

Internationalisation of the executive suite and firm performance: UK evidence

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ABSTRACT

Modern corporations are increasingly confronted with the complexities of international environment. Under such conditions real value systems, cognitive schema and personality features or knowledge on such possessed by foreign and domestic, however, internationally experienced top executives may facilitate the performance of the top management team duties. On the basis of this argued alignment, we ask a question whether such an organisational response to the firm's international exposure in terms of internationalising the top management team can be at the root of an enhanced corporate performance. We utilise the upper echelons theoretical framework and the resource- based view of the firm. Around 750 executives' profiles of one hundred largest UK corporations were studied. In this sample we trace the moderating effects of the firm's internationalisation strategy on the relationship between the TMT nationality and international experience diversity index and the corporate performance.

Key words: *degree of internationalisation, international experience diversity, nationality diversity , performance, resource- based view, top management team, upper echelons*

Introduction

Global competition entails learning ways to exploit and leverage new knowledge and as a result profitably arbitrage with knowledge asymmetries. Firms' global strategic postures involve the dynamic, chess-like global competitive moves and countermoves (Bartlett & Ghoshal, 1989; Prahalad & Doz, 1987). Moreover, internationalised firms are confronted with differentiated cultural, institutional and competitive environments (Ricks, Toyne, & Martinez, 1990), which requires the co-ordination of geographically dispersed resources (Gomez- Mejia & Palich, 1997; Kim & Mauborgne, 1993; Roth, 1995). On top of that, there exist competitive pressures for companies to further increase their competitive postures (Hamel & Prahalad, 1994; Zachary, 1996). Consequently, their survival and performance becomes a function of their ability to cope with the resultant complexity of the operating environment.

Against this backdrop, intangible resources in the form of values, cognitive schema and personality profiles that are associated with nationalities and international assignment experience of the senior management may serve as an inside conduit for knowledge and provide the greatest opportunities for leveraging the knowledge asymmetries to the firm advantage. On the other hand, multinational companies (MNC), as highly exposed internationally business entities offer such international executives the greatest discretion to positively impact on the firm's proceedings (Daily, Certo, & Dalton, 2000; Sanders & Carpenter, 1998). They are in particular well suited to leverage their understanding of foreign markets and competitors, co-ordinate market and subsidiary initiatives as well as engage in multi- market competitive contests (Carpenter, Sanders, & Gregersen, 2001). International assignment experience of executives has been also found to be likely to contribute to firm performance. This can be achieved through better management development, co-ordination and control of international operations, and information co-ordination and processing between parent firms and foreign affiliates as well as among affiliates (Black, Gregersen, & Mendenhall, 1992; Calof & Beamish, 1994; Sambharya, 1996).

In this article we pose the question as to what extent aligning the cognitive capacity of the top management team (TMT) with the firm's degree of internationalisation can be at the root of

quantifiable performance enhancements. The complementary lenses of the upper echelons theoretical framework (Finkelstein & Hambrick, 1996; Hambrick & Mason, 1984) and resource-based view of the firm (Barney, 1991; Wernerfelt, 1984) serve as the foundation for the development of the theoretical argument. The idea of examination of various internationalisation aspects on this collegial body at the apex of an organisation has been researched for some time now (e.g. Athanassiou & Nigh, 1999, 2000; Daily *et al.*, 2000). In this study we treat both dimensions of TMT internationalisation, nationality and international experience diversity, as an organisational response to a firm's foreign expansion. This potential alignment between the TMT and firm internationalisation is then juxtaposed with the companies' accounting and market-based performance indicators. Several studies pointed to such a research question that is aimed at explaining the performance effects of this match as a promising line of future inquiry (Athanassiou & Nigh, 1999, 2000; Heijltjes, Olie & Glunk, 2003; Sanders & Carpenter, 1998).

The first section contains the literature review on the TMTs, the nationality and international experience diversity, as well as the discussion on the performance implications of the TMT internationalisation process. The presentation of the research design and data analysis follows. The subsequent two sections contain the description of findings, their interpretation, and the indication of potential future research areas. Concluding remarks are included in the final section.

Theory development

Internationalisation of top management teams

An important contribution to the understanding of the managers' influence on organisations in the 1970s was due to Child (1972), who accentuated the crucial role of "strategic choice" in organisation processes. He invoked the concept of "dominant coalition", first coined by Cyert and March (1963), and argued that strategic choice is executed by any party that has power at a given time in a given organisation. The catalysts of the lift-off of the literature on senior management's impact on organisations were Kotter (1982) and the article by Hambrick and Mason (1984). The former posited how differences in managers' demeanour can be attributable to their varying personal and background characteristics. The latter proposed an academically rigorous research framework, termed the "upper

echelons” perspective, in which strategic choices are underpinned by cognitions and values of top executives, as a result of which an organisation becomes a reflection of its senior managers.

A great impact of Hambrick and Mason (1984) is attributable to its consistence as both the theoretical framework and methodology for analysing the upper echelons. In the next step of the theory development Finkelstein and Hambrick (1996) distinguish between two major classes of personal characteristics that constitute an executive orientation: psychological factors and observable experiences. The former have the advantage of construct clarity and drawback of measurement difficulty, the latter the benefit of relative measurement ease and the shortcoming of having implicit psychological features behind the observed characteristics. Therefore, they are used in concert in the model, and the propositions on links between experiences and psychological characteristics are made (they are also made for experiences and organisational strategy and performance). Accordingly, the executive experiences have particular psychological accompaniments that can be categorised into the following analytical groups: (1) values, (2) a cognitive model, (3) other personality factors (charisma, locus of control). National origin and international assignment experience are mentioned only as possible future research directions, being a part of observable background factors.

Carpenter, Sanders and Geletkanycz (2004) in their review of studies applying the original upper echelons framework with various extensions note that internationalisation aspects have made inroads into the original framework and represent its somewhat dominant enhancement. Nationality and international assignment experience diversity represent thus a justified element of the observable background characteristics in the study of executive profiles. Accordingly, analysing the underlying psychological accompaniments of both characteristics one can conceive that foreign nationals, depending on their cultural distance to the country, in which a MNC is head-quartered, can bring in different values, ways of cognition, and personality features to the TMT, whereas domestic, however, internationally experienced managers can contribute to the knowledge of such foreign values, cognition models, and typical personality profiles. In the latter case it is also conceivable that after a particularly long foreign assignment a given person assimilated certain foreign values, ways of cognition, and personality characteristics typical for the country of her stay. This would, however, also

depend on the age, at which that person commenced her foreign residence, as intuitively the older a person gets, the less prone she is to environmentally induced changes in beliefs, ways of thinking, *etc.* In sum, presence of the foreigner or the domestic member with international assignment experience on TMTs means either presence of the corresponding values, cognition models, and personality features, or the knowledge on such, respectively. The common denominator of both situations is that members with these two types of international expertise shall, according to the theory and intuition, facilitate the performance of duties of the TMT in the MNC, provided that this expertise deals with or is related to the markets, in which the MNC operates.

Sambharya (1996) demonstrated that foreign experience of the TMT exhibited a positive association with its firm's international exposure. For a sample of small Canadian companies, Reuber and Fischer (1997) showed that top managers' international experience was associated with their greater propensity to involve into international partnerships, as a result of which their firms reached foreign sales faster than companies run by internationally inexperienced executives. Tihanyi, Ellstrand, Daily and Dalton (2000) reported that TMT average tenure and its heterogeneity, education, and international experience were positively linked to a firm's global strategic posture (GSP), *i.e.* a multidimensional indicator of international involvement (contrary to the mean TMT age, which was negatively correlated with GSP). Similar results were reported for TMT education and international experience by Carpenter and Friedrichson (2001). Finally, Carpenter, Pollock and Leary (2003) demonstrated that the technology-based initial public offering firms pursued globalisation strategies, when the TMT and directors possessed international experience.

Ruigrok, Greve and Tacheva (2006) tackle the question of the relationship between TMT internationalisation and changes in the firm degree of internationalisation (DOI) in the European banking and insurance industry. They utilise the information-processing view of the firm and the liability of foreignness perspective of the firm foreign expansion. The underlying rationale of the research question can be sub-summed under the statement that the complexity accompanying the foreign expansion requires a corresponding degree of information- processing capacity at the apex of the organisation, *i.e.* at the TMT level (Sanders & Carpenter, 1998). The article contains a more

dynamic view of the firm adjustment process in terms of increasing nationality and international experience diversity at TMTs to a more expansive international strategy, penetrating into new geographical and cultural areas (and not simply increasing the international posture within the cultural and geographical block, in which the company had the operations already). The authors find corroborative evidence for all their hypotheses. The results therefore imply that TMT internationalisation is primarily associated with changes in the international posture of the firm in the sense of entering new foreign markets and previously unexplored cultural areas. The study represents a step forward on the way towards a more dynamic understanding of the internationalisation process of the firm and the role of TMTs in processing information and overcoming liability of foreignness. It underlines the supposition that demands on corporate headquarters are particularly high during foreign market entry and in the early development process of a foreign subsidiary, *i.e.* at the stage when the company is learning to deal with the liabilities of functioning in the international environment (Zaheer, 1995). One of the most notable implications that arise from this article for the managerial practice is that companies with broader geographical involvement are indeed more prone to extend the search for TMT members beyond the home-country borders. This also challenges the traditional belief that foreigners are not likely to reach the top tier of the organisational hierarchy due to a cultural glass ceiling (a metaphor proposed originally for the barriers preventing women from reaching top organisational levels, e.g. Morrison, White, & Van Velsor, 1992).

In the light of the theoretical predictions generated through the upper echelons framework and the presented academic evidence we derive two hypotheses on the association between the firm's degree of internationalisation and the nationality as well as international experience diversity.

H₁: The firm's degree of internationalisation will exhibit a positive association with the nationality diversity of the top management team.

H₂: The firm's degree of internationalisation will demonstrate a positive association with the international experience diversity of the top management team.

Performance implications

The resource-based view of the firm (RBV) is unique to and regarded as a paradigm for the field of strategic management (Peteraf, 1993). Rooted in the early works of Penrose (1959) and Andrews (1971), the approach is pre-occupied with the efficiency-based, intra-firm sources of competitive advantage (Foss, Knudsen & Montgomery, 1995; Peteraf, 1993). The theory makes, however, significant inroads into the domain of international business (Peng, 2001). Traditionally, a multinational corporation (MNC) is recognised to face a problem of liability of foreignness arising from the institutional distance between the home and host country and associated with non-trivial costs (Zaheer, 1995). The firm-specific advantage and its transfer to the overseas subsidiaries is prescribed by the eclectic framework (Dunning, 1977; Dunning, 2000), and the transaction cost economics theory in particular, as an appropriate response to this phenomenon (Buckley & Casson, 1976; Caves, 1996). The RBV goes a step further, however, and helps specify the nature of the firm-specific advantage as: (1) administrative heritage (e.g., Bartlett & Ghoshal, 1989), (2) organisational practices (e.g., Zaheer, 1995), and (3) bargaining power (Moon & Lado, 2000).

The RBV also serves as a common platform linking the product diversification and internationalisation strategy in terms of examination of resources that underlie both strategies. More specifically, managerial capabilities developed through experience with product diversification can facilitate more effective realisation of the international expansion strategy. Hitt, Hoskisson and Kim (1997) came up with fine-grained empirical findings of this proposition, stating that the breadth of internationalisation is negatively associated with performance in product non-diversified firms, positively related in highly product diversified companies, and related in a curvilinear manner in moderately diversified firms. As a more general observation describing one of the main features of this theoretical importation to the field of international management is that the RBV takes a dynamic account of the assets and activities that are at the root of all kinds of advantage (ownership, location and internalisation). It emphasises asset/ resources creation and augmentation in addition to their protection and exploitation only, across all processes behind each particular type of advantage.

Finally, most importantly for this study, the RBV can enrich the analysis of international human resource management. At the level of the parent firm, the top management team may represent one of the most valuable, unique and difficult to imitate resources. In fact, the positive association between the degree of the MNC's internationalisation and the level of international expertise among its top managers has been reported in academic research (e.g., Athanassiou & Nigh, 1999, 2000). The "international" attributes of senior management are interpreted as the firm-specific tacit knowledge, which, if not matched by executives of other MNCs, have been demonstrated to lead to higher firm performance (Carpenter *et al.*, 2001). Daily *et al.* (2000) also showed that international experience of the senior managers represents an attractive feature to other firms, which are interested in acquiring such tacit knowledge. At the subsidiary level there arise three major prescriptions. First, to enable the potential bottom-up transfer of the subsidiary capabilities, staffing these geographically dispersed units with entrepreneurial managers is recommended (Birkinshaw, Hood, & Jonsson, 1998). Second, for the same reason as well as the subsidiary capability development the subsidiary managers need to be provided with incentives that promote their desired behaviours (Gupta & Govindarajan, 2000). Third, the MNC's human resource management practices, such as compensation, ought to be aligned with the local culture (Schuler & Rogovsky, 1998). Finally, at the employee level, the positive association between valuing people as a source of competitive advantage and higher performance in relation to firms that do not place the same value on their employees has been found (e.g., Lee & Miller, 1999). The RBV appears therefore as the analytical platform connecting human resource management with firm-specific advantage, which is of high importance, given that Barney (1991), one of the two RBV seminal works, recognised socially complex relationships as some of the most difficult-to-imitate resources.

Carpenter *et al.* (2001) utilise a combined perspective of the resource- and capability-based view of the firm as a theoretical background to develop their argument on the chief executive officers (CEOs) creating value for their firms and themselves through their control of a valuable, rare and inimitable resource (international assignment experience). They argue that the value of human capital

is amplified, when it is bundled with other resources in a complementary fashion. Causal ambiguity, path dependencies, and social complexity make it then harder for competitors to duplicate such an advantage that stems from a bundle of valuable, firm-specific resources (Teece, Pisano, & Shuen, 1997). In that sense, the article represents a hint on refinement to the general Hambrick and Mason's (1984) upper echelons theory through generating the specific contingencies, under which executives' backgrounds can be translated into actual competitive advantage. The international assignment experience of the CEO of a U.S. multinational corporation is hypothesised to be positively associated with the corporation's performance. The relationships with moderators of the TMT international assignment experience and global strategic posture are also tested. The obtained results provide the corroborative evidence for the proposed associations, which highlights the tangible benefits of CEO international assignment experience for potential firms willing to improve their performance.

Sanders and Carpenter (1998) employ the complementary perspectives of information-processing and agency theory (Eisenhardt, 1989). The former accentuates that the ability to process and transfer information might be valuable, whereas the latter specifies particular governance mechanisms, by which such value may be best realised. Overall, both theoretical lenses serve as a basis for the examination of the relationship between internationalisation, complexity and governance. The authors find support for the majority of their hypotheses. Importantly for this study, they point to the examination of the performance implications of an alignment between corporate governance arrangements and internationalisation as one of the prospective research tracks.

Athanassiou and Nigh (2000) examine the impact of the MNC internationalisation on the behaviour of its TMT. Two kinds of behaviour related to the international business management represent an object of focus especially: (1) the time spent by the TMT member personally outside the home country in the various markets, in which the MNC does business, (2) face-to-face meetings to discuss international business issues. The resource-based view (RBV) and international business theory as well as the tacit knowledge perspective form the theoretical background of the study. The authors argue that the TMT, moulded by the MNC's idiosyncratic internationalisation over time, can be seen as a valuable, rare, inimitable and non-substitutable (VRIN) resource. An MNC's

organisational capability therefore takes on a role as an independent source of competitive advantage, as it is an important, intangible asset in its own right (Collis, 1991), whereby the TMT is such an inimitable resource at the core of the MNC's organisational capability. With regard to the latter line, the authors state that personal experience gained from the MNC's specific international markets, with the face-to-face communication and the personal presence that it entails, represent necessary conditions for building the tacit knowledge of the MNC's operations in different national markets abroad. The individual personal experience overseas is shared among the TMT members through face-to-face interactions to create a group level understanding. The findings obtained for the relationship between the firm's degree of internationalisation and two aspects of the TMT's international business behaviour (first-hand experience of the MNC's overseas activities through personal presence, face-to-face meetings to discuss international business issues of strategic importance) are in line with the relevant theory, which predicts that TMT members need to develop their own tacit knowledge stocks of the MNC's overseas markets through the aforementioned international business behaviour in order to arrive at common interpretations of explicit knowledge flowing from or concerning the firm's overseas markets. In consequence, this sharing of tacit and explicit knowledge shall result in elaborating strategic decisions concerning the firm's world-wide direction. The study's findings are also consistent with other established international business theoretical developments (normative integration of international company's managers, social capital theory). The MNC's evolving multinational network of activities can be therefore viewed as a structure, which precipitates the need for an increase in a TMT's international experience. Again importantly for this research effort, Athanassiou and Nigh (2000) indicate the impact of the alignment between the MNC's internationalisation and the TMT's international business-related behaviour on the company's performance as one of the prospective and promising research questions.

In the article published a year earlier, Athanassiou and Nigh (1999) broadly in the similar vein propose that TMT members form unique advice networks in order to share tacit knowledge about their MNC's international business activities and markets. They scrutinise the relationship between the density of the TMT's international business advice network and MNC's international strategy. The

theoretical argument enfold along the lines that the accrual of shared tacit knowledge shapes the TMT into the VRIN asset over time (resource-based view). The article's contribution is considered as fourfold: (1) establishment of how an MNC's international strategy impacts on the character of its TMT, (2) examination of the research area of the firm's international business activities, (3) a finding that the TMT stands for a key coordinating mechanism through its tacit knowledge sharing and IB advice network processes, (4) social network aspects introduced to the study of TMTs as a lens of viewing their management of tacit knowledge. The article also conveys a suggestion that future research can examine the links among MNC's internationalisation strategy (extent, mode, interdependence), TMT advice network characteristics, and MNC performance, which again represents an important justification for the research question adopted in this study.

Daily *et al.* (2000) examine the contemporary CEOs' international experience in their career backgrounds. Relationships under consideration are between CEO international experience, tenure, firm internationalisation, succession events and corporate financial performance. Knowledge and experience as intangible resources can be classified as VRIN resources easily and are thus at the root of the competitive advantage. Accordingly, CEOs can be seen as such resources (RBV perspective). The importance of international experience is believed to have increased substantially in recent years, in abreast with the increasing internationalisation of companies. The authors test 3 hypotheses with the firm performance as an *explanandum*, which were supported. The obtained results provide counter-veiling evidence to the traditionally emphasised view on the negative effects of being an expatriate manager. They also point to the fact that organisations increasingly consider international experience to be of fundamental importance in the selection of outside successor CEOs, as well as that international experience may be crucial to companies, for which such internationally seasoned CEOs may work in the future.

Dahlin, Weingart and Hinds (2005) make an interesting, experiment-based contribution to the nationality diversity literature. They put under scrutiny two aspects of diversity: education and nationality. They propose that the first mainly enhances information use (Williams & O' Reilly, 1998) and the latter invokes social categorization (Earley & Mosakowski, 2000), thus hindering information

use. Three dimensions of information use are distinguished: (1) range, (2) depth, and (3) integration. The importance of information processing for performance of a team on many tasks is significant, because effective decision-making regarding complex, multifaceted problems requires the consideration of multiple perspectives. A top management team grappling with strategic decisions with effects that cascade down through an organisation represents an exact case in point. Diversity in those teams allows them to tap a broader array of relevant information, thereby increasing comprehension of the consequences of each option that can be chosen (Hambrick, Cho, & Chen, 1996; Hambrick & Mason, 1984). The authors assumed a U-shaped curvilinear relationship between nationality diversity and all three considered dimensions of information use. The rationale for this set of hypotheses is that social categorization effects are most likely to occur in groups with moderate heterogeneity, in which distinct sub-groups (fault-lines) can form (Earley & Mosakowski, 2000; Gibson & Vermeulen, 2003). Surprisingly, apart from the range of information, the other two dimensions of information use have been found to form an inverted U-shaped relationship with nationality diversity, suggesting the benefits that the authors did not anticipate. Social categorization resulting from nationality diversity may interfere with teams' ability to access a broad set of information, but it does not impair its capability of exploring that information in great depth or using it in an integrated or coherent way. One of the suggested implications of the generated findings is that teams that need to make complex links between unique information categories (e.g., TMTs) may benefit, when nationality diversity is moderate to high (an overview of the discussed contributions is included in Table 1).

*****Table 1 about here*****

In sum, the RBV stipulates that the “international” attributes of senior management can be interpreted as the firm-specific tacit knowledge, which, if unmatched by executives of other MNCs, have been showed to lead to higher firm performance (Carpenter *et al.*, 2001; Daily *et al.*, 2000). Barney (1991), one of the two RBV seminal works, recognised socially complex relationships as some of the most difficult-to-imitate resources. Moreover, several of the reviewed studies contained an important indication that work on the performance implications of the alignment between the

internationalisation strategy and different aspects of TMT internationalisation (corporate governance arrangements, international business behaviour, advice network characteristics) represents a promising line of future inquiry. Based on this evidence, we derive the next two hypotheses. Carpenter (2002) argues that overlooking certain important moderating and intervening variables may have been at the root of the inconsistency in research grappling with the top management team demography-performance relationships. One of such critical omissions- with few exceptions (e.g., Hambrick *et al.*, 1996; Michel & Hambrick, 1992)- is the inclination towards de-contextualisation of top management teams, which means not accounting for the idiosyncratic nature of each firm's strategy and the social structure of the TMT. Accordingly, we argue that the biographic characteristics of top managers, such as nationality and international experience diversity are likely to impact on organisational performance, provided that the company strategic context is taken into account, *i.e.* a firm's internationalisation strategy, the degree to which a firm depends on foreign markets for revenues and owned-factors of production. We hypothesise therefore that the degree of internationalisation creates a setting for the positive association between the TMT nationality, international experience diversity and performance. We expect the firm's degree of internationalisation to be a moderator of the relationships between both TMT internationalisation variables and a firm's performance.

H₃: The higher the degree of firm foreign expansion, the greater will be the positive association between the nationality diversity among the members of the top management team and the company's performance.

H₄: The higher the degree of firm foreign expansion, the greater will be the positive association between the international experience diversity among the members of the top management team and the company's performance.

Method

Sample

The sample in this study has been based on the population of 100 biggest stock exchange listed companies in the United Kingdom, distinguished upon the criterion of market capitalisation as of the year- end 2005. The additional criteria for the inclusion into the sample were adopted to avoid cases that could obtrude the analysis of data: (1) a firm had to be a non-SME (small and medium enterprise) according to the European Union definition (a number of employees above 250, more than € 50 million turnover), (2) typical investment vehicles, which minimise the number of employees, were excluded. All collected data were valid for the year- end 2005. First, the secondary information sources were consulted extensively: the companies' websites, annual reports, the LexisNexis, the Thomson ONE Banker database, information generated through casual Internet searches. In case some data points were unavailable the pertinent firms were contacted by the means of e- mail, fax and telephone interview. The initial sample consisted of 100 companies, altogether about 750 executive profiles have been studied. Due to data unavailability and the size of the top management team below 3 members in case of four companies, the sample size in the analysis decreased to 91 firms for the nationality diversity variable and to 49 for the data series on the TMT international experience diversity.

Dependent variables

Tests of the first two hypotheses, assuming a positive relationship between the firm's degree of internationalisation and the TMT nationality and international experience diversity involve the multiple OLS regression with both biographic variables treated as an *explanandum*. The nationality diversity, in the vein of Hambrick, Davison, Snell and Snow (1998), is conceived as a continuum. It is measured with the use of the Blau's index (Blau, 1977), which allows for such a treatment of this variable: $(1 - \sum p_i^2)$, where p_i stands for the fraction of TMT members representing a single nationality. As a result, the more nations are present on this collegial body at the apex of an organisation, the closer to the unity is the index. On the opposite end of the continuum, in case when the TMT is nationally homogenous, the indicator totals zero. The Bunderson and Sutcliffe's (2002) index, introduced to account for the functional diversity of the team, shall be used to capture the

international assignment experience of the TMT: $(\sum (1 - \sum p_{ij}^2) / n)$, where p_{ij} stands for a percentage of years in the overall career length that a director “i” spent on the professional assignment in country “j”, and n the number of team members. Such a definition of this variable allows for accounting for both the duration of an individual’s business experience in a particular country and the geographic dispersion of countries, where this experience was gathered. The interpretation of this measure is similar to the Blau’s index. The more frequent assignment experiences and the more number of countries, in which they were gathered by the team members, the closer to one is the indicator, and thus the higher international experience diversity.

Tests of the other two hypotheses, which assume a positive association between the firm's performance (regressand) and TMT nationality as well as international experience diversity (explanatory variable) moderated by the degree of the firm international exposure, are conducted based on the multiple OLS regression analysis with an interaction term. We utilise both the accounting- and market-based measures of corporate performance, net income, which allows for capturing past results of the company, and the market-to-book- ratio that is geared more towards the future and incorporates the market valuation of the corporation. Net income is defined as the fiscal period income or loss reported by a company after subtracting expenses and losses from all revenues and gains, and expresses the accounting profitability of the company. The data on this indicator has been collected for the year-end 2006 in order to ensure that the time-lagged performance effects are captured. Market-to-book ratio, defined as the market valuation of a company (market capitalisation) divided by its book value (the equity portion of the balance sheet), reflects the ability of the firm to exceed the expected returns in the future in the perception of the market (e.g., Brigham, 1995). It has the advantage of being more resistant to manipulation, as it is often subject to forces beyond management’s control (Decktop, 1987; Hambrick & Finkelstein, 1995). Market-to-book ratio has been collected for the year-end 2005 since under the perfect market hypothesis the market shall instantly incorporate in its valuation the changes in the posture of the firm, such as internationalisation strategy and personal movements on the top management team.

Explanatory variables

The degree of internationalisation is operationalised as the global strategic posture (GSP), as presented in for example Carpenter *et al.* (2001), in which three elements are equally weighted to form an index measure: (1) foreign sales to total sales (FSTS), (2) foreign assets to total assets (FATA), and (3) geographic dispersion of operations (GEO). This measure corresponds with the Sullivan's (1994) conceptualisation of the internationalisation strategy indicator that encompasses the following dimensions: (1) financial, (2) structural, and (3) psychological (attitudinal). The first captures the financial aspects of a firm's foreign operations, its international presence based on the revenue. The second dimension reflects an organisation of international operations. We account for the last element, the psychic dispersion of international operations, with the use of the measure used in for example Sanders and Carpenter (1998), and originally attributable to Johansen and Vahlne (1977), defined as the ratio of the number of countries with subsidiaries of a given firm divided by the highest number of countries with subsidiaries of the most geographically widespread firm in the sample (N_x / N_y). Accordingly, the most dispersed company exhibits an internationalisation ratio of one (maximum), and the rest of firms are placed in the geographical distribution range between zero and one. The composite indicator named the degree of internationalisation (DOI) has been checked how well it measures a GSP as a single uni-dimensional latent construct with the Cronbach's alpha coefficient. It exceeds the adopted in the social science research acceptability threshold of 0.70 reaching the level of 0.7781. Both the degree of internationalisation and the nationality as well as international experience diversity indicators form a product term in the test of the moderation effects stipulated in the hypotheses 3 and 4.

Control variables

The first model testing hypotheses 1 and 2 encompasses a company size, industry effects and a TMT size as control variables. Larger companies are more likely to expand internationally, as they enjoy scale advantages, thanks to which they are able to overcome structural and financial difficulties inherent to investments abroad (Calof, 1994). The size control variable is defined as the natural logarithm of total sales. Similarly, in certain industries internationalisation can be achieved more

easily, for example in industrial equipment, pharmaceutical, and chemical industry, whereas in the others companies are less prone to develop substantial international activities, as for instance in construction or transportation industry (*cf.* Ruigrok, van der Linde, & Peck, 2001). The industry effects are accounted for with the use of the dummy variable. The six categories of mining and construction, manufacturing, transportation, communication, electric, gas and sanitary services, wholesale and retail trade, finance, insurance and real estate, and other services are distinguished on the basis of the four-digit SIC industry code. Finally, the larger is the TMT, the higher is the likelihood that foreigners and domestic managers with international experience will constitute a part of the TMT composition. We define the TMT size variable as the natural logarithm of the overall number of TMT members. The control variables considered in the first model are also put in the second one, with the exception of the TMT size, which is assumed not to explain corporate performance.

Analysis

Tests of both sets of hypotheses involve the computation of the multi-variate regression analysis (Gujarati, 2003). Hypotheses 3 and 4 state that the relationship between the nationality as well as international experience diversity and corporate performance is moderated by the firm's degree of internationalisation. In other words, we expect the performance effects of the nationality and international experience diversity to hold only when the company has established international operations. Foreign expansion as a moderator therefore specifies the conditions, under which the main effect is to take place (Baron & Kenny, 1986). Since the degree of internationalisation variable represents a ratio, we adopt the model with an interaction term between continuous predictors, where the regression of the criterion on one of the predictors varies as a function of the value of the other one (Aiken & West, 1991; *cf.* Aguinis, 2004).

$$Y = \beta_0 + \beta_1 * X_1 + \beta_2 * Z + \beta_3 * X_1 * Z + \beta_4 * X_2 + \sum_{i=1, j=5}^{n=5} \beta_j * D_i$$

Y stands for the corporate performance, X_1 for the TMT nationality and international experience diversity, Z for a degree of internationalisation, X_2 for the company size, and D_i (dummy variable) for the industry branches (control variables). The product term $X_1 * Z$ represents the interaction effect

between the degree of internationalisation and TMT nationality as well as international experience diversity. All the regressions have been checked for the correctness of the assumptions of the classical regression model (Gujarati, 2003) with the regression diagnostics functions of the statistical software package STATA.

Results

The majority of the examined UK companies are located in the middle range of the internationalisation ratio. The frequency distribution (Table 2) demonstrates that the 53 per cent of firms exhibit a degree of internationalisation at the level between 0.31 and 0.70 for the adopted GSP measure. On the other hand, a noticeable number of the UK corporations does not exceed the level of 0.10 of the degree of internationalisation (24 per cent). Such a distribution of the variable makes it reach a mean value of 0.3881 (Table 3), which taking into account the composite character of the indicator with a significant structural element should be described as relatively high. This is, however, typical for the British companies, which tend to set to green-field foreign investments relatively early (Ruigrok, Greve, & Owtcharov, 2006). The UK TMTs appear to have slightly less than proportionately responded to this extent of foreign expansion, as the vast majority of corporations scored within the limit of 0.50 of an index value of the indicators for nationality and international experience diversity, 80 and 100 per cent, respectively. On the other hand, 70 per cent of corporations exhibit a nationality diversity index of more than 0.10 and 69 per cent exceeds an international experience diversity index of 0.10 (Table 2). The resulting mean values are at the level of 0.31 and 0.19 (Table 3 and 4). On average, there were almost 2.5 nationalities represented on the UK TMT, which accounts for 24 per cent of the entire team. In the maximum case managers from seven different countries (82 per cent) collaborated at one executive committee. The average length of an international assignment experience of the top manager at the UK company as of year- end 2005 amounted to more than 11 years (at maximum it reached 43 years). Around 65 per cent of all studied executives spent some time abroad during their careers. These statistics demonstrate that the cultural glass ceiling effect (Morrison *et al.*, 1992) preventing foreigners from reaching the top tier of the organisational hierarchy did not hold to a great extent in the UK companies in 2005. Interestingly, the firms appear to have

preferred the mix of foreign members to the group of domestic but internationally experienced executives on their top management teams. This observation provides somewhat counter-veiling evidence to the argument that Ruigrok *et al.* (2006) develop, stating that the regularity of the TMT internationalisation is an incremental process, in which the companies first tend to introduce internationally seasoned, however domestic, senior managers, and only at a later stage of their foreign expansion resort to foreigners.

We find support for the hypotheses 1 and 2 (Table 5). The strength of the relationship-as pre-determined in the analysis of the descriptive statistics- is greater for the nationality diversity. Foreign expansion triggers an introduction of foreign nationals and internationally seasoned managers to the TMT as an organisational response. UK companies tend to reach for a blend of nationalities rather than a differentiated portfolio of international assignment experiences among their executives. The greater the TMT size, the higher is the nationality mix on the UK top teams. Finally, the level of the nationality diversity index is on average significantly higher in the other services industry than in the remaining industry branches except for the wholesale and retail trade.

We do not obtain corroborative evidence for hypothesis 3 for the net income measure of performance (Table 10). The coefficient of TMT nationality diversity is the only element of the puzzle that contrary to our expectations is not significant. The product term of the TMT nationality diversity and degree of internationalisation and an increase in the explained amount of variance in the model with an interaction effect as compared to the one without it are significant. Transformation of the simple slope for the nationality diversity mix on the TMT ($\beta_1 + \beta_3 Z$) indicates that if significant it would commence exerting positive impact on the profitability of companies as measured by net income at the level of the degree of internationalisation of 0.04 and above. Since the mean ratio of the UK firms' international exposure amounts to 0.39 (Table 6), its threshold value for the nationality diversity on the executive committee to matter for the corporate performance lies considerably below the level of internationalisation that the UK companies exhibit on average. In fact, almost 90 per cent of firms expanded abroad at the level beyond 0.04 of the internationalisation ratio as of year- end 2005 (Table 2). A year later they would experience measurable performance improvements in terms of net

income thanks to the introduction of foreigners to their TMTs. We note a negative sign of the significant coefficient accompanying the moderator. At the zero value of the TMT nationality diversity international expansion would negatively impact on corporate performance. We also obtain significant results for four industry branches, whereby companies in the mining and construction sector experience the best performance, followed by firms in the transportation, etc. services, and other services sector. Finance, insurance and real estate entities constitute the worst performers. When this regression is run for the market-to-book ratio, we generate supportive evidence for hypothesis 3 neither, because the model lacks significance (Table 10). However, the coefficient of TMT nationality diversity, the product term of the TMT nationality diversity and degree of internationalisation and an increase in the explained amount of variance in the model with an interaction effect are significant. This finding suggests that our direction of searching for the moderation effects on the relationship in question is also justified for the market-to-book performance variable. The market has capitalised on the alignment of the cognitive capacity of the top management team with the degree of foreign expansion and we run into insignificant results. However, suppose that the model was significant, the interpretation of the coefficients would be similar to the one presented for the net income measure of performance. Transformation of the simple slope ($\beta_1 + \beta_3 Z$) indicates that TMT nationality mix would commence exerting positive impact on the profitability of companies as measured by market-to-book ratio at the level of the degree of internationalisation of 0.47. Since the mean ratio of the UK firms' international exposure amounts to 0.46 (Table 8), its threshold value for the nationality diversity on the top management team to matter for the corporate performance would lie slightly above the level of internationalisation that the UK companies demonstrate on average. Around 50 per cent of firms expanded abroad at the level beyond 0.47 of the internationalisation ratio (Table 2). They would therefore experience measurable performance improvements in terms of market-to-book ratio thanks to the introduction of foreigners to their TMTs. The sign of the insignificant coefficient accompanying the moderator is negative. Therefore, at the zero value of the TMT nationality diversity international expansion would negatively impact on corporate performance. Contrary to the net income model, the industry effects produce insignificant results.

We generate corroborative evidence for hypothesis 4 for the net income measure of performance (Table 10). The coefficient of TMT international experience diversity, the product term of the TMT international experience diversity and degree of internationalisation and an increase in the explained amount of variance in the model with an interaction effect as compared to the one without it are significant. The introduction of the internationally seasoned domestic managers to this body at the apex of an organisation does seem to constitute a matching organisational response to the rising degree of internationalisation as measured by the corporate performance indicator. Transformation of the simple slope for the international experience mix on the TMT ($\beta_1 + \beta_3 Z$) indicates that it commences exerting positive impact on the profitability of companies as measured by net income at the level of the degree of internationalisation of 0.57 and above. Since the mean ratio of the UK firms' international exposure amounts to 0.42 (Table 6), its threshold value for the international experience diversity on the executive committee to matter for the corporate performance lies distinctly above the level of internationalisation that the UK companies exhibit on average. Around 30 per cent of firms expanded abroad at the level beyond 0.57 of the internationalisation ratio as of year- end 2005 (Table 2). They experienced measurable performance improvements in terms of net income thanks to the introduction of internationally seasoned managers to their TMTs at the end of 2006. For the purpose of illustrating the interaction effects, we plot the relationship between net income and TMT international experience diversity on Chart 1. We demonstrate the form of the equation for the three values of the moderator: one standard deviation below the mean (0.20), the mean (0.42) and one standard deviation above the mean (0.64). With regard to the first two levels of the degree of internationalisation that lie below an identified threshold of 0.57 for the international experience mix to positively impact on performance we observe a negative association between the two variables. However, as expected, the last value of the firm's international exposure indicator contributes to the positive simple slope and in consequence positive form of this association. We note a positive sign of the insignificant coefficient accompanying the moderator. At the zero value of the TMT international experience diversity international expansion would positively impact on corporate performance. Two industry branches also produce valid results. Finance, insurance and real estate entities perform significantly better than firms in the other services

sector. We do not find support for hypothesis 4, when the model encompasses the market-to-book measure of performance. Again, arguably the market has already capitalised on the information on the presence of internationally experienced managers on the top management team.

Discussion

The obtained results suggest that values, ways of cognition, and personality features brought to the top management team by foreigners and the knowledge on such possessed by internationally experienced managers facilitate the performance of duties of the TMT in the MNC, provided that this expertise deals with or is related to the markets, in which the MNC operates. Such human capital constitutes enhanced cognitive capacity, which represents an adequate organisational response to the complexities arising from operating internationally. Arguably, foreign and domestic, but internationally, experienced executives become a company's inside conduit for knowledge and help leverage the knowledge asymmetries to the firm advantage. They are able to generate benefits from their understanding of foreign markets and competitors, co-ordinate market and subsidiary projects as well as get involved in multi-market competitive contests (Carpenter *et al.*, 2001). They are also well positioned to potentially contribute to performance improvements through their actions, which materialise in better management development, co-ordination and control of international operations, and information co-ordination and processing between parent firm and foreign affiliates. In sum, our findings corroborate that the enhanced information-processing capacity at the apex of an organisation is associated with the degree of international exposure, and thus enables efficient coping with the liabilities of foreignness.

The nationality diversity mix was not found to constitute an intra-firm source of competitive advantage for the UK companies. The generated evidence is not corroborative that values, cognitive schema and personality features brought in to the TMTs by foreigners stand for valuable, rare, inimitable and non-substitutable resources in a firm operating in an international marketplace. As we point out in the subsequent paragraph, TMTs with international experience diversity among their members were better able to handle information-intensive tasks present on their agenda in the internationalised companies. This finding is somewhat counter-veiling to what we found out in the

analysis of descriptive statistics, where companies appeared to prefer the blend of nationalities rather than the mix of international assignment experiences among their executives. Overall, we can state that the introduction of foreigners to the TMT does not seem to constitute a matching organisational response to the rising degree of internationalisation as measured by corporate performance indicators.

International assignment experience diversity, in turn, was found to represent a valuable asset and a conceivable source of a firm's competitive advantage in the internationalised UK companies. Knowledge on or real value systems, group cognitions, and personality features *per se* that internationally seasoned managers contribute to the TMTs arguably embody valuable, rare, inimitable and non-substitutable resources. Accordingly, the "international" attributes of domestic managers represented the firm-specific tacit knowledge, which based on socially complex relationships constituted some of the most difficult-to-imitate resources (Barney, 1991) and lead to higher firm performance. The internationally experienced TMT members arguably engaged in international business related behaviour taking the form of face-to-face meetings and advice networks, which shaped the TMT idiosyncratic development into the VRIN asset over time. The internationalised TMT, as an important, intangible asset in its own right, stood at the core of the MNC's organisational capability behind the firm-specific competitive advantage (Athanassiou & Nigh, 1999, 2000). Finally, the lack of social categorization arising from the nationality diversity does not impede the access to a wider information set by the TMTs. The TMTs, as units that need to make complex links between unique information categories, can furthermore explore information in great depth or use it in an integrated or coherent way (Dahlin *et al.*, 2005). We did not obtain corroborative evidence of these findings for the market-based measure of performance. The market has therefore capitalised on the information that the TMT cognitive capacity of a given company was aligned with the degree of foreign exposure. Overall, we have found the moderating influence of the firm's degree of internationalisation on the relationship between the TMT international experience diversity and corporate performance. The benefits of having internationally seasoned TMT members can be therefore capitalised on, only when the company expanded abroad and on top of that reached a certain threshold of international operations.

This study represents an attempt at enriching the discussion on patterns of internationalisation of the corporations' top- tier bodies as an organisational response to the firms' increasing foreign exposure. In the vein of Carpenter (2002) as well as to address an endogeneity problem of the degree of internationalisation explaining both TMT nationality and international experience diversity as well as performance we adopted a research design, in which we track the moderating effects of the firm's international exposure for the relationship between both TMT internationalisation measures and corporate performance. We conduct this study for the time-lagged performance measure of net income, as arguably the effects of the aligned phenomena of TMT internationalisation with the firm's international exposure can be translated into enhanced performance after a certain time span only. The problem of the causality of the association between the phenomena of the firm's international exposure and foreigners as well as internationally experienced domestic managers entering the TMT (what comes first and causes the other phenomenon to react?) remains as in all upper echelons, as well as generally in social sciences, research an object of concern. Finally, future research can concentrate on tracking the moderation effects in the sample of companies from other countries, which can yield valuable insights from the comparative analysis additionally.

Conclusion

This study aims at contributing to the field of research of international management. On the basis of the rationale of the upper echelons theoretical framework, we elucidate why we expect an introduction of foreigners and the domestic, but internationally experienced, managers to the TMT to be an appropriate organisational response to the firm's internationalisation strategy. Through the lens of the resource- based view of the firm we look upon the phenomenon of the moderating influence of the firm's degree of internationalisation on the relationship between the firm's corporate performance and the TMT nationality and international assignment experience diversity. We obtain support for three out of altogether four hypotheses. We did not detect a moderating influence of the firm's international exposure on the association between the TMT nationality diversity and the firm's corporate performance. The moderating influence was, in turn, found for the mix of internationally seasoned directors. On top of that, we identified a threshold of international operations, upon

exceeding of which the benefits of having international TMT members as measured by corporate performance can be expected. Our findings indicate that a firm reacts to the environmental complexity and demands arising from functioning in an international market- space in terms of introducing foreigners as well as internationally experienced executives to the TMT. Moreover, we attempted at providing an empirics- based evidence on the potential quantifiable benefits of such an arguable alignment as measured by corporate performance. The corroborative evidence for the international experience mix represents a hint that under the conditions of the certain degree of internationalisation such benefits can be expected.

Table 1: Literature review of the contributions on the TMT internationalisation

TMT internationalisation		
Study	Relationship tested	Result
Athanassiou & Nigh (1999)	MNC international strategy and the density of the TMT's international business advice network	Positive
Athanassiou & Nigh (2000)	MNC internationalisation and the international business behaviour of TMT (the time spent by the TMT member personally outside the home country, face-to-face meetings)	Positive
Carpenter & Friedrickson (2001)	TMT education, international experience, tenure heterogeneity and a firm's international exposure	Positive
	TMT functional heterogeneity and a firm's internationalisation	Negative
Carpenter, Pollock & Leary (2003)	Technology-based initial public offering firms pursuing globalisation strategies and the TMT members and directors possessing international experience	Positive
Carpenter, Sanders & Gregersen (2001)	The international assignment experience of the CEO of a U.S. multinational corporation and the corporation's performance	Positive
Dahlin, Weingart & Hinds (2005)	Three dimensions of information use: (1) range, (2) depth, and (3) integration, and nationality diversity (U-Shape)	Range (U-Shape), depth and integration (inverted U-shape)
Daily, Certo & Dalton (2000)	CEO international experience, tenure, firm internationalisation, succession events and corporate financial performance	Positive
Reuber & Fischer (1997)	Top managers' international experience and their greater propensity to involve into international partnerships	Positive
Ruigrok, Greve & Tacheva (2006)	TMT internationalisation and changes in the firm degree of internationalisation (DOI) in the European banking and insurance industry	Positive
Sambharya (1996)	Foreign experience of the TMT and the firm's international exposure	Positive

Sanders & Carpenter (1998)	Internationalisation (DOI), complexity and governance (TMT compensation, the composition of the top management team, board structure)	Positive
Tihanyi, Ellstrand, Daily & Dalton (2000)	TMT average tenure and its heterogeneity, education, international experience and a firm's GSP.	Positive
	TMT average age and a firm's GSP	Negative

Table 2: Frequency distribution of the UK companies in terms of the degree of internationalisation, TMT nationality and international experience diversity

	Degree of intern.		TMT nat. diversity		TMT intern. exp. divers.	
	Freq.	% Cum. freq.	Freq.	% Cum. freq.	Freq.	% Cum. freq.
0.00- 0.10	24	24	27	30	15	31
0.11- 0.20	5	29	5	35	15	62
0.21- 0.30	8	37	10	46	10	82
0.31- 0.40	12	49	11	58	3	88
0.41- 0.50	12	61	20	80	6	100
0.51- 0.60	13	74	9	90	0	
0.61- 0.70	16	90	3	93	0	
0.71- 0.80	9	99	6	100	0	
0.81- 0.90	1	100	0		0	
0.91- 1.00	0		0		0	
Total:	100		91		49	

Table 3: Model 1 Descriptive statistics

	μ	S.D.	1	2	3	4
TMT nationality diversity	0.31	0.24	1.00			
Degree of internationalisation	0.39	0.25	0.68***	1.00		
Firm size	7.83	3.26	0.17†	0.09	1.00	
TMT size	1.87	0.39	0.40***	0.20*	0.19†	1.00

*** p< 0.001, ** p< 0.01, * p< 0.05, † p< 0.10

Table 4: Model 2 Descriptive statistics

	μ	S.D.	1	2	3	4
TMT intern. exp. diversity	0.19	0.14	1.00			
Degree of internationalisation	0.43	0.22	0.54***	1.00		
Firm size	9.09	1.78	0.15	0.26†	1.00	
TMT size	1.48	0.37	0.25†	0.27†	0.28*	1.00

*** p< 0.001, ** p< 0.01, * p< 0.05, † p< 0.10

Table 5: Models 1 and 2 Regression results

	TMT nationality diversity	TMT international experience diversity
Degree of internationalisation	0.63***	0.36**
Firm size ^(a)	0.01	-0.00

TMT size ^(a)	0.18***	0.03
Mining and construction	-0.04	-0.02
Manufacturing	-0.06	0.04
Transp., etc. services	-0.04	0.06
Wholesale and retail trade	0.00	0.05
Finance, insurance and real estate	-0.11	0.06
Other Services	-0.29**	-0.03
R ²	0.55	0.32
F- value	12.56***	2.33*

*** p< 0.001, ** p< 0.01, * p< 0.05, † p< 0.10, (a) natural logarithms of variables

Table 6: Model 3 Descriptive statistics

	μ	S.D.	1	2	3	4	5
Net income	0.07	1.26	1.00				
TMT nationality diversity	0.30	0.24	0.30**	1.00			
Degree of internationalisation	0.39	0.26	0.16	0.69***	1.00		
Firm size	8.93	1.21	0.59***	0.18	0.24*	1.00	
TMT nat. div.*DOI	0.16	0.16	0.31**	0.91***	0.81***	0.22†	1.00

*** p< 0.001, ** p< 0.01, * p< 0.05, † p< 0.10

Table 7: Model 4 Descriptive statistics

	μ	S.D.	1	2	3	4	5
Net income	0.20	1.47	1.00				
TMT int. exp. diversity	0.19	0.14	0.16	1.00			
Degree of internationalisation	0.42	0.22	0.15	0.55***	1.00		
Firm size	9.27	1.23	0.77***	0.19	0.10	1.00	
TMT int. exp.*DOI	0.10	0.10	0.26†	0.93***	0.74***	0.23	1.00

*** p< 0.001, ** p< 0.01, * p< 0.05, † p< 0.10

Table 8: Model 5 Descriptive statistics

	μ	S.D.	1	2	3	4	5
Market- to- book ratio	1.30	1.58	1.00				
TMT nationality diversity	0.31	0.24	-0.01	1.00			
Degree of internationalisation	0.37	0.26	0.07	0.51***	1.00		
Firm size	8.90	1.23	0.06	0.22*	0.24*	1.00	
TMT nat. div.*DOI	0.14	0.15	0.12	0.81***	0.74***	0.18†	1.00

*** p< 0.001, ** p< 0.01, * p< 0.05, † p< 0.10

Table 9: Model 6 Descriptive statistics

	μ	S.D.	1	2	3	4	5
Market- to- book ratio	1.56	0.74	1.00				
TMT int. exp. diversity	0.18	0.13	0.11	1.00			
Degree of internationalisation	0.43	0.22	-0.00	0.52***	1.00		
Firm size	9.29	1.22	0.08	0.20	0.12	1.00	
TMT int. exp.*DOI	0.10	0.10	0.09	0.93***	0.72***	0.25	1.000

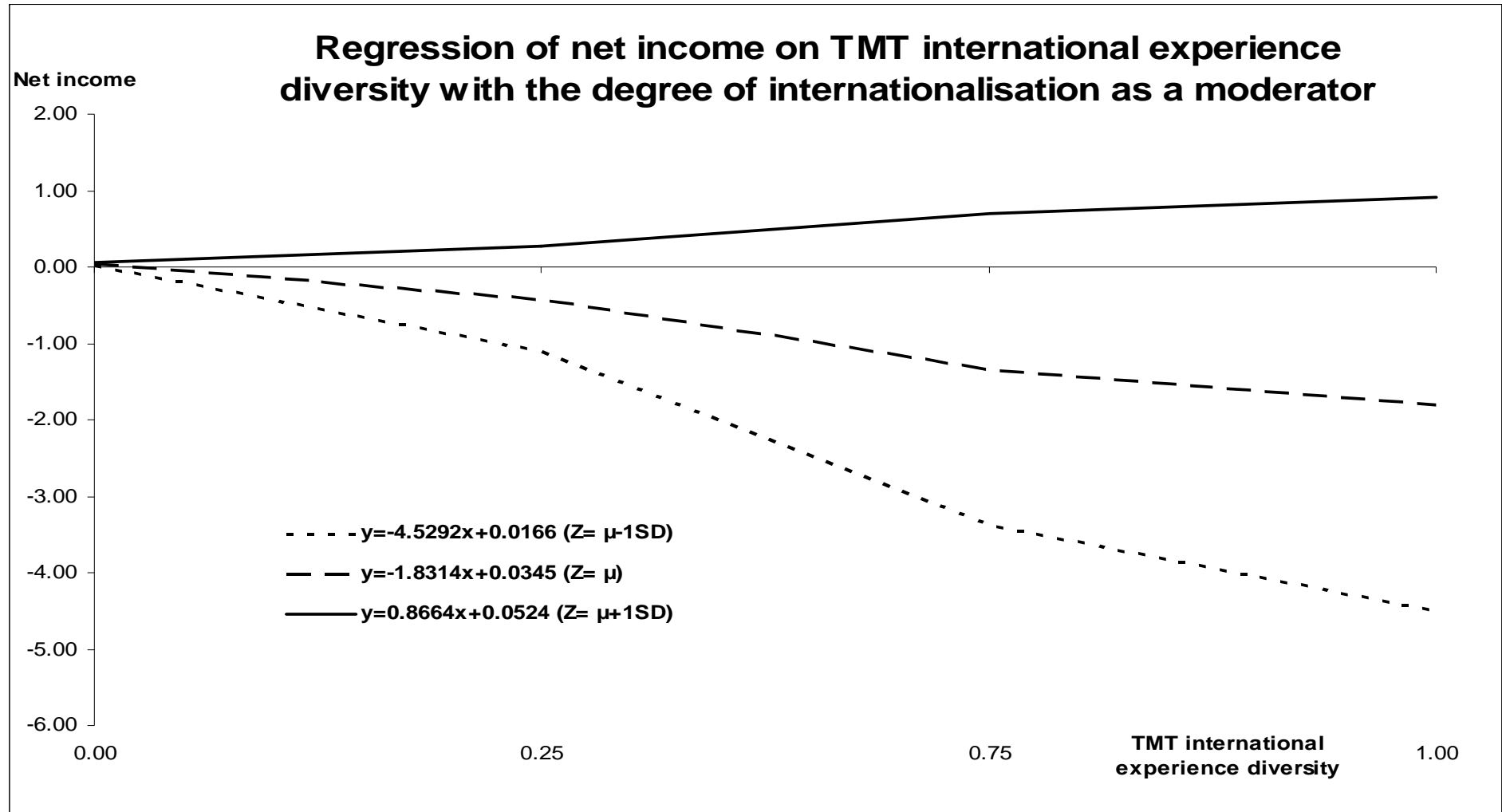
*** p< 0.001, ** p< 0.01, * p< 0.05, † p< 0.10

Table 10: Model 3, 4, 5, 6 Regression results

Variable	Net income ^(a)		Market- to- book ratio ^(a)		Net income ^(a)		Market- to book- ratio ^(a)	
	1	2	1	2	1	2	1	2
Degree of internationalisation	-0.48	-1.26†	0.45	-1.06	1.62	0.08	-0.77	-0.78
Firm size ^(a)	0.64***	0.63***	0.12	0.15	0.85***	0.78***	0.08	0.08
Mining and construction	1.07*	0.89†	0.35	-0.03	1.12	1.03	0.65	0.65
Manufacturing	0.39	0.35	-0.22	-0.15	0.28	0.09	0.02	0.02
Transportation, etc. services	0.35	0.44*	-0.59	-0.43	0.96	0.99	-0.14	-0.14
Wholesale and retail trade	-0.48	-0.51	-0.56	-0.68	-0.02	0.12	-0.18	-0.17
Finance, insurance and real estate	1.33***	-1.33***	-0.04	-0.12	1.36*	1.34*	-0.33	-0.33
Other Services	-6.38***	-6.08***	0.44	0.59	-8.85***	-7.37***	1.07	1.07
TMT nationality diversity	1.47**	-0.16	-0.53	-2.46†				
TMT nat. div.* DOI		3.69*		5.25†				
TMT international experience diversity					-0.39	-7.03*	0.82	0.78
TMT int. exp.* DOI						12.37*		0.07
R ²	0.64	0.66	0.03	0.08	0.70	0.74	0.06	0.06
F- value	14.85***	14.30***	0.35	0.73	10.09***	10.56***	0.27	0.24
ΔR ²		2.16*		4.30***		3.91*		0.00

*** p< 0.001, ** p< 0.01, * p< 0.05, † p< 0.10, (a) natural logarithms of variables

Chart 1



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