The current issue and full text archive of this journal is available at
www.emeraldinsight.com/1352-7592.htm

Top management team, international risk management factor and firm performance

William C. Auden
Touro University International, Danbury, Connecticut, USA, and
Joshua D. Shackman and Marina H. Onken
Touro University International, Cypress, California, USA

Abstract

Purpose – The paper seeks to address four key Top Management Team (TMT) demographic characteristics in their relationship with firm performance: age, functional background, educational field, and team tenure. The study extends research on the TMT by explicitly introducing team performance as a new context measured in the form of International Risk Management Factor, in addition to demographic characteristic effects. International Risk Management Factor is developed based on multiple international risks trading off theory. In order to calculate that factor International Risk Management Index is introduced.

Design/methodology/approach – In the paper a sample of 212 firms was used, including 4,009 executives; also four hypotheses were tested. The hypotheses were tested using multiple regression analysis.

Findings – The findings in this paper support the proposition that top management team is an appropriate unit of study, due to its impact on firm performance. The results indicate that there is a significant correlation between TMT demographic characteristics and firm performance. This study concluded that three of the proposed four TMT demographic characteristics, including age, functional background, and team tenure influence firm performance. Results validate the proposition that TMT demographic characteristics show a significant positive correlation with firm performance, particularly when the accounting measure is applied. In addition, Top Management Team performance was positively correlated to team tenure, suggesting that as team tenure progresses team performance improves.

Originality/value – The paper differs in many features from previous research. Some of the most important aspects include scope of the study, scale of the sample, complexity of the moderated variable, uniqueness of moderated variable operationalization, and innovation in calculating International Risk Management Factor. For the first time, the study focuses exclusively on Top Management Team performance. The concept, which captures complexity of all TMT characteristics, is not included in demographic characteristics of TMT.

Keywords Team performance, Team management, Senior management, Risk management, Business performance

Paper type Research paper

Past research about firm performance focused mostly on environmental or organizational explanations with little consideration about top management team demographics. However, empirical support of these studies has been inconclusive suggesting that other factors, including the management, may play a crucial role in the performance of the firm. Our study follows on Hambrick and Mason (1984) as well as Carpenter (2002) research in order to find out, which additional context

Team Performance Management
Vol. 12 No. 7/8, 2006
pp. 209-224

1352-7592
DOI 10.1108/13527590610711778

would be appropriate to include while determining relationships between top management teams demographics and firm performance.

The study differs in many features from previous research. Some of the most important aspects include scope of the study, scale of the sample, complexity of the moderated variable, uniqueness of moderated variable operationalization, and innovation in calculating International Risk Management Factor.

The scope of the study is unique as the target population for the study includes all companies listed under S&P500 and S&P400 MidCap categories. The sample is unique as it is larger than most of the existing Top Management Team studies. The sample of 212 companies was selected based on information that the company is engaged in international business activity.

For the first time, the study focuses exclusively on Top Management Team performance. The concept, which captures complexity of all TMT characteristics, is not included in demographic characteristics of TMT.

Firm's strategy including international strategy is widely recognized as a significant determinant of the complex tasks that any top management team have to manage (Finkelstein and Hambrick, 1996; Henderson and Fredrickson, 1996; Michel and Hambrick, 1992; Sanders and Carpenter, 1998). Firm's international strategy is also recognized as a proxy for TMT managerial complexity (Carpenter, 2002). Our study expanded that idea in the direction that in fact firm's international strategy is a proxy for TMT performance indicator. The idea of TMT performance is based on assumption that TMT is solely responsible for strategic decisions. On the other hand, recent studies focus on international strategy as a main condition associated with an explicit design to spread firms' overall business risk (Kim *et al.*, 1989). That way a firm can avoid business risk associated with one country economic environment but expose itself to international risk. This paradox of simultaneously diversifying firms' overall risk and increasing their specific international risk exposure can be solved by TMT performance to optimize international risk through proper management. Hence, international risk management seems to be crucial indicator of TMT performance.

Top Management Team as the one, which is responsible for a firm's strategy can also be judged by how well international risk is diversified. The better international risk is managed as expressed by risk diversification the better TMT performance. We can also argue that the team performance can be objectively evaluated by international risk management factor. It can be argued that TMT performance is also reflected in firm's financial performance as measured by accounting ratios. To answer that, we can say that as firm's performance is more likely to be associated with all employees' efforts to be successful in business; international risk management seems to be exclusively associated with TMT and its performance.

The introduction of moderating variable operationalization is also unique among prior research. The study used International Risk Management Factor in order to associate TMT demographic characteristics with the firm performance.

And finally, the study innovation includes development of International Risk Management Index. The IRM Index can range from 0.0 (no sign of International Risk Management activity, indicating low Top Management Team performance) to 2.0 (an

extremely effective International Risk Management activity, indicating high Top Management Team performance).

Our International Risk Management Index is not intended to measure risk associated with foreign business activities. Instead, it was design to measure the level of risk management. In other words, it measures top management team performance using foreign risk diversification as one of many possible operationalization of team performance.

Risk optimization depends on how much risk is diversified among foreign countries, revenues coming from those countries and investments in those countries. The more diversified situation the higher risk optimization level is achieved. Our IRM Index measures a level of risk management and not a level of risk exposure itself. The risk management doesn't tend to risk avoidance or risk maximization but rather to risk optimization. The level of risk management could be very low or very high despite the level of company's risk exposure. In fact, the risk management is not directly associated with company's risk exposure.

The fundamental objectives of any organization are to establish and maintain competitive advantage and ensure strong organizational performance (Eisenhardt *et al.*, 1998). The achievement of these goals is based on top management teams' ability to anticipate and respond to external change (Burgelman, 1991; Child, 1972). This factor is of particular importance in situations where the competition broadens, including within its boundaries foreign markets and foreign firms in domestic markets.

Strategic management scholars also predict that a strong international presence is an essential to the future survival and prosperity of large business organizations (Bartlett and Ghoshal, 1989; Porter, 1990; Prahalad and Hamel, 1994). International competition has become a reality in most industries. In order to participate in those changes, U.S. companies become international competitors.

Firms' performance increasingly depends on world trade and foreign investments. The number of subsidiaries established abroad and the number of countries in which firms operate, have expanded greatly (Doz, 1991). A new competitive landscape including, especially, internationalization of competition, confirms all previous predictions about that phenomenon (Bettis and Hitt, 1995; Hitt *et al.*, 1998).

Strategic management researchers have identified top management team (TMT) as having a significant impact on organizational performance (Eisenhardt *et al.*, 1998). The ultimate objectives of TMT's efforts are to create a competitive advantage and ensure strong organizational performance. As the top management takes important corporate decisions and sets strategic directions, it is recognized as a key component affecting a firm's performance.

The organizational demographic theory (Pfeffer, 1983) as well as the Hambrick and Mason (1984) upper echelon theory imply that measures of heterogeneous TMT demographic characteristics hold great promise for organizational research. The organizational demography theory serves as a useful tool in understanding corporate strategy (Michel and Hambrick, 1992), competitive behavior (Cho *et al.*, 1994), and organizational performance (Murray, 1989; Norburn and Birley, 1988; Schwenk, 1991).

This study will evaluate the relationship between Top Management Team (TMT) demographic characteristics and firm performance. Strategic management research has focused on the relationship between the TMT's demographic compositions and organizational performance during the few last decades. It is widely recognized that

TMT compositions affect organizational performance, but this is subject to organizations' specific contexts. Therefore, the study suggests that top management team demographic composition is likely to affect organizational performance through team performance in form of international risk management.

Although several researchers have demonstrated a link between TMT demographic characteristics and firms' performance (Carpenter, 2002; Goll *et al.*, 2001; Haleblian and Finkelstein, 1993), this study extends that link by suggesting and empirically testing the moderating role of International Risk Management Factor (IRMF). Therefore, the study suggests that top management team demographic characteristics are likely to affect organizational performance, and international risk management moderates this relationship.

The measure of company performance was based on an accounting (ROA) Return on Assets three-year average.

Conceptual background

Previous studies linked team structure to different environmental conditions, such as, uncertainty (Bantel, 1993), turbulence (Haleblian and Finkelstein, 1993; Keck and Tushman, 1993, Keck, 1997; Murray, 1989), munificence (Wiersema and Bantel, 1992), and high velocity (Eisenhardt, 1989; Eisenhardt and Schoonhoven, 1990; Smith *et al.*, 1994).

Recent studies focus more on international strategy as a main condition. International strategy is usually associated with an explicit design to spread firms' overall risk (Kim *et al.*, 1989). However, such strategy ultimately exposes firms to international risk. This paradox of simultaneously spreading firms' overall risk and increasing their specific international risk can be solved by TMT efforts to minimize international risk through proper management. In fact, Miller (1992) argues that multiple international risks can be managed by trading off one type of international risk against another, to keep a specific firm's international risk lower than it would be without such a trade-off.

The important international risk factors discussed in the literature are: foreign location (Dunning, 1998), type of commitment of that foreign location, as evidenced by the modes of entry chosen (Ghemawat, 1991; Root, 1987), and the proportion of revenue exposure a firm has in that location (Miller, 1992).

All firms engaged in international business must employ strategies to manage their risks. Experienced managers believe that they can apply their skills to influence the amount of risk to which their firms are exposed (March and Shapira, 1987). Furthermore, it has been argued (Shapira, 1995) that some risks can be influenced by managers' actions. We can conclude that at least some firms are able to manage the risk of their internationalization, by making simultaneous trade-offs among various types of international risk.

Therefore, as some researchers have (Shrader *et al.*, 2000) suggested, it is appropriate for future research to explore the relationships between Miller (1992) theory and firm performance, including different measures of firm performance and country-by-country investigation. This study examined the moderating role of International Risk Management as a single factor, which measures the combined distance among three specific types of international risks: foreign location risk, the mode of entry risk, and the proportion of revenue exposure risk.

The greater the combined distance between these three international risk types, the better the team performance. This concept reflects international risk management as a situation in which the entry to a higher risk country would be traded-off by relying on this country for a lower percentage of the firm's revenue. Alternatively, the firm can rely on this country for a higher percentage of its revenue, by choosing a less committed entry mode (less risky). In other words, greater the distance between specific international risks types, better the international risk management performed by TMT.

Hypotheses

The organizational demographic theory argues about the two basic sets of team demographics. One is job-related and the other is non-job-related. These two dimensions predict which demographic characteristics are associated with substantive conflict and affective conflict, respectively. The functional background, educational field, and team tenure of the individual manager that constitute the job-related field significantly shapes managerial opinions about their job, company, and the business environment.

Therefore, this study argues that heterogeneity of educational field, functional background, and team tenure results in substantive, job-related, and non-personal conflicts. This argument is consistent with the findings of previous studies.

For the purpose of this study, TMT age was adopted as the variable for modeling cohesion among team members.

This study focuses on four TMT demographic characteristics: TMT age homogeneity, TMT functional background heterogeneity, TMT educational field heterogeneity, and TMT team tenure heterogeneity.

These independent variables were selected because of their theoretical links to TMT abilities and skills necessary to understand the business environment and take the best possible decisions.

TMT age homogeneity

Non-job related demographics are readily perceived by group members, and incorporated into social perception (Fiske and Taylor, 1991). Pelled (1996) argued that demographics, such as, age, race, and gender are visible and silent. They are likely to contribute to personal differences among TMT members. This argument is grounded in the similarity-attraction paradigm (Byrne, 1971; Piper *et al.*, 1983; Shaw, 1981; Stokes, 1993). This stream of social-psychology research says that people are more attracted to others, who are similar to them and, by analogy, are more inclined to dislike those dissimilar to them.

Building on that argument, this study argues that non-job-related demographics often cause divisions among TMT members. Therefore, heterogeneity of non-job-related demographics is more likely to generate personal disagreement and, in turn, lead to affective conflicts. This research suggests that homogeneity of non-job-related variables results in greater group cohesion.

These arguments lead to the following hypothesis:

H1. There is a significant positive relationship between a TMT's Age Homogeneity as moderated by International Risk Management Factor, and firm performance.

TMT functional background heterogeneity

TMT functional background and educational field are believed to have an effect on TMT knowledge and skills. Managers with different functional background are likely to have different attitudes, knowledge, and perceptions (Dearborn and Simon, 1958; Hambrick and Mason, 1984; Waller *et al.*, 1995). Therefore, examining TMT functional background may help to determine how selective perception and particular abilities associated with interpreting a situation may affect strategic choice and, in turn, firm performance.

H2. There is a significant positive relationship between a TMT's Functional Background Heterogeneity as moderated by International Risk Management Factor, and firm performance.

TMT educational field heterogeneity

A TMT with diverse educational fields may signal a balance between short-term and a long-term orientation, facilitating strategic decisions. This is reflected in firm performance.

These arguments lead to the following hypothesis:

H3. There is a significant positive relationship between a TMT's Educational Field Heterogeneity as moderated by International Risk Management Factor, and firm performance.

TMT team tenure heterogeneity

Research on team tenure heterogeneity suggests that this heterogeneity may signal the diversity in a team's view of the firm and its business environment. Consequently, it can be considered as an indicator of firm performance. For example, Bantel and Jackson (1989) theorized that the attitude and value differences resulting from TMT tenure heterogeneity would add to top team's cognitive diversity and stimulate its discussions. Similarly, Wiersema and Bantel (1992) argued that this heterogeneity would result in a greater diversity of information sources and perspectives and, therefore, contribute to creative and innovative decision-making.

Consequently, these arguments lead to the following hypothesis:

H4. There is a significant positive relationship between a TMT's Team Tenure Heterogeneity as moderated by International Risk Management Factor, and firm performance.

Research settings and methods

Previous studies utilized regression analysis in evaluating the relationship between TMT composition and organizational outcome. This study also used the regression analysis to evaluate the relationship between TMT demographic composition and firm performance.

A sample consisting of both large and mid-size US firms was analyzed. Data was collected from secondary sources. Our sample was formed of 212 firms, which were taken from the S&P Industrials and S&P Mid-cap indices. This sample was chosen because detailed demographic data was available on their TMTs and there was substantial variance in the scale of their international strategies. In addition, large firms are considered the most complex in terms of their competitive

environments and internal operating requirements (Prahalad, 1990). These corporations must manage a variety of strategies (Hamel and Prahalad, 1994; Prahalad and Bettis, 1986).

The restriction for a firm to be included in our sample was that it had revenue generated from its international activities, which can be found in secondary data.

Data for this study was collected for the years 2001 through 2003. The analysis was conducted at the level of the firm. The factors used were the aggregated composition and diversity of the Top Management Teams.

The calculation of TMT Functional Background Heterogeneity was based on the Blau Index (Blau, 1977). The calculation of TMT Age Homogeneity and Team Tenure Heterogeneity was based on the coefficient of variation, which is calculated by dividing the standard deviation by the mean.

Moderating variable: international risk management factor

The study also examined the moderating role of International Risk Management as a single factor that measures the combined distance between three specific types of international risks: foreign location risk, International revenue exposure risk, and Mode of entry risk.

The study examined a moderating variable, International Risk Management Factor, which represents team performance as a context that is likely to influence the relationships tested. International Risk Management Factor was developed based on Miller's multiple international risks trading off theory. In order to calculate that factor International Risk Management Index was introduced.

The greater the combined distance between these three international risks types, the better. This concept reflects international risk management as a situation in which the entry to a higher risk country would be traded-off by relying on this country for a lower percentage of the firm's revenue. Alternatively, the firm can rely on this country for a higher percentage of its revenue, by choosing a less committed entry mode (less risky). In other words, greater the distance between specific international risk types, better the international risk management performed by TMT.

The entry mode was calculated using a firm's reliance on owned foreign assets, and was measured by foreign assets as a percentage of total assets.

Each of the three components of the IRM factor is a ratio variable, ranging from 0.0 to 1.0. To calculate a firm's IRM index, for a particular country, the distance between each pair of these variables was calculated in absolute numbers. The higher the number, better the IRM Factor. To calculate a firm's overall IRM index, an average of all countries' IRM indexes was calculated. Therefore, a firm can theoretically range from 0.0 (no sign of IRM) to 2.0 (an extremely high IRM).

In order to optimize risk exposure we should manage different types of risks by trading off one risk against the other. If one of them is high, we should lower the other and vice versa. That way we comparing the distance between any two types of risks and summarize those distances to calculate the overall risk management associated with that particular country. Let us consider the following example.

Each of the following risk categories can be measured from 0 to 1. Zero represents minimum risk exposure and 1 represents maximum risk exposure.

These risk categories are as follows: Country risk (CR), Revenue risk (RR), and Fixed assets risk (FR).

The IRM Index for a single country is calculated as follows:

$$\text{IRMI} = (\text{CR} - \text{RR}) + (\text{CR} - \text{FR}) + (\text{RR} - \text{FR})$$

In that case, we consider the situation in which the management decided to optimize risk exposure. Risk exposure parameters will be as follows:

$$\text{CR} = 0; \text{country risk very low, close to 0}$$

$$\text{RR} = 1; \text{revenue from that country very high, close to 1}$$

$$\text{FR} = 1; \text{fixed assets invested in that country very high, close to 1}$$

$$\text{IRMI} = (\text{CR} - \text{RR}) + (\text{CR} - \text{FR}) + (\text{RR} - \text{FR})$$

$$\text{IRMI} = (0 - 1) + (0 - 1) + (1 - 1)$$

$$\text{IRMI} = 1 + 1 + 0$$

$$\text{IRMI} = 2$$

All results are in absolute numbers as the order in which we compute distances is irrelevant to the result. In that case, IRM Index is equal 2. The team performance can be described as very high.

Control variables

Top management team size. Team size was controlled for and measured as a single item. Team size was calculated as the number of TMT members in each team included in the study.

Firm size. The size of the firm can have an impact on the firm's performance. Therefore, the relationships hypothesized in this study were calculated by including Firm Size as a control variable that was measured as the logarithm of total employees.

International work experience. International Work Experience has been shown to impact firm international strategy as well as firm performance (Carpenter, 2002). TMT International Work Experience was defined as the percentage of team members that had current or previous international responsibilities. Working from the manager's historical positions, we considered a manager to have had international experience if he or she had been in charge of an international department and/or had worked abroad (see Table I).

Results

The main objective of this study was to evaluate the relationship between demographic characteristics performance of the firm, among various Top Management Teams (TMT). It is hypothesized that a positive correlation exists between the Functional Background Heterogeneity, Educational Field Heterogeneity as well as Team Tenure Heterogeneity and firm performance. On the other hand, a positive correlation is expected to exist between Team Age Homogeneity and firm performance.

Table II shows the results of the regression analysis of Return on Assets and Age Homogeneity. The effect of TMT Age Homogeneity as moderated by IRM Factor on the firm's performance was significant ($B = 0.207, p < 0.1$), suggesting that the firm with a higher TMT Age Homogeneity level shows a higher performance as measured

Variable	Sample size (%)	Moderated models Mean (%)	Standard deviation (%)	Min. (%)	Max. (%)
Dependent variable					
Return on assets	212	11.59	8.29	−16.90%	70.18
Independent variables					
Age	212	0.877	0.039	0.658	0.977
Functional background	212	0.748	0.113	0.000	0.876
Educational field	212	0.478	0.148	0.000	0.720
Tenure	212	0.804	0.345	0.165	2.795
Control variables					
Firm size	212	9.973	1.397	6.586	15.763
Team size	212	11	5	3	43
Intern work experience	212	0.168	0.221	0.000	1.000
Moderating variable					
IRM	212	0.987	0.293	0.249	1.669

Table I.
Descriptive statistics

	Return on assets
Age	0.207*
	(0.124)
Age moderated	−0.017
	(0.022)
Firm size	−0.004
	(0.004)
Team size	0.000
	(0.001)
InternWorkExp	0.023
	(0.022)
(Constant)	−0.023
	(0.105)
Observations	212
Adjusted R^2	−0.009

Notes: *Significant at 10 percent; **Significant at 5 percent

Table II.
Test for *H1*

by Return on Assets. This was also expected in our hypotheses. Therefore, *H1* was supported.

Table III shows the results of the regression analysis of Return on Assets and Functional Background Heterogeneity. The effect of TMT Functional Background Heterogeneity as moderated by the IRM Factor on firm performance was significant ($B = 0.096, p < 0.1$). The result suggests that firms with a higher TMT Functional Background Heterogeneity level experience a higher performance as measured by Return on Assets. Therefore, *H2* was supported.

Table IV shows the results of the regression analysis of Return on Assets and Educational Field Heterogeneity in Moderated Model 2. They display no significant

	Return on assets
ºFunctional Background	0.096*
	(0.057)
FunctionalBackModerated	−0.019
	(0.027)
Firm size	−0.003
	(0.004)
Team size	0.000
	(0.001)
InternWorkExp	0.024
	(0.027)
(Constant)	0.081
	(0.053)
Observations	212
Adjusted R^2	−0.006

Table III.
Test for *H2*

Notes: * Significant at 10 percent; **Significant at 5 percent

	Return on assets
EduField	−0.003
	(0.048)
EduFieldMod	−0.017
	(0.038)
Firm size	−0.002
	(0.004)
Team size	0.000
	(0.001)
InternWorkExp	0.022
	(0.023)
(Constant)	0.143
	(0.049)
Observations	212
Adjusted R^2	−0.018

Table IV.
Test for *H3*

Notes: * Significant at 10 percent; **Significant at 5 percent

effect of the TMT Educational Field Heterogeneity on the Return on Assets ($B = -0.003, p = 0.958$). Thus, *H3* was not supported.

Table V shows the results of the regression analysis of Return on Assets and TMT Team Tenure Heterogeneity. They display a significant effect of the TMT Team Tenure Heterogeneity as moderated by IRM Factor on the Return on Assets ($B = 0.075, p < 0.05$). The results suggest that firms with a higher TMT Team Tenure heterogeneity levels have a higher performance as measured by Return on Assets. Therefore, *H4* was supported.

	Return on assets
TenureHetero	0.075**
	(0.034)
TenureHeteroMod	−0.046
	(0.021)
Firm size	−0.002
	(0.004)
Team size	0.000
	(0.001)
InternWorkExp	0.024
	(0.022)
(Constant)	0.113
	(0.043)
Observations	212
Adjusted R^2	0.001

Table V.
Test for *H4*

Discussion

TMT demographic characteristics directions

The key question addressed in this study was: If there is a relationship between the TMT demographic characteristics and the firm's performance, what would that direction be?

The results from this study suggest that the relative utility of the TMT homogeneity versus TMT heterogeneity is specific to the underlying demographic. While some prior research has shown that demographic heterogeneity makes the team open to change (Katz, 1982; Dutton and Duncan, 1987; Virany *et al.*, 1992; Glick *et al.*, 1993) it is possible that TMT age homogeneity is necessary for the firm's success. This study demonstrates that the impact of TMT demographic characteristics depends on the specific variable. Most of the existing literature does not explicitly recognize this fact. Instead, they discuss team homogeneity or heterogeneity as though the effects apply uniformly across all variables.

For *H1*, the results, as hypothesized, established the relationship between TMT age homogeneity and the firm's performance as both significant and positive.

The results of this study also reveal the positive relationship between TMT functional background and a firm's performance. The particular direction of that relationship was as predicted by our *H2*, which is to be heterogeneous. That is, firms that have more diversified teams with respect to functional background tend to show a better performance. Our findings are in line with a majority of previous studies. The main argument behind this proposition is that managers with a more diversified functional background are likely to have different attitudes, knowledge, and perception. Numerous studies have also found that the relationship between functional background and strategic choices is based on team heterogeneity (Chaganti and Sambharya, 1987; Song, 1982; Thomas *et al.*, 1991).

This research shows that the demographic characteristic of functional background plays a crucial role in the firm's performance and the desired direction is heterogeneity.

Finally, our study shows that the relationship between TMT tenure and a firm's performance was positive and significant when its direction was heterogeneity. It confirms that firms with more diversified teams, with respect to team tenure, tend to

perform better. The results of this study support previous findings, suggesting that the job-related TMT heterogeneity is a critical resource that can affect organizational outcome. The results were confirmed by Dutton and Duncan (1987), who state that TMT heterogeneity can act effectively, scanning the environment for new events and trends. Similarly, Nadler and Heilpern (1998) argue that TMT heterogeneity is helpful in predicting environmental changes.

We used educational field heterogeneity as a variable to represent the highest level of educational category on the TMT. The results revealed that it was not a good predictor of the firm's performance. In fact, it produced a negative coefficient, contrary to what we predicted. The explanation could be that the educational field variable as declared by executives was not well diversified with 57 per cent in business/economics category, 31 per cent in engineering/science, 11 per cent in law and only one per cent in liberal arts. Moreover, past research has demonstrated that educational field and functional background tend to be correlated (Bantel and Jackson, 1989; Wiersema and Bantel, 1992). However, our study shows that the correlation coefficient of these two variables was only 0.357.

TMT team performance

Additional question addressed in this study was: does the team performance, as measured by international risk management factor moderate the relationship between TMT demographic characteristics and the firm's performance?

While prior research has linked various TMT demographic characteristics with a firm's performance, this study extends that idea by examining how team performance, represented by international risk management factor, would influence that relationship.

We proposed that the international risk management factor would moderate the basic models. A positive interaction between TMT tenure heterogeneity and a firm's performance occurred only when a moderating variable was introduced to the basic model. This outcome is logical in a sense that a more diversified TMT may be willing to adapt to changes in the surrounding business environment. Thus, the teams that score better with respect to their international risk management factor show a better firm performance. In terms of TMT tenure heterogeneity, a diversified team could make wiser decisions on product offering, assets allocation, and the effective utilization of internationally allocated resources, which converts into better firm performance.

These results are consistent with previous research results. Wiersema and Bantel (1992) established a relationship between team tenure and the firm's performance. The upper echelons theory recommends a high team diversification and a high tenure heterogeneity, which would create a competitive advantage resulting in better firm performance.

Future research and summary

Although every effort was made to anticipate and control for possible complications in the initial stages of this study, it is not without its share of limitations.

The first limitation of this study is associated with the study sample. More specifically, the sample for this study consists of US firms only. Therefore, a natural extension of this study would be to test its predictions in another national context.

Another important limitation regarding operationalization of variables involves our choice of the moderating variable of team performance. International risk management factor, which represents team performance, is innovative but it is possible to exchange it for one that would serve the purpose better. Team performance is a central concept in our theoretical assumptions. It is important to mention that by using the moderating variable, we did not measure the team performance directly, but instead tried to capture those team characteristics that are beyond demographic representation.

The results of this study indicate that additional research including the specific context of the TMT characteristics is justified. Future research should attempt to develop a theoretical model, which can be tested to determine the effectiveness of team performance measures. The realization that team performance differs with demographic composition is an important first step to the development of such a theoretical model.

Implication for practice

The prime area of practice where the results of our study could be applied to is ratings. The firm's financial stakeholders typically comprise creditors, shareholders, and insurers. Assessment of risks to financial stakeholders normally involves financial analysis of earnings, cash flows, balance sheet and off balance sheet risk exposure. At the same time some authors argue that a more complete analysis should focus on another aspects of firm performance, including assessment of country influence, industry factors, competitive dynamics and firm management, with regard to their impact of the firm's operating and financial performance (Grunert *et al.*, 2002; Mahlemann, 2004). Among these various factors, it is argued that assessment of a firm's management is possibly the most meaningful.

Our study results provide additional empirical evidence to link management demographic composition to value creation and the firm's performance. In this regard, continued disclosure as well as future research will have to guide financial analysts to improve how they incorporate management demographic composition factor more rigorously in a firm's analysis.

Summary. The top management team seems to have a strong influence on the firm's performance. The results from this study indicate that three out of four demographic characteristics hypothesized to influence a firm's performance were significant predictors. Firms that have more homogeneous team regarding age and more heterogeneous teams regarding their functional background and team tenure tend to perform better. If the proxies accurately reflect the underlying process of decision making, it would seem that both job-related as well as non-job-related components influence a firm's performance.

References

Bantel, K.A. (1993), "Top team, environment, and performance effects on strategic planning formality", *Group Organization Studies*, Vol. 18, pp. 436-58.

Bantel, K. and Jackson, S. (1989), "Top management and innovations in banking: does the composition of the top team make a difference?", *Strategic Management Journal*, Vol. 10, pp. 107-24.

Bartlett, C. and Ghoshal, S. (1989), *Managing across Borders*, Harvard Business School Press, Boston, MA.

Bettis, R.A. and Hitt, M.A. (1995), "The new competitive landscape", *Strategic Management Journal*, Vol. 16, pp. 7-19.

Blau, P. (1977), *Inequality and Heterogeneity*, Free Press, New York, NY.

Burgelman, R. (1991), "Intraorganizational ecology of strategy making and organizational adaptation: theory and field research", *Organization Science*, Vol. 2, pp. 239-62.

Byrne, D. (1971), *The Attraction Paradigm*, Academic Press, New York, NY.

Carpenter, M.A. (2002), "The implications of global strategy and social context for the relationship between top management team heterogeneity and firm performance", *Strategic Management Journal*, Vol. 2, pp. 275-84.

Chaganti, R. and Sambharya, R. (1987), "Strategic orientation and characteristics of upper management", *Strategic Management Journal*, Vol. 8, pp. 393-401.

Child, J. (1972), "Organization structure, environment, and performance: the role of strategic choice", *Journal of Management Studies*, Vol. 11, pp. 13-27.

Cho, T., Hambrick, D. and Chen, M. (1994), "Effects of top management team characteristics on competitive behaviors of firms", *Academy of Management Journal*, Vol. 32, pp. 359-67.

Dearborn, D. and Simon, H. (1958), "Selective perception: a note on the departmental identification of executives", *Sociometry*, Vol. 21, pp. 140-4.

Doz, Y. (1991), "International industries: fragmentation versus globalization", in Vernon-Wortzel, H. and Wortzel, L.H. (Eds), *Global Strategic Management: The Essentials*, John Wiley, New York, NY.

Dunning, J.H. (1998), "Location and the multinational enterprise: a neglected factor?", *Journal of International Business Studies*, Vol. 29, pp. 461-91.

Dutton, J.E. and Duncan, R. (1987), "The creation of momentum for change through the process of strategic issue diagnosis", *Strategic Management Journal*, Vol. 8, pp. 279-96.

Eisenhardt, K.M. (1989), "Making fast strategic decisions in high-velocity environments", *Academy of Management Journal*, Vol. 32, pp. 543-76.

Eisenhardt, K.M. and Schoonhoven, C.B. (1990), "Organizational growth: linking founding team, strategy, environment, and growth among US semiconductor ventures, 1978-1988", *Administrative Science Quarterly*, Vol. 35, pp. 504-29.

Eisenhardt, K.M., Kahwajy, J. and Bourgeois, L. (1998), "Conflict and strategic choice: how top management teams disagree", in Hambrick, D., Nadler, D. and Tushman, M. (Eds), *Navigating Change: How CEOs, Top Teams, and Boards Steer Transformation*, Harvard Business School Press, Boston, MA.

Finkelstein, S. and Hambrick, D.C. (1996), *Strategic Leadership: Top Executives and Their Effects on Organizations*, West Publishing Company, New York, NY.

Fiske, S. and Taylor, S. (1991), *Social Cognition*, McGraw-Hill, New York, NY.

Ghemawat, P. (1991), *Commitment: The Dynamic of Strategy*, Free Press, New York, NY.

Glick, G., Miller, C. and Huber, G. (1993), "The impact of upper-echelon diversity on organizational performance", in Huber, G. and Glick, W. (Eds), *Organizational Change and Redesign: Ideas and Insights for Improving Performance*, Oxford University Press, New York, NY.

Goll, I., Rakesh, B.S. and Tucci, L.A. (2001), "Top management team composition, corporate ideology, and firm performance", *Management International Review*, Vol. 2, pp. 109-29.

Grunert, J., Norden, L. and Weber, M. (2002), "The role of non-financial factors in internal credit ratings", No. 5, working paper, Mannheim University, Mannheim.

Haleblian, J. and Finkelstein, S. (1993), "Top management team size, CEO dominance, and firm performance: the moderating role of environmental turbulence and discretion", *Academy of Management Journal*, Vol. 36, pp. 844-63.

Hambrick, D.C. and Mason, P.A. (1984), "Upper echelons: the organization as a reflection of its top managers", *Academy of Management Review*, Vol. 9, pp. 193-206.

Hamel, G. and Prahalad, C. (1994), *Competing for the Future*, Harvard Business School Press, Boston, MA.

Henderson, A. and Fredrickson, J. (1996), "Information processing demands as determinants of CEO compensation", *Academy of Management Journal*, Vol. 39, pp. 575-606.

Hitt, M.A., Keats, B.W. and DeMarie, S.M. (1998), "Navigating in the new competitive landscape: building strategic flexibility and competitive advantage in the twenty-first century", *Academy of Management Executive*, Vol. 12, pp. 22-42.

Katz, R. (1982), "The effects of group longevity on project communication and performance", *Administrative Science Quarterly*, Vol. 27, pp. 81-401.

Keck, S.L. (1997), "Top management team structure: differential effects by environmental context", *Organizational Science*, Vol. 8, pp. 143-56.

Keck, S.L. and Tushman, M. (1993), "Environmental and organizational context and executive team structure", *Academy of Management Journal*, Vol. 36, pp. 1314-44.

Kim, W., Hwang, P. and Burgers, W. (1989), "Global diversification strategy and corporate profit performance", *Strategic Management Journal*, Vol. 10, pp. 45-57.

Mahlemann, T. (2004), "Classification and ratings of firms in the presence of financial and non-financial information", working paper, University of Cologne, Cologne.

March, J.G. and Shapira, Z. (1987), "Managerial perspectives on risk and risk taking", *Management Science*, Vol. 33, pp. 1404-18.

Michel, J. and Hambrick, D. (1992), "Diversification posture and top management team characteristics", *Academy of Management Journal*, Vol. 35, pp. 9-37.

Miller, K.D. (1992), "A framework for integrated risk management in international business", *Journal of International Business Studies*, Vol. 23, pp. 311-31.

Murray, A. (1989), "Top management group heterogeneity and firm performance", *Strategic Management Journal*, Vol. 10, pp. 125-41.

Nadler, D.A. and Heilpern, J.D. (1998), "The CEO in the context of discontinuous change", in Hambrick, D., Nadler, D. and Tushman, M. (Eds), *Navigating Change: How CEOs, Top Teams, and Boards Steer Transformation*, Harvard Business School Press, Cambridge, MA.

Norburn, D. and Birley, S. (1988), "The top management team and corporate performance", *Strategic Management Journal*, Vol. 9, pp. 225-37.

Pelled, L.H. (1996), "Demographic diversity, conflict, and work group outcomes: an intervening process theory", *Organization Science*, Vol. 7, pp. 615-31.

Pfeffer, J. (1983), "Organizational demography", *Research in Organizational Behavior*, Vol. 5, pp. 299-357.

Piper, W., Marrache, M., LaCroix, R. and Jones, B. (1983), "Cohesion as a basic bond in groups", *Human Relations*, Vol. 36, pp. 93-108.

Porter, M. (1990), *The Competitive Advantage of Nations*, Free Press, New York, NY.

Prahalad, C. (1990), "Globalization – the intellectual and managerial challenges", *Human Resources Management*, Vol. 29, pp. 27-38.

Prahalad, C. and Bettis, R. (1986), "The dominant logic: a new linkage between diversity and performance", *Strategic Management Journal*, Vol. 7, pp. 485-501.

Prahalad, C. and Hamel, G. (1994), "Strategy as a field of study: why search for a new paradigm?", *Strategic Management Journal*, Vol. 15, pp. 5-16.

Root, F.R. (1987), *Entry strategy for International Markets*, Heath, Lexington, MA.

Sanders, W.G. and Carpenter, M.A. (1998), "Internationalization and firm governance", *Academy of Management Journal*, Vol. 41, pp. 158-78.

Schwenk, C. (1991), "Does diversity pay? Top tanagement team heterogeneity and firm performance", working paper, Indiana University, Bloomington, IN.

Shapira, Z. (1995), *Risk Taking: A Managerial Perspective*, Russell Sage Foundation, New York, NY.

Shaw, M. (1981), *Group Dynamics: The Psychology of Small Group Behavior*, McGraw-Hill, New York, NY.

Shrader, R.C., Oviatt, B.M. and McDougall, P.P. (2000), "How new ventures exploit trade-offs among international risk factors: lesson for the accelerated internationalization of the twenty-first century", *Academy of Management Journal*, Vol. 4, pp. 1227-47.

Smith, K.G., Smith, K.A., Olian, J.D., Sims, H.P. Jr, O'Bannon, D.P. and Scully, J.A. (1994), "Top management team demography and process", *Administrative Science Quarterly*, Vol. 39, pp. 412-38.

Song, J. (1982), "Diversification strategies and the experience of top executive of large firms", *Strategic Management Journal*, Vol. 3, pp. 377-80.

Stokes, J. (1993), "Components of group cohesion: intermember attraction, instrumental value, and risk taking", *Small Group Behavior*, Vol. 14, pp. 163-73.

Thomas, A., Litschert, R. and Ramaswamy, K. (1991), "The performance impact of strategy manager coalignment: an empirical examination", *Strategic Management Journal*, Vol. 12, pp. 509-23.

Virany, B., Tushman, M.L. and Romanelli, E. (1992), "Executive succession and organization outcomes in turbulent environments: an organization learning approach", *Organizational Science*, Vol. 3, pp. 72-91.

Waller, M., Huber, G. and Glick, W. (1995), "Functional background as a determinant of executives' selective perception", *The Academy of Management Journal*, Vol. 38, pp. 943-74.

Wiersema, M. and Bantel, K. (1992), "Top management team demography and corporate strategic change", *Academy of Management Journal*, Vol. 35, pp. 91-121.

Corresponding author
William C. Auden can be contacted at: William_auden@hotmail.com