationality diversity alleviates the negative effects on post-CBA performance associated with low levels of TMT international experience and narrows the region of values of the experience variables where their effect on post-CBA performance is negative. Regressions of BHAR do not show significant interactive effects. Overall, H3 and H4 receive partial support. It could be that TMT nationality diversity can contribute to the variety of perspectives and knowledge a TMT can use in making CBA decisions; however, it may also present social cohesion and communication problems (Ben-Amar *et al.*, 2013; Nielsen and Nielsen, 2013). Such effects may explain the pattern of results observed here.

In practical terms, where the results are statistically significant in our models, for firms whose TMTs have high nationality diversity, the negative effects of international experience stop dominating when the average length of TMT international experience is 4.62 years shorter compared to its effect in firms with low TMT nationality diversity (Model 2G, Table 6). The respective difference for the geographic scope of TMT international experience is an average of 0.63 countries (Model 3H).

Robustness checks

We completed four sets of robustness checks. First, we considered potential endogeneity concerns other than those related to unobserved heterogeneity, which we addressed by including firm and year fixed effects in the main analyses. CBA decisions in particular could be endogenous, given that past performance may increase a firm's propensity to acquire (Barkema and Schijven, 2008) and impact the CBA decision (Dutta, Malhotra and Zhu, 2016). To address this potential reverse causality concern, we re-estimated Models 2A–3F (Tables 3 and 4) with the addition of 1-year lagged ROA and ROE (Powell and Stark, 2005). The results (available on request) were in line with our earlier findings.

Second, we addressed potential endogeneity concerns relating to simultaneity bias and non-random sample selection, in particular selection bias due to observables (Tucker, 2010).[3] While we used a large set of control variables, they may be

[3]Selection bias may be of concern if, for example, the TMTs of large acquirers have higher levels of international experience than the TMTs of smaller acquirers. Simultaneity bias may be of concern if, for example, well-performing firms hire executives with high international experience. If TMT international experience were randomly allocated across firms that engage in CBAs, we

Table 6. Ordinary regression analyses of the moderating effects of TMT nationality diversity on the relationship between TMT international experience and post-CBA performance

	Panel 1: BHAR		Panel 2: ROA		Panel 3: ROE	
Variables	Model 1G	Model 1H	Model 2G	Model 2H	Model 3G	Model 3H
Length of TMT international experience (A)	−1.875***		−0.776***		−1.928***	
	(−2.58)		(−4.63)		(−3.04)	
(A) Squared	0.092		0.0799***		0.198*	
	(0.72)		(2.71)		(1.75)	
Geographic scope of TMT international experience (B)		−5.902		−4.536***		−10.74***
		(−1.25)		(−4.19)		(−2.59)
(B) Squared		4.144		2.450***		4.775*
		(1.33)		(3.44)		(1.75)
TMT nationality diversity	2.435	2.04	1.032	2.256**	−0.588	0.754
	(0.5)	(0.46)	(0.93)	(2.21)	(−0.14)	(0.19)
(A) × TMT nationality diversity	0.269		0.449**		0.497	
	(0.33)		(2.39)		(0.69)	
(A) Squared × TMT nationality diversity	0.0818		−0.0179		−0.00337	
	(0.61)		(−0.59)		(−0.03)	
(B) × TMT nationality diversity		1.012		5.583***		8.253*
		(0.19)		(4.67)		(1.8)
(B) Squared × TMT nationality diversity		3.424		−2.680***		−2.278
		(0.97)		(−3.33)		(−0.74)
Full acquisition	−0.119	−0.0529	0.0252	0.0829	1.45	1.587
	(−0.05)	(−0.02)	(0.05)	(0.15)	(0.69)	(0.75)
Diversifying acquisition	0.932	1.083	−0.363	−0.358	0.577	0.668
	(0.44)	(0.52)	(−0.76)	(−0.74)	(0.31)	(0.36)
Deal value	−0.339	−0.323	−0.0891	−0.117	0.0844	0.0543
	(−0.67)	(−0.64)	(−0.77)	(−1.01)	(0.19)	(0.12)
Cash	3.099	3.372*	0.207	0.336	−0.453	−0.127
	(1.52)	(1.65)	(0.44)	(0.72)	(−0.25)	(−0.07)
Stock	4.155	4.192	−7.663***	−7.736***	−23.76***	−23.91***
	(0.61)	(0.61)	(−4.93)	(−4.97)	(−4.01)	(−4.03)
Acquisition experience	−0.722***	−0.792***	−0.131***	−0.148***	−0.226	−0.252
	(−3.89)	(−4.26)	(−3.06)	(−3.41)	(−1.38)	(−1.53)
Firm size	−10.90***	−11.38***	−4.165***	−4.136***	−11.43***	−11.55***
	(−4.91)	(−5.13)	(−8.16)	(−8.08)	(−5.88)	(−5.92)
Leverage	0.0167	0.0422	−0.0172	−0.0193	0.171***	0.175***
	(0.32)	(0.8)	(−1.43)	(−1.59)	(3.73)	(3.79)
Tobin's Q	−0.307	−0.406	1.310***	1.478***	4.863***	5.228***
	(−0.18)	(−0.24)	(3.4)	(3.82)	(3.31)	(3.55)
TMT size	−2.230**	−2.499**	0.321	0.243	1.837*	1.548
	(−2.02)	(−2.26)	(1.26)	(0.95)	(1.9)	(1.6)
Average TMT tenure	−0.653	−0.513	0.400***	0.464***	0.839	1.006*
	(−0.99)	(−0.79)	(2.66)	(3.1)	(1.46)	(1.76)
Average TMT age	0.0244	−0.143	−0.187	−0.265**	0.193	−0.0187
	(0.04)	(−0.26)	(−1.47)	(−2.10)	(0.4)	(−0.04)
TMT gender diversity	0.0696	0.0408	−0.315***	−0.315***	−0.67***	−0.655***
	(0.27)	(0.16)	(−5.34)	(−5.35)	(−3.00)	(−2.92)
CEO time in role	1.461***	1.702***	0.117	0.191**	−0.359	−0.158
	(3.75)	(4.33)	(1.32)	(2.13)	(−1.06)	(−0.46)
Duality of CEO	0.413	2.883	0.721	0.618	−0.965	−0.669
	(0.09)	(0.61)	(0.66)	(0.56)	(−0.23)	(−0.16)
Female CEO	−8.454	−7.525	13.96***	19.35***	34.50*	38.87**
	(−0.38)	(−0.34)	(2.79)	(3.85)	(1.81)	(2.03)
Cultural distance	−0.435	−0.583	0.132	0.152	0.744	0.72
	(−0.63)	(−0.84)	(0.84)	(0.95)	(1.24)	(1.19)
Country risk	9.009	8.751	−1.933	−1.938	16.15	16.83
	(0.58)	(0.56)	(−0.54)	(−0.54)	(1.19)	(1.23)
GDP per capita	−0.0776	−0.0738	−0.0247	−0.0252	0.152	0.155
	(−0.49)	(−0.47)	(−0.68)	(−0.69)	(1.09)	(1.11)

Table 6. (Continued)

Variables	Panel 1: BHAR		Panel 2: ROA		Panel 3: ROE	
	Model 1G	Model 1H	Model 2G	Model 2H	Model 3G	Model 3H
Country governance	3.898	4.043	0.825	0.97	4.089	4.411*
	(1.36)	(1.42)	(1.25)	(1.48)	(1.63)	(1.76)
Year fixed effects included	yes	yes	yes	yes	yes	yes
Firm fixed effects included	yes	yes	yes	yes	yes	yes
Constant	−18.65	−13.64	31.03***	30.99***	36.67	38.71
	(−0.49)	(−0.36)	(3.58)	(3.59)	(1.11)	(1.17)
Adjusted R-squared	0.346	0.348	0.772	0.771	0.739	0.738
Number of observations	1,545	1,545	1,521	1,521	1,521	1,521

T-statistics in parentheses.
*p< 0.10,
**p< 0.05,
***p< 0.01.

insufficient to deal with non-random treatment effects if such effects do exist (Reeb, Sakakibara and Mahmood, 2012). We used a PSM procedure (Majocchi *et al*., 2018; Rosenbaum and Rubin, 1983) to estimate the average treatment effects and address these concerns (Brockman, Rui and Zou, 2013). We matched firms with high and low levels of TMT international experience (treated firms) within each industry year to control firms. The treated and control firms were matched on the number of prior acquisitions, full acquisition indicator, diversifying acquisition indicator, method of payment, deal value, firm size, TMT size, tenure and nationality diversity. The outcome variables were BHAR, ROA and ROE.

Given that our earlier analysis suggested U-shaped relationships between TMT international experience measures and post-CBA performance, we ran separate PSM analyses for firms with high levels and low levels of each of the two TMT international experience measures. To construct the high-experience sample, for each year, we defined firms as treated if their TMT international experience was higher than the 70th, 80th or 90th percentile of the TMT international experience within the sample of firms for that year. The firms that fell below these percentiles were the control firms. To construct the low-experience sample, for each year, we defined firms as treated if their TMT international experience was lower than the 40th, 30th or 20th percentile of the TMT international experience within the sample of firms for that year. The firms that fell above these percentiles were the control firms. Thus, for each of the two TMT experience measures, with each of our three post-CBA performance measures, and with each of the aforementioned treatment thresholds, we conducted the PSM analyses using high and low TMT experience treatment samples matched to their control firms. This yielded a total of 108 estimates of average treatment effects. The treatment effects were positive in all cases except for three, where these effects were not statistically different from zero. Table 8 reports a sample of the estimates (full results are available on request) of average treatment effects and confirms that our earlier findings documenting U-shaped relationships were not driven by simultaneity or sample selection biases.

Third, the measures of the length and geographic scope of TMT international experience are interdependent by construction, that is a non-zero value for the length measure mechanically implies a positive value of the scope measure and vice versa. To address potential concerns stemming from high correlation (0.77) between the two measures, we applied principal component analysis (PCA) (Adams and Jiang, 2017; Huang *et al*., 2020) and used the first component as a combined measure of TMT international

could then directly measure the differences in outcomes between samples of firms who have TMTs with high/low international experience (treated firms) with those whose TMTs do not have such experience (control firms). However, the selection of TMTs into firms may be non-random and therefore may require adjustment for systematic differences in baseline characteristics between treated and untreated firms that might influence treatment selection.

Table 7. Multilevel mixed effects analyses of the moderating effects of TMT nationality diversity on the relationship between TMT international experience and post-CBA performance

	Panel 1: BHAR		Panel 2: ROA		Panel 3: ROE	
Variables	Model 1I	Model 1J	Model 2I	Model 2J	Model 3I	Model 3J
Length of TMT international experience (A)	−0.916**		−0.619***		−1.660***	
	(−2.21)		(−4.28)		(−3.18)	
(A) Squared	0.0906		0.0571**		0.163*	
	(1.39)		(2.28)		(1.8)	
Geographic scope of TMT international experience (B)		−3.683		−4.114***		−11.52***
		(−1.37)		(−4.41)		(−3.40)
(B) Squared		1.814		2.185***		5.667**
		(0.9)		(3.4)		(2.42)
TMT nationality diversity	1.351	0.398	1.518	3.135***	3.196	5.868*
	(0.43)	(0.14)	(1.5)	(3.38)	(0.87)	(1.74)
(A) × TMT nationality diversity	0.209		0.431**		0.626	
	(0.34)		(2.41)		(0.96)	
(A) Squared × TMT nationality diversity	0.0555		0.00644		0.0163	
	(0.67)		(0.24)		(0.17)	
(B) × TMT nationality diversity		2.664		5.553***		10.55**
		(0.67)		(4.87)		(2.52)
(B) Squared × TMT nationality diversity		2.064		−2.472***		−3.44
		(0.79)		(−3.28)		(−1.25)
Full acquisition	−0.38	−0.385	−0.0879	−0.0957	1.498	1.5
	(−0.18)	(−0.18)	(−0.16)	(−0.17)	(0.73)	(0.73)
Diversifying acquisition	−0.52	−0.511	−0.434	−0.432	0.612	0.667
	(−0.28)	(−0.28)	(−0.90)	(−0.89)	(0.34)	(0.37)
Deal value	−0.119	−0.142	−0.0346	−−0.0584	0.0913	0.0595
	(−0.25)	(−0.30)	(−0.30)	(−0.50)	(0.21)	(0.14)
Cash	3.545*	3.611*	−0.00921	0.067	−0.0995	0.109
	(1.92)	(1.95)	(−0.02)	(0.14)	(−0.06)	(0.06)
Stock	−6.592	−6.86	−10.31***	−10.32***	−31.45***	−31.22***
	(−1.28)	(−1.32)	(−7.00)	(−6.98)	(−5.85)	(−5.79)
Acquisition experience	−0.683***	−0.725***	0.00159	−0.00055	0.0324	0.0292
	(−4.61)	(−4.82)	(0.13)	(−0.05)	(0.77)	(0.7)
Firm size	2.732***	2.459***	0.073	0.0349	−0.729	−0.835
	(3.81)	(3.4)	(0.25)	(0.12)	(−0.72)	(−0.82)
Leverage	0.0539	0.0665*	0.0105	0.00799	0.193***	0.196***
	(1.35)	(1.65)	(0.93)	(0.69)	(4.64)	(4.65)
Tobin's Q	1.858**	1.903**	0.949***	1.097***	3.872***	4.185***
	(2)	(2.04)	(2.96)	(3.41)	(3.34)	(3.6)
TMT size	−0.896	−0.854	−0.0284	−0.117	0.459	0.208
	(−1.15)	(−1.10)	(−0.12)	(−0.49)	(0.52)	(0.24)
Average TMT tenure	−0.641	−0.611	0.415***	0.430***	0.696	0.721
	(−1.59)	(−1.50)	(3.14)	(3.24)	(1.45)	(1.5)
Average TMT age	0.0833	0.0736	−0.195*	−0.232**	0.408	0.318
	(0.31)	(0.27)	(−1.92)	(−2.29)	(1.12)	(0.88)
TMT gender diversity	−0.0755	−0.0612	−0.244***	−0.239***	−0.411**	−0.386**
	(−0.54)	(−0.44)	(−4.99)	(−4.91)	(−2.33)	(−2.20)
CEO time in role	0.959***	0.957***	0.147*	0.192**	−0.073	0.0625
	(3.7)	(3.68)	(1.8)	(2.33)	(−0.24)	(0.21)
Duality of CEO	−1.592	−1.639	−1.329	−1.508	−6.116*	−6.036*
	(−0.59)	(−0.60)	(−1.42)	(−1.60)	(−1.80)	(−1.76)
Female CEO	−3.053	−4.779	8.396**	12.89***	18.12	22.43
	(−0.28)	(−0.43)	(2.09)	(3.19)	(1.25)	(1.54)
Cultural distance	0.119	0.0249	0.076	0.0989	0.582	0.578
	(0.19)	(0.04)	(0.48)	(0.62)	(0.99)	(0.98)
Country risk	17.05	15.85	2.024	2.043	22.54*	22.83*
	(1.2)	(1.11)	(0.56)	(0.57)	(1.69)	(1.71)
GDP per capita	−0.0359	−0.0368	−0.00368	−0.00151	0.165	0.171
	(−0.25)	(−0.26)	(−0.10)	(−0.04)	(1.22)	(1.26)

Table 7. (Continued)

Variables	Panel 1: BHAR		Panel 2: ROA		Panel 3: ROE	
	Model 1I	Model 1J	Model 2I	Model 2J	Model 3I	Model 3J
Country governance	4.198	4.431*	1.334**	1.500**	5.074**	5.393**
	(1.59)	(1.68)	(2)	(2.25)	(2.06)	(2.19)
Time fixed effects included	yes	yes	yes	yes	yes	yes
Constant	−36.05**	−32.52**	3.381	4.655	−57.40***	−53.81***
	(−2.38)	(−2.15)	(0.64)	(0.89)	(−2.99)	(−2.84)
Random effects parameters: Target Country: ln(sd)	−5.671	−5.822	−6.697	−6.636	−5.903	−5.663
	(−0.02)	(−0.02)	(−0.03)	(−0.03)	(−0.01)	(−0.01)
Acquirer Industry: ln(sd)	1.099	1.320**	1.028***	1.153***	2.358***	2.434***
	(1.3)	(2.09)	(2.6)	(3.22)	(6.61)	(7.28)
Acquiring Firm: ln(sd)	2.848***	2.869***	2.576***	2.575***	3.806***	3.796***
	(30.9)	(31.7)	(55.8)	(55.57)	(86.91)	(86.32)
Residuals: ln(sd)	3.328***	3.325***	1.847***	1.849***	3.157***	3.160***
	(152.07)	(151.78)	(82.63)	(82.65)	(145.11)	(145.2)
Number of observations	1,545	1,545	1,521	1,521	1,521	1,521

T-statistics in parentheses.
*p< 0.10,
**p < 0.05,
***p < 0.01.
ln(sd): natural log of the standard deviation of the intercept.

experience.[4] We then estimated models equivalent to those used to test our hypotheses, with the composite PCA-based measure of TMT international experience in place of the original two TMT international experience variables. The corresponding results (available on request) are in line with those reported earlier.

Finally, we addressed potential measurement issues pertaining to post-CBA abnormal stock performance by using 12-month cumulative abnormal returns (CAR) in place of BHAR.[5] The results of this replication analysis (available on request) support our earlier conclusions.

Discussion

This paper examined when and why executives' international experience may have positive or negative effects on firm performance following CBA decisions. To answer this question, we built on UET as it provides a foundational logic for why TMT characteristics, including international experience, may influence CBA and other strategic decisions and, consequently, firm performance (Carpenter, Sanders and Gregersen, 2001; Hambrick, 2007; Hsu, Chen and Cheng, 2013; Le and Kroll, 2017). We contributed to this research by conceptualizing how individuals learn from international experience, building on ELT and its relevant applications (Fee, Gray and Lu, 2013; Kolb, 2015; Ng, Van Dyne and Ang, 2009). Prior upper echelons research has typically presumed a positive association between executives' international experience and their abilities to make good internationalization decisions, leading to positive firm performance outcomes. We revisited this line of thinking and explained the challenges that may emerge in the early stages of one's learning from international experience, specifically (temporary) overconfidence and errors in making inferences, attribution and transfer of learning (Gary, Wood and Pillinger, 2012; Hånell *et al*., 2021; Sanchez and Dunning, 2018). Crucially, such challenges

[4]The PCA sequentially extracts the principal components, which are unit-length linear combinations of the two variables that explain most of the total variance of the two variables. We used a correlation matrix to extract the principal components because the data are expressed in different units (length as years and scope as number of countries). Applying PCA to the standardized variables gave the first (second) component with an eigenvalue of 1.77 (0.22), explaining 88.56% (11.44%) of the total variance.

[5]We would like to thank an anonymous reviewer for bringing to our attention this concern reflecting the ongoing debate about the appropriateness of measures of abnormal stock performance, particularly in medium- to long-run event studies (see e.g. Barber and Lyon, 1997; Tupper *et al*., 2018).

Table 8. Propensity score matching analysis

Cutoffs	TMT international experience measure	Mean	pLo (centred)	pHi (centred)	pLo (raw)	pHi (raw)	Average treatment effect (ATE)					
							BHAR-Lo	ROA-Lo	ROE-Lo	BHAR-Hi	ROA- Hi	ROE-Hi
20Lo–90Hi	Length	4.949	−4.71	6.64	0.47	11.82	8.218***	1.920***	9.696***	2.565	1.912***	5.792**
							(0.00)	(0.00)	(0.00)	(0.16)	(0.00)	(0.01)
20Lo–90Hi	Scope	0.834	−0.66	1.14	0.20	2.00	6.348***	1.644**	7.262***	1.239	1.255*	10.65***
							(0.00)	(0.01)	(0.00)	(0.53)	(0.05)	(0.00)
30Lo–90Hi	Length	4.949	−3.76	6.64	1.42	11.82	5.370***	3.203***	13.33***	3.614**	2.969***	6.161***
							(0.00)	(0.00)	(0.00)	(0.04)	(0.00)	(0.00)
30Lo–90Hi	Scope	0.834	−0.53	1.14	0.33	2.00	4.875***	2.754***	10.28***	2.645	1.595**	8.896***
							(0.00)	(0.00)	(0.00)	(0.15)	(0.02)	(0.00)
40Lo–90Hi	Length	4.949	−2.66	6.64	2.52	11.82	6.094***	3.861***	8.702***	5.668***	3.533***	7.460***
							(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
40Lo–90Hi	Scope	0.834	−0.36	1.14	0.50	2.00	3.461*	5.611***	17.32***	3.738*	3.098***	12.92***
							(0.08)	(0.00)	(0.00)	(0.05)	(0.00)	(0.00)
40Lo–80Hi	Length	4.949	−2.66	3.84	2.52	9.02	2.636	2.018***	8.412**	1.661	2.104***	7.740**
							(0.19)	(0.00)	(0.02)	(0.36)	(0.00)	(0.02)
40Lo–80Hi	Scope	0.834	−0.36	0.64	0.50	1.50	7.008***	4.934***	19.88***	3.276*	1.913**	14.39***
							(0.00)	(0.00)	(0.00)	(0.09)	(0.04)	(0.00)
40Lo–70Hi	Length	4.949	−2.66	2.17	2.52	7.35	2.039	3.908***	6.778**	0.607	2.323***	7.211*
							(0.41)	(0.00)	(0.03)	(0.75)	(0.00)	(0.06)
40Lo–70Hi	Scope	0.834	−0.36	0.14	0.50	1.00	3.975	5.694***	19.59***	1.554	2.340**	13.84***
							(0.11)	(0.00)	(0.00)	(0.44)	(0.01)	(0.00)

Two-tailed p-values in parentheses.
*p < 0.10,
**p < 0.05,
***p < 0.01.
Cutoffs – refers to the cutoffs that define the treated firms. Exp. Measure – refers to the measure of TMT international experience. Mean – mean of the measure of TMT international experience. pLo (centred) and pHi (centred) – the percentile values of TMT international experience in years (centred) that correspond to the lower and upper percentiles used to define treatment. Hi pLo (raw) and pHi (raw) – the percentile values of TMT international experience (uncentred) in years that correspond to the lower and upper percentiles used to define treatment. Statistic – shows the average treatment effect (ATE) and the p-value of the ATE. The columns BHAR-Lo, ROA-Lo, ROE-Lo, BHAR-Hi, ROA-Hi and ROE-Hi report the average treatment effect and the corresponding p-value for the outcome variables: BHAR, ROA and ROE.

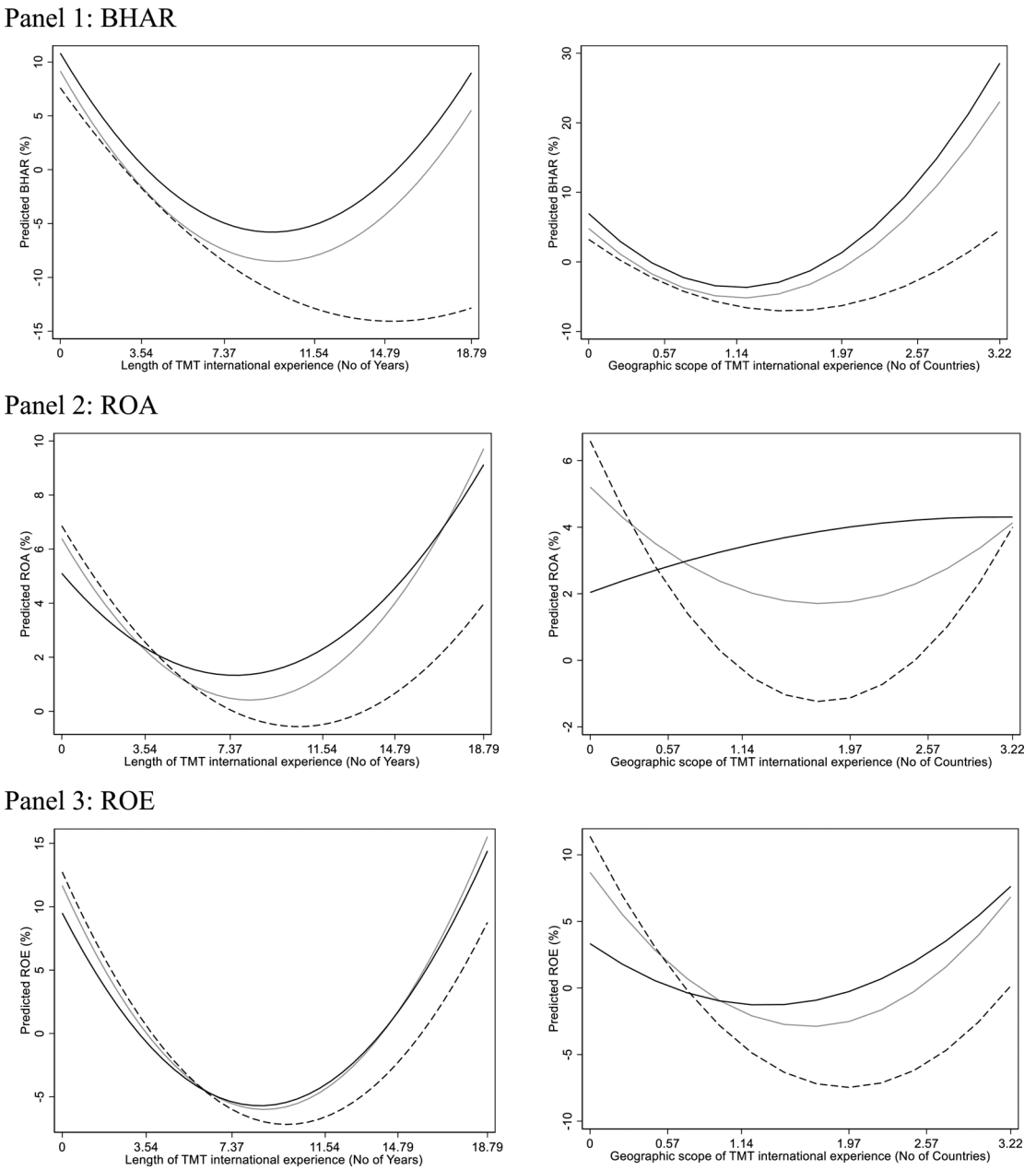

Figure 2. Estimated relationships between TMT international experience and post-CBA performance with moderation by TMT nationality diversity. The grey lines in each graph correspond to the baseline (unmoderated) relationship between each respective TMT international experience variable and post-CBA performance (based on models presented in Table 3). The solid black lines correspond to the relationship between each respective TMT international experience variable and post-CBA performance when TMT nationality diversity is high (based on models presented in Table 6). The dashed lines correspond to the relationship between each respective TMT international experience variable and post-CBA performance when TMT nationality diversity is low (based on models presented in Table 6). The x-axis values correspond to the minimum, 50th, 75th, 90th, 95th and maximum values of the TMT experience variables over the range of the data

delay the start of reliable learning (Musaji, Schulze and De Castro, 2020) and may lead to initially negative effects on executives' ability to derive and apply lessons from their experience in strategic decisions, specifically those regarding CBAs. By conceptualizing the process of – and challenges associated with – learning from international experience, our study contributes to UET with a

nuanced explanation for why and when TMT international experience may or may not lead to better CBA decisions and consequent firm performance outcomes.

Specifically, we argued and confirmed empirically that there is a U-shaped relationship between two main dimensions of TMT international experience, namely its length and scope, and firm performance following CBA decisions. We also argued that TMT nationality diversity may alleviate the negative effects that arise at low levels of TMT international experience. These arguments and findings offer new explanations that may help clarify the mixed empirical results regarding the relationship between executives' international experience and firm performance reported in the prior research discussed earlier (e.g. Carpenter, Sanders and Gregersen, 2001; Daily, Certo and Dalton, 2000; Hsu, Chen and Cheng, 2013; Hutzschenreuter and Horstkotte, 2013; Le and Kroll, 2017; Wang *et al*., 2016; Wei *et al*., 2020).

Our findings also shed new light on the often unsatisfactory nature of acquisition performance (Haleblian *et al*., 2009; Wei and Clegg, 2017). Prior research has often attributed this to various managerial biases (e.g. Billet and Qian, 2008; Hayward and Hambrick, 1997; Malmendier and Tate, 2008; Vaara *et al*., 2014). We discuss that if TMTs have some yet limited international experience, the increased risk of learning errors and overconfidence may result in poorer decisions in the acquisition process (Pablo, Sitkin and Jemison, 1996), and thus poorer post-CBA performance.

Practical implications

Our study shows that, when substantial, TMT international experience can be valuable for MNCs undertaking CBAs; however, it may have a negative impact at low levels. This negative impact may be alleviated with appropriate TMT composition in terms of nationalities. These findings have implications for executive development and selection in firms. MNCs would do well to ensure that their executives are very highly experienced internationally. While this can be achieved through hiring, this may also put a premium on executive development involving long-lasting and varied international experience opportunities and support that would enable individuals to achieve the benefits of learning from their experiences. In this context, there may be trade-offs involved. For example, long-lasting international experiences may come at the cost of their geographic scope, and vice versa. Thus, it is important to consider how the different types of experience and nationalities may be bundled within a TMT, and to do so in light of the firm's strategy.

Limitations and further research

We theorized about executives' learning from international experiences and the challenges involved. However, the archival nature of our data did not allow us to test directly how such learning happens. Thus, we relied on prior research, which established the connection between international experience and learning (e.g. Endicott, Bock and Narvaez, 2003; Fee, Gray and Lu, 2013). Future research may fruitfully use experimental, inductive and longitudinal methodologies to deepen our understanding of how learning from international experience happens and how executives' use of their experiential knowledge in strategic decisions affects organizational outcomes.

While our study focused on CBAs as a context in which TMT international experience matters for firm performance, in line with UET (Hambrick, 2007), executives' experiences in other areas and contexts may also be a source of suboptimal decisions and poor performance outcomes due to the process and challenges involved in experiential learning. To this end, prior research found U-shaped and negative firm performance effects of managerial experiences with foreign direct investments and franchising decisions, as well as in entrepreneurship (Hmieleski and Baron, 2009; Lai, Chen and Song, 2019; Musaji, Schulze and De Castro, 2020). We considered two key dimensions of executives' international experience, namely its length and geographic scope (Le and Kroll, 2017; Wei *et al*., 2020), and one aspect of TMT composition, namely nationality diversity (Nielsen and Nielsen, 2013). Other dimensions and types of experience, for example across sectors, functions and types of organizations, as well as other aspects of TMT members' backgrounds such as gender, ethnicity, culture and religious beliefs, may matter in how TMTs make strategic decisions that affect firm performance. Furthermore, there may be other moderators in place, including at the country level and across levels of analysis. While we designed our study to control for many

such factors, there are plenty of opportunities for future research along these lines.[6]

Our study focused on CBAs by firms from a single country, the UK. While such a research design has methodological advantages, it is also suitable for replication and comparison with other contexts to establish the extent to which our findings may be generalized. Moreover, we focused on the international experiences of the acquiring firms' TMTs. It is possible that the target firms' TMT experiences may also affect post-CBA performance. Finally, we could not investigate whether the host-country experience of TMT members mattered for post-CBA performance due to collinearity issues. This provides another opportunity for further research.

Conclusion

While prior research has long recognized the value of executives' international experience to MNCs, such experience teaches slowly. Our study shows that when TMTs deciding on CBAs have some but limited international experience, it may do more harm than good in terms of firm performance. Such negative effects may be somewhat alleviated by TMT nationality diversity. Hence, it is important to consider how to best compose TMTs, in terms of executives' international experience and nationality diversity, in light of their firm's internationalization decisions and performance.

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