*Related content and download information correct at time of download.
Board diversity and intellectual capital performance
The moderating role of the effectiveness of board meetings
Mahfoudh Abdul Karem Mahfoudh Al-Musali and Ku Nor Izah Ku Ismail
School of Accounting, University Utara Malaysia, Sintok, Malaysia

Abstract
Purpose – The purpose of this paper is to investigate if the effectiveness of board meetings moderates the relationship between board diversity (in terms of educational level and nationality) and intellectual capital (IC) performance.
Design/methodology/approach – The empirical data are drawn from banks’ annual reports over the three-year period of 2008 to 2010. Public’s value-added intellectual coefficient method is applied to measure IC performance. The frequency of board meetings is used as a proxy for board meeting effectiveness.
Findings – Based on the hierarchical regression analysis, our results do not support the hypothesis that the effect of board diversity on IC performance is positive as the effectiveness of board meetings increases.
Practical implications – Findings of this study indicate that there is a need for more effective meetings through providing appropriate and sufficient information to directors, particularly in strategic issues such as those related to IC that could make board members better prepared and more involved in meetings.
Originality/value – This study adds to the literature, as it is the first study that explores the variables that could affect the relationship between board diversity and IC performance in the context of banks.

Keywords VAIC, GCC banks, Board meetings, Intellectual capital performance, Board diversity

Paper type Research paper

1. Introduction
Issues of intellectual capital (IC) performance and corporate governance have increasingly attracted the attention of researchers, policy makers, regulatory bodies and investors both from developed and emerging countries. With the advent of knowledge-based economy, IC performance becomes crucially important for the growth and development of firms in general, and knowledge-based firms such as banks in particular, as the latter’s key resources are intangible and intellectual in nature (Ahuja and Ahuja, 2012; Kamath, 2007; Goh, 2005). It is argued that the IC of banks is more important than their physical capital in the process of wealth creation (Latif et al., 2012; El-Bannany, 2008; Kamath, 2007; Goh, 2005). This is because banks provide knowledge-based products or services (Shih et al., 2010) and it is the IC rather than physical capital that determines the quality of services and products provided to customers (Latif et al., 2012; Kamath, 2007; Goh, 2005). Hence, according to Ahuja and Ahuja (2012), banks with better IC performance would likely be more successful than...
others, and those with poorer IC performance would need to take steps to improve their performance if they want to succeed.

The GCC countries (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and Arab Emirates) have expressed their interest in expanding their knowledge-based sectors in line with their efforts to diversify their economy to reduce their high dependency on the oil and gas sector as the main source of revenues (Randeree, 2012). The enrichment of the mentality and intellectual capacity of a nation has become one of the areas targeted under the GCC countries’ plans for growth and development (Ku Ismail and Abdul Karem, 2011). According to Al-Muharrami and Matthews (2009), GCC countries share a large number of economic, cultural and political similarities, which by far outweigh any differences. The banking sector in most of the GCC countries is the second highest contributor to the countries’ GDP after the oil and gas sector and it remains the cornerstone of the non-oil GDP growth (Abu Loghod, 2010).

Research on IC performance of GCC banks documents that IC performance of GCC banks is relatively low (Al-Musalli and Ku Ismail, 2012a, 2012b, 2011; Abdul Salam et al., 2011; Ku Ismail and Abdul Karem, 2011). Thus, to be able to enhance IC performance, GCC bank managers as well as regulators need to determine the factors that may develop the IC or otherwise.

Corporate governance is considered an important determinant of IC performance. According to Safieddine et al. (2009) and Keenan and Aggestam (2001), corporate governance and IC are related. Keenan and Aggestam (2001, p.259) wrote: “Corporate governance is responsible for creating, developing, and leveraging the IC residing in the people, structures, and processes of the firm”.

A board of directors (being the most important internal mechanism of corporate governance) is viewed as an important tool to create, develop, leverage and manage the IC of a firm and thus, influences firm performance (Abidin et al., 2009; Ho and Williams, 2003; Williams, 2001). According to Williams (2001), boards of directors can structure relevant strategies and policies on how to obtain and best utilize the required resources underlying IC.

Theoretically, it has been argued that the management of IC will require greater innovation, perceptions and flexibility in the decision-making process (Williams, 2001), which are more likely to exist in a board with greater diversity (Talke et al., 2010; Wincent et al., 2010; Williams, 2001; Goodstein et al., 1994). The Upper echelon theory suggests that diversity among board members help them to be more innovative, develop more effective strategies and produce high-quality innovative decisions that will improve the quality of actions taken by a firm (Certo et al., 2006; Au and Menguc, 2005; Carter et al., 2003). From the perspective of corporate governance, resource dependency theory suggests that greater diversity among board members can lead to improved firm performance through facilitating the acquisition of critical resources for an organization, including IC (Goodstein et al., 1994).

However, despite its importance, little attention has been given by previous studies to the potential impact of board diversity on IC performance. The emphasis of previous studies was on the association between board size and board-independence-related attributes such as percentage of outside directors, CEO duality and board ownership and IC performance, producing inconclusive results (Abidin et al., 2009; Ho and Williams, 2003; Williams, 2000). According to Keenan and Aggestam (2001), knowledge and attitudes of board members, rather than the structure of the board, are more important in managing IC. Previous studies that examined the relationship between
board diversity and IC performance provided empirical evidence that greater diversity amongst members of the board of directors leads to improved firm IC performance (Swartz and Firer, 2005; Williams, 2001, 2000). However, these studies focused only on gender and ethnic diversity, but ignored other characteristics such as board educational level diversity and nationality diversity.

It is argued that board diversity in terms of education level and nationality would improve firm outcomes such as firm innovativeness (Talke et al., 2010; Wincent et al., 2010), reputation (Miller and Triana, 2009; Mizruchi, 1996) and better understanding of customer needs (Erhardt et al., 2003; Oxelheim and Randøy, 2003). These outcomes are related and have important implications on IC performance. However, scholars like Talke et al. (2010) and Certo et al. (2006) argue that board diversity does not affect firm performance as much; they further suggest that instead of investigating a simple direct relationship between board diversity and firm performance, variables that affect this relationship should be explored. Carpenter (2002) suggests that inconsistencies in diversity-performance relationships shown in prior studies may point to the possibility that important moderating or intervening variables have been overlooked. Several researchers have suggested that despite the merits of diversity among top managers, it is also accompanied by costs (Talke et al., 2010; Auh and Menguc, 2006; Certo et al., 2006). While the differences among board members may provide a board with a variety in resources, these differences may also have problematic consequences with regard to firm performance (Certo et al., 2006). Auh and Menguc (2005) stated that greater diversity has been shown to cause process deficiencies by plaguing effective operation of the 4Cs (i.e. communication, collaboration, coordination and cohesiveness). Unless the costs associated with a diverse board are attenuated, firm outcomes such as IC performance will suffer as a result.

One aspect of resource dependency theory linked with corporate governance and performance is the effectiveness of board meetings. This study proposes that the effectiveness of board meetings can play a pivotal role in lessening the disadvantages related to board diversity and would in fact lead to greater IC performance. We use the number of board meetings as a proxy for board effectiveness. This proposition is based on the idea that more frequent board meetings improve board effectiveness (Conger et al., 1998). According to Wincent et al. (2010), frequent board meetings translate more readily board knowledge, expertise and ties into improvements in firm outcomes. In addition, using frequency of board meetings as a measure of board meeting effectiveness is consistent with previous studies. It has been suggested that frequency of board meetings as a contingent condition for board diversity would in fact lead to greater firm outcomes (Wincent et al., 2010).

The effectiveness of meetings is not necessarily shown by the frequency of meetings. It is also shown by the behavior of the individual board members in the meetings, such as the preparation before meetings, attentiveness and participation during meetings and post-meeting follow-ups (Carcello et al., 2002). However, the only measure that is publicly available is the number of board meetings (Carcello et al., 2002). Therefore, this study proposes that the effectiveness of board meetings (measured by the frequency of board meetings) would moderate the board diversity-IC performance relationship.

Our findings make two contributions to board-IC performance literature:

(1) This paper considers whether the effectiveness of board meetings change the relationship between board diversity and IC performance.
The findings of the study have implications for GCC banks and regulatory authorities since high expectations are placed on corporate governance to improve GCC banks’ performance.

In addition, the results of this study would be of interest to regulators in other countries whose economic and cultural conditions are similar to that of the GCC countries.

The remainder of this paper is organized as follows. Section 2 reviews briefly the literature on IC, and Section 3 develops the hypotheses. Section 4 discusses the research methods, and Section 5 presents the results. Finally, Section 6 discusses the implications of the findings and concludes the paper.

2. Intellectual capital: definition, classification and measurement

Until now, there has been no uniform or generally accepted definition or classification of IC (Ahuja and Ahuja, 2012; Chu et al., 2011; Zeghal and Maaloul, 2010). For the purpose of this paper and consistent with previous studies such as Ho and Williams (2003), Abidin et al. (2009) and Goh (2005), we adopted the definition derived by the OECD (2000). The OECD (2000, p. 6) defines IC as “the economic value of two categories of intangible assets of a firm:

1. Human capital; and
2. Organizational (structural) capital”.

Human capital (HC) is defined as the knowledge, qualifications, experiences and skills of employees that they take with them when they leave a firm (Zeghal and Maaloul, 2010; Ross and Ross, 1997). Structural capital (SC) refers to the knowledge that remains with the firm after the employees leave. SC is the result of HC’s past performances (Abdul Salam et al., 2011). It includes production processes, organization management processes, organizational routines, procedures, systems, cultures and databases, information technology, customer relations and loyalty, supplier relation, firm brand and reputation and so on (Ting and Lean, 2009; Goh, 2005).

According to Swartz and Firer (2005), the various conceptual, epistemological and theoretical differences of the IC concept lead to the absence of a fully accepted measure of IC performance. According to Chan (2009), there are 34 methods identified in the literature for measuring, evaluating and accounting for IC. Among these methods, the Value-Added Intellectual Coefficient (VAIC) method has been suggested by many researchers as the most appropriate method to measure IC performance (Abdul Salam et al., 2011; Joshi et al., 2010). According to Kamath (2007), the VAIC method is designed to enable a firm to measure IC performance and it is considered appropriate for knowledge-inclined firms such as banks.

3. Hypotheses development

Corporate governance literature uses the concept of board diversity to refer to board composition and the varied combination of attributes, characteristics and expertise contributed by individual board members in relation to board process and decision-making (Van der Walt and Ingle, 2003). There is a growing recognition of the value brought about by diverse board members in terms of education level and nationality into the boardrooms in the GCC region, and one of the priority improvement
areas for boards in the region[1] is the recruitment of more foreign directors (GCC Board Directors Institute, 2011).

Studies have suggested that board diversity could influence IC performance by way of promoting greater innovation and flexibility in the decision-making process. In addition, board diversity would improve firms' understanding of customers' and employees' perceptions and needs, promote the willingness to change and adapt and strengthen the firm's relationship with internal and external stakeholder groups (Al-Musalli and Ku Ismail, 2012a, 2012b; Williams, 2000, 2001; Swartz and Firer, 2005).

Diversity of educational level among board members reflects their varying degrees of knowledge and skills, thereby influencing board capacity to generate more or less creative solutions to resolve complex problems and provide a broader scope of inputs that help to improve strategy formulation and evaluation (Ruigrok et al., 2006; Auh and Menguc, 2006; Bantel and Jackson, 1989). It is argued that boards with greater educational-level diversity are more likely to have greater information processing capabilities, flexibility and better ability to adopt new ideas and to accept innovations (Wincent et al., 2010; Talke et al., 2010). These characteristics could help directors in structuring relevant strategies and policies on how to obtain and best utilize the IC resources. Thus, educational-level diversity of board members could be advantageous for GCC banks seeking to improve IC performance.

The GCC countries are occupied by more than 200 nationalities (Al-Khoury, 2010). The region is one of the jurisdictions with the most diverse workforce in the world, in which foreigners constitute 60 to 90 per cent of its workforce (Al-Khoury, 2010). Thus, nationality diversity among board members (i.e. including foreign members) is expected to affect bank IC performance in ways similar to educational level diversity, particularly banks’ relationships with employees and customers that constitute the most important components of banks’ IC (Kamath, 2007). Williams (2001) claims that dissimilarities of board members’ cultural backgrounds can contribute to different sociological perceptions and a wider set of views that enables a board to be more sensitive to the requirements of the workforce. This, thus, enhances a board’s ability to instigate more comprehensive policies, strategies, activities and projects that create working conditions that are attractive to a broader spectrum of potential employees and exploit its existing human resources to its advantage.

Previous studies have further shown that board members from different nationalities help firms to understand its culturally diverse customer base (i.e. particular customer preferences and requirements) and to improve consumer policies that establish and sustain long-term relationships with customers (Randoy et al., 2006; Williams, 2001). As highlighted earlier, despite the benefits of having boards of directors with greater diversity, the costs of diversity are also noteworthy. It has been argued that diversity could lead to conflicts and negatively affect the effectiveness of communication in top management (Carpenter, 2002). According to Goodstein et al. (1994), board diversity may lead to potentially conflicting conceptions of strategic change and limit a board’s ability to take timely strategic actions. Consequently, excessive diversity can actually affect IC performance negatively by impeding and hampering creative decision-making related to IC. Therefore, the direct effect of board diversity on IC performance can be mixed and ambiguous because of the dual impact of the benefits and costs associated with board diversity. Based on resource dependency theory, this study posits that the effectiveness of board meetings could help in lessening the disadvantages related to
board diversity. Thus, the effect of board diversity in terms of educational-level diversity and nationality diversity on IC performance will be positive as the effectiveness of board meetings improves.

The frequency of board meetings is an important mechanism to ensure that issues are discussed in sufficient depths, and board members get more opportunities to confer and to set strategies (Vafeas, 1999; Zahra and Pearce, 1989). Simon et al. (1999) found that debates and discussions among top management team members increase the tendency of diversity to enhance firm performance, arguing that through debates and in-depth discussions, team members are likely to draw on their diversity by rethinking their points of view and consider factors they had not been previously considered. Simon et al. (1999) further contended that debates among team members can help overcome board diversity-related problems such as poor communication and coordination. This, in particular, may improve the effects of board diversity on a board’s ability to provide better advice and counsel on strategic issues to management and effectively participate in formulating IC-related strategies and policies that help a firm to retain, develop and best utilize resources underlying IC which will ultimately increase IC performance.

Wincent et al. (2010) argue that frequent board meetings may improve innovative performance of firms in that it increases the likelihood of consensus among directors and helps to handle uncertainties. IC performance, consequently, could be improved since innovation increases a firm’s stake of intangibles and facilitates IC development (Marques et al., 2006). According to Rabi et al. (2010), frequent board meetings helps board members to evaluate R&D projects more thoroughly and enables them to monitor and supervise the progress of any R&D projects and take necessary actions for projects that are not progressing successfully. This will ultimately help to improve IC performance. Accordingly, we propose the following contingency hypothesis that summarizes our central argument:

\[ H1. \text{ Board diversity (i.e. educational-level diversity and nationality diversity) and the effectiveness of board meetings will influence IC performance through their interaction effect. Diverse boards with more effective board meetings will have a higher level of IC performance compared to diverse boards with less effective board meetings.} \]

4. Methods
Our sample frame comprises of all listed banks in the GCC countries during the period 2008-2010. Due to the inaccessibility of some of the annual reports and incomplete data in some, the final sample consists of 128 bank-years, distributed as in Table I. All Kuwaiti-listed banks are excluded from the sample due to missing relevant information. Out of the 128 observations, 43 are from 2008, 44 from 2009 and 41 from 2010.

<table>
<thead>
<tr>
<th>Country</th>
<th>Conventional banks</th>
<th>Islamic bank</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bahrain</td>
<td>23</td>
<td>13</td>
<td>36</td>
</tr>
<tr>
<td>Oman</td>
<td>17</td>
<td>0</td>
<td>17</td>
</tr>
<tr>
<td>Qatar</td>
<td>9</td>
<td>6</td>
<td>15</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>20</td>
<td>5</td>
<td>25</td>
</tr>
<tr>
<td>UAE</td>
<td>23</td>
<td>12</td>
<td>35</td>
</tr>
<tr>
<td>Total</td>
<td>92</td>
<td>36</td>
<td>128</td>
</tr>
</tbody>
</table>

Table I. Number and types of GCC banks
We apply VAIC method developed by Pulic (1998) in measuring IC performance. It is a widely used method (Abdul Salam et al., 2011; Joshi et al., 2010) and is suggested by many researchers as the most appropriate method to measure IC performance (Abdul Salam et al., 2011; Joshi et al., 2010; Ting and Lean, 2009; Chan, 2009; Kamath, 2007; Goh, 2005). One of the advantages of the VAIC method is that it has a history of deployment and application in IC performance research (Komnenic and Pokrajcic, 2012). Algebraically, VAIC is expressed as follows:

\[
VAIC = CEE + HCE + SCE
\]  
(1)

Where:

- CEE is an indicator of Value-Added efficiency of capital employed (CEE = VA/CE); CE = (book value of total assets) − (intangible assets) = (financial assets) + (physical assets);
- HCE is an indicator of value-added efficiency of HC (HCE = VA/HC); HC = total salaries and wages; and
- SCE is an indicator of Value-Added efficiency of SC (SCE = SC/VA), SC = VA − HC = (value added) − (total salaries & wages). IC efficiency (ICE) is the sum of human capital efficiency (HCE) and structural capital efficiency (SCE). Total VA is calculated by using information contained in the annual report as follows:

\[
VA = OP + EC + D + A
\]  
(2)

Where, OP = Operating Profits; EC = Total Employee Expenses; and D = Depreciation; and A = Amortization.

We use Blau’s index to measure board diversity (in terms of educational level and nationality). Blau’s index is described as an ideal measure to capture diversity and variations within a group of people because it meets the four criteria for a good measure of diversity: it varies from zero (representing no diversity) to theoretical maximum of one. Larger numbers indicate greater diversity. The index is bounded and assumes that there are no negative values (Miller and Triana, 2009). Educational-level diversity is measured using Blau’s index by calculating the following mathematical equation:

Educational level diversity \( 1 - \sum(P_i)^2 \), where, \( p = \) the percentage of board members in each educational category and \( i \) = the number of different educational categories represented on the board. Consistent with previous studies, the maximum educational level of each board member is identified within four categories:

1. Without a bachelor’s degree;
2. Bachelor’s degree;
3. Master’s degree; and
4. Doctoral degree (Talke et al., 2010 and Kim and Lim, 2010).

Similarly, nationality diversity is calculated as \( 1 - \sum(P_i)^2 \), where, \( p = \) the percentage of board members in each nationality category, \( i \) = the number of different nationality categories represented on the board. This study identifies two categories to capture nationality diversity: locals and foreigners. This measurement is similar to the study by
Darmadi (2011) and Ruigrok et al. (2006). The effectiveness of board meetings is measured as the number of board meetings per year (Wincent et al., 2010; Vafeas, 1999).

This study employs several control variables. Al-Musalli and Ku Ismail (2012b) found that board size and representation of independent directors have an important impact on IC performance of GCC banks. Therefore, this study controlled for the effect of board size, measured as the total number of directors serving on a board, and representation of independent directors measured as the number of independent directors on a board (Abeysekera, 2010). Following previous studies, we also control for other determinants of IC performance, that is, bank size and financial performance, measured by the natural log of total assets and return on equity, respectively. We further set a dummy variable to control for the global financial crisis, whose value is 1 for the years 2008 and 2009, and 0 otherwise.

We employ hierarchical regression analysis to test the moderating effect of the effectiveness of board meetings on the relationship between board diversity and IC performance. Following Baron and Kenny (1986), we enter control variables in the first hierarchical step. We enter the independent variables in the second step to examine the relative direct contribution of board demographic diversity. The moderator variable is entered in the third step, and the interaction terms are entered in the final regression model.

5. Results

The correlation matrix and descriptive statistics are presented in Table II. An examination of the correlation matrix suggests that multicollinearity is not a problem in the regression procedure since the correlation coefficients between independent variables are less than 0.7 (Hair et al., 2006), and none of the variance inflation factors approach the threshold value of 10 (Kline, 2005). However, when the interaction terms for testing the moderating effects are entered in the regression model, there is a multicollinearity problem. Thus, to reduce multicollinearity, all variables used to construct the interaction terms are standardized (Aguinis and Gottfredson, 2010).

Table III shows the results of the four-step hierarchical analysis. In the first step, the $R^2$ indicates that 51.3 per cent of the level of IC performance can be explained by the control variables. By adding the independent variables in Step 2, $R^2$ increased to 0.52. However, this increase in $R^2$ ($\Delta R^2 = 0.008$) is statistically insignificant ($p > 0.10$). This implies that board diversity in terms of educational level and nationality does not

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Educational level diversity</td>
<td>0.47</td>
<td>0.15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Nationality diversity</td>
<td>0.22</td>
<td>0.19</td>
<td>0.234**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Board size</td>
<td>9.16</td>
<td>1.91</td>
<td>0.245**</td>
<td>0.114</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Number of independent directors</td>
<td>4.78</td>
<td>2.09</td>
<td>0.129</td>
<td>0.105</td>
<td>0.269**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Financial performance</td>
<td>0.11</td>
<td>0.13</td>
<td>-0.005</td>
<td>-0.220**</td>
<td>0.092</td>
<td>0.008</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Bank size</td>
<td>9.86</td>
<td>0.59</td>
<td>-0.046</td>
<td>-0.091</td>
<td>0.413**</td>
<td>0.118</td>
<td>0.317**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Global financial crisis</td>
<td>0.051</td>
<td>0.017</td>
<td>0.041</td>
<td>0.048</td>
<td>0.114</td>
<td>-0.041</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. IC performance</td>
<td>4.20</td>
<td>2.7</td>
<td>-0.149*</td>
<td>-0.223*</td>
<td>-0.080</td>
<td>-0.196*</td>
<td>0.672**</td>
<td>0.247**</td>
<td>0.042</td>
</tr>
</tbody>
</table>

Notes: $n = 128; \; *p < 0.05; \; **p < 0.01$
### Table III. Results of Hierarchical Regression Analysis

<table>
<thead>
<tr>
<th>Variables</th>
<th>Step 1</th>
<th>Step 2</th>
<th>Step 3</th>
<th>Step 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Board size</td>
<td>$-0.194^{**} (-1.932)$</td>
<td>$-0.154^{*} (-1.475)$</td>
<td>$-0.155^{*} (-1.496)$</td>
<td>$-0.159^{*} (-1.542)$</td>
</tr>
<tr>
<td>Representation of independent directors</td>
<td>$-0.229^{***} (-2.728)$</td>
<td>$-0.219^{***} (-2.587)$</td>
<td>$-0.232^{***} (-2.753)$</td>
<td>$-0.261^{***} (-3.058)$</td>
</tr>
<tr>
<td>Bank size</td>
<td>0.535* (1.600)</td>
<td>0.455* (1.340)</td>
<td>0.419 (1.241)</td>
<td>0.427 (1.270)</td>
</tr>
<tr>
<td>Global financial crisis</td>
<td>$-0.176 (-0.480)$</td>
<td>$-0.156 (-0.427)$</td>
<td>$-0.151 (-0.416)$</td>
<td>$-0.089 (-0.246)$</td>
</tr>
<tr>
<td>Educational level diversity</td>
<td>$-0.257 (-1.277)$</td>
<td>$-0.229 (-1.142)$</td>
<td>$-0.249 (-1.244)$</td>
<td>$-0.093 (-0.511)$</td>
</tr>
<tr>
<td>Nationality diversity</td>
<td>$-0.050 (-0.274)$</td>
<td>0.040 (0.220)</td>
<td>0.283^{**} (1.690)</td>
<td>0.209 (1.228)</td>
</tr>
<tr>
<td>Effectiveness of board meetings</td>
<td>0.011 (0.046)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Educational level diversity *effectiveness of board meetings</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nationality diversity *effectiveness of board meetings</td>
<td></td>
<td></td>
<td></td>
<td>$-0.381^{**} (-1.934)$</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.513</td>
<td>0.520</td>
<td>0.531</td>
<td>0.546</td>
</tr>
<tr>
<td>Adjusted $R^2$</td>
<td>0.493</td>
<td>0.492</td>
<td>0.500</td>
<td>0.507</td>
</tr>
<tr>
<td>$R^2$ change</td>
<td>0.513</td>
<td>0.008</td>
<td>0.011</td>
<td>0.015</td>
</tr>
<tr>
<td>Significant $F$ change</td>
<td>0.000</td>
<td>0.383</td>
<td>0.094</td>
<td>0.156</td>
</tr>
<tr>
<td>Durbin Watson</td>
<td></td>
<td></td>
<td></td>
<td>1.718</td>
</tr>
</tbody>
</table>

**Notes:** $n = 128$ for all models; unstandardized coefficients are reported; the figures in parentheses are $t$ values; *$p < 0.10$; **$p < 0.05$; ***$p < 0.01$
contribute in explaining the variation in IC performance. This result is consistent with those of Al-Musalli and Ku Ismail (2012a).

The inclusion of the moderator variable (board meeting effectiveness) in Step 3 results in a statistically significant increase in $R^2$ ($p < 0.05$, one tail). This result indicates that there is a major effect of the moderator variable on the dependent variable (quasi moderator). When the interaction terms are entered into the regression equation (Step 4 of Table II), there is a significant increase in model fit for regression equations that predict IC performance ($\Delta R^2 = 0.015; p < 0.10$, one tail).

Upon the inspection of the beta coefficient for interaction terms, we found that only one interaction out of the two interactions produced a significant relationship. The interaction between board nationality diversity and the effectiveness of board meetings produced a significant result. However, the effect on IC performance is negative, which is in contradiction with the hypothesized relationship ($\beta = -0.385, p < 0.05$, one tail). This finding is graphically presented in Figure 1. The interaction between board educational-level diversity and the effectiveness of board meetings has an insignificant effect on IC performance ($\beta = 0.010, p > 0.10$). Overall, our findings suggest that our hypothesis is not supported. We next discuss our findings and their implications in detail.

A graph on the relationship between the IC performance and board nationality diversity with board meeting effectiveness in Figure 1 shows the same direction for banks that practice either more or less effective board meetings. Both lines indicate a negative relationship between board nationality diversity and the IC performance, with less effective board meetings being much steeper than more effective board meetings.
The increase in board nationality diversity leads to less IC performance when there is a practice of frequent board meetings.

6. Study implications
The findings of this study show that board demographic diversity (i.e. educational level and nationality) is not related to IC performance of banks. Thus, the study fails to support the resource dependency theory and upper echelon theory in terms of the association between educational-level diversity, nationality diversity and IC performance of banks. However, the findings seem to support the theoretical assumption by scholars like Talke et al. (2010) and Certo et al. (2006) that board demographic diversity exhibits no main effect on firm performance. They suggest that instead of investigating a simple direct relationship between board demographic diversity and firm performance, variables that affect this relationship should be explored.

A possible reason for the insignificant relationship between board educational level diversity and bank IC performance is that GCC directors are working in an environment characterized by high information asymmetry problem (Chahine, 2007). GCC board members state that they do not receive sufficient and appropriate information about corporate strategy and industry trends as well as organizational information. Consequently, they do not actively participate in board meetings (BDI, 2011). As a result, GCC boards could not benefit from the opportunity of having a diverse level of academic qualifications, which provide diverse skills of research and analysis. This situation might provide a possible explanation for the insignificant moderating effect of the effectiveness of board meetings on the relationship between educational-level diversity and IC performance. According to the GCC Board of Directors Institute survey, 82 per cent of the GCC board members state that they do not receive the appropriate information to prepare ahead for meetings (GCC Board Directors Institute, 2011). GCC board members state that they do not receive sufficient and appropriate information about corporate strategy and industry trends as well as organizational information, and consequently they do not actively participate in board meetings (GCC Board Directors Institute, 2011). Arguably, as a result of not receiving sufficient and appropriate strategic information, GCC banks’ board members who lack the necessary skills and adequate understanding of the banking environment (OECD, 2009) are less likely to actively participate in meetings and less involved in strategic decisions such as those related to IC development.

With respect to board nationality diversity, although information asymmetry problem affects both foreign and local directors, there are differences in the level of information asymmetry between these two types of directors (Zaheer, 1995). Foreign directors have larger asymmetries of information about firm activities than domestic directors because as foreigners they are not as well embedded in the networks of information in the host country (Zaheer, 1995). In addition, local directors are better connected and communicated with the managers (Chahine and Tohme, 2009). Hence, due to their poor amount of firm-specific information, foreign directors in GCC banks may not be able to make significant contributions related to IC development. However, contrary to the expectations, the findings show a statistically significant negative interaction of both board nationality diversity and the frequency of board meetings for bank IC performance. A possible explanation for this unexpected finding is that under this condition, perhaps when boards with many directors from foreign nationality meet regularly, they tend to change strategic plans and overly complicate things. Thus, frequent meetings with many foreign directors may create stress,
conflict and uncertainty among highly nationality diverse boards which is counterproductive and impedes the generalization of good IC-related decisions and strategies. A negative IC performance is the result.

The insignificant effect of educational-level diversity on IC performance suggests that merely a diverse level of academic qualifications, which provide diverse skills of research and analysis, does not add value to IC performance, but there is a need for identifying the importance of bank-relevant skill sets that are appropriate for GCC banks. Similarly, nationality diversity is not significantly related to IC performance. Consequently, this raises concerns of the benefits of recruiting more foreign nationals on the boards of GCC banks (as recommended by GCC corporate governance institutions), suggesting that this procedure is not a quick way to enhance IC performance. A policy implication from this finding is that more research is needed to understand whether foreign members experience difficulties in promoting better corporate governance and adding value to IC performance of GCC banks.

With respect to the effectiveness of board meetings, findings of this study indicate that there is a need for more effective meetings through providing appropriate and sufficient information to directors particularly in strategic issues such as those related to IC. By doing so, board members would be better prepared and more involved in meetings. In addition, findings of this study may lend support to the recommendation issued recently by GCC Board Directors Institute (2011) that GCC boards need to allocate more time to discuss strategic issues.

The findings of this study warrant further investigation on the nature of the role played by independent directors of GCC banks in developing IC performance. As a high number of independent directors is found to be associated with low IC performance, the GCC policy makers and regulators must analyze whether the recommendations for GCC banks to have a board of directors dominated by independent directors is appropriate. The regulators should bear in mind that GCC banks are operating in small stock markets and it may not be easy for them to have qualified independent directors due to their lack of expertise, skills and knowledge in understanding the banking environment (OECD, 2009). In addition, due to the high information asymmetry in the GCC banking sector, it is less likely that banks would benefit from having a large number of independent directors. Furthermore, the dominant role of the controlling shareholders in nominating and selecting independent directors may prevent banks from appointing “truly” independent directors.

Finally, the insignificant effect of global financial crisis on IC performance of GCC banks may be attributed to the macro intervention policies taken by GCC governments which help to mitigate the adverse impact of the current global financial crisis. According to Khamis and Senhadji (2010), despite the sharp decline in oil revenues, GCC governments maintained or even increased their spending levels to offset the fallout from the crisis. The intervention policies taken by the GCC governments may create an atmosphere that creates confidence among GCC banks and helps them continue to implement their activities normally.

Note
1. Although in the popular press, diversity is almost always synonymous with gender and ethnic diversity (Knight et al., 1999), and this study ignores these two demographic characteristics. This is because GCC countries do not include ethnic groups and there is a weak presence of women on the boards ranging from 0.1 per cent in Saudi Arabia to 2.7 per cent in Kuwait (The National Investor, 2008).
References


Corresponding author
Mahfoudh Abdul Kareem Mahfoudh Al-Musali can be contacted at: abdulkareem@uum.edu.my

For instructions on how to order reprints of this article, please visit our website: www.emeraldgrouppublishing.com/licensing/reprints.htm
Or contact us for further details: permissions@emeraldinsight.com