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Intellectual Capital Performance and Board Characteristics of GCC Banks

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Abstract

This paper examines the relationship between board of directors' characteristics (educational level diversity, nationality diversity, board interlocking, board size and number of independent directors) and intellectual capital performance in a sample of 147 banks in Gulf Cooperation council (GCC) countries for the period 2008-2010. The results show that IC performance of GCC listed banks is low. In contrast to our expectation, the number of independent directors has a significant negative relationship with IC performance of GCC listed banks. All other variables are not associated with IC performance.

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1. INTRODUCTION

With the advent of knowledge-based economy, intellectual capital (IC) rather than physical capital becomes the main factor in driving firm value and sustaining its competitive advantage. This is especially true for knowledge intensive industries such as the banking industry (Shih et al., 2010). Board of directors is viewed as an important tool to create, develop, leverage, and manage IC of a firm through structuring and formation of relevant strategies and policies. However, studies on the relationship between IC performance and board characteristics (such as size and composition) is limited and provides mixed evidence (Abidin et al., 2009;

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Ho and Williams, 2003). Focusing on upper echelon theory and resource dependency theory, this study examines if board diversity (in terms of educational level and nationality) and board interlocking influence IC performance of GCC listed banks. Traditionally, measures of firm financial performance have been based on accounting and/or market values, in which they merely focus on physical capital in measuring firm performance. Thus, findings of this study expand the current understanding of the association between board diversity, board interlocking and firm performance defined within a new context, that is, IC. This study concentrates only on the banking industry, which is normally excluded by previous studies. The reason for selecting GCC banks is because the socio-economic structure among the GCC countries is quite similar, which enables us to control the effect of their macro and cultural factors, leading to a more meaningful interpretation.

The structure of this study is as follows. The next section reviews the relevant literature and hypotheses development. The third section presents the research method used. The fourth section discusses the findings of this study. The fifth section concludes the paper.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1 Board diversity and IC performance

The upper echelon theory argues that organizational outcomes such as firm performance, strategic orientation, innovation and creativity, and diversification are influenced by top management diversity such as educational level, gender, and nationality (see e.g. Miller and Triane, 2009). The theory suggests that demographic diversity among board members provides a wider range of perspectives, and solutions that enhance the effectiveness and efficiency of board's strategic decision-making. This will help them produce high quality innovative decisions that improve the quality of actions taken by a firm (see Wincent et al., 2010; Talke et al., 2010). Hence, diversity in demographic attributes while affecting organizational outcomes should also affect a firm's IC performance (Williams, 2000; Williams, 2001; Swartz and Firer, 2005). Resource dependency theorists argue that these advantages of diversity could help board bring or secure critical resources to a firm including IC (Abeysekera, 2010) which in turn lead to enhanced IC performance.

Prior research has shown that educational level and nationality are positively associated with firm's innovativeness and firm's strategic choice in areas such as innovation, R&D, technology, and customer orientation (Miller and Triane, 2009; Talke et al., 2010) which in turn could improve firm's IC performance. Nationality diversity among board members is viewed as an important mechanism to help a firm understand its culturally diverse employees and customers' base. This will enhance the board's ability to instigate more comprehensive policies and strategies that improve its relationship with employees and customers. (Randoy et al., 2006; Williams, 2001). Firm reputation as one component of IC (Swartz and Firer, 2005) is found to be enhanced when board of directors is nationally diverse (Miller and Triane, 2009). Hence, based on the above discussion we hypothesize the following:

Hypothesis 1. There is a positive relationship between board educational level diversity and bank IC performance.

Hypothesis 2. There is a positive relationship between board nationality diversity and bank IC performance.

2.2 Board interlocking and IC performance

Board interlocking refers to the case in which directors sit on more than one board. From a resource dependency perspective, board interlocking is one mechanism in which a firm can access resources (ideas, information, capital) from external environment (e.g. Hillman et al., 2000; Johnson et al., 1996). Shropshire (2010) stated that interlocking directors represent a communication channel to transfer knowledge and know-how. This in turn facilitates IC development (Nahapiet and Ghoshal, 1998). According to Nahapiet and

Ghoshal (1998), the combination of knowledge and experience of different parties create and facilitate the development of IC. The positive association between board interlocking and innovation, firm reputation and legitimacy, and firm relationships with its important customers and suppliers could be observed, for example in the works of Wincet et al. (2010), Sarkar and Sarkar (2009), and Hillman et al. (2000). This in turn enhances IC performance. Hence, in line with the resource dependency theory, we hypothesize the following:

Hypothesis 3. There is a positive relationship between board interlocking and bank IC performance.

2.3 Board size and IC performance

According to resource dependency theory, larger boards are more likely to include increased pool of expertise who will enhance boards' information processing capabilities. Board members will mitigate individual directors' deficiencies in business skills through collective decision making which in turn improves the quality of firm strategic decisions and actions (Abeysekera, 2010; Ruigrok et al., 2006). Furthermore, larger boards are more likely to increase firms' ability to obtain and secure critical resources from their environment such as IC resources (Abeysekera, 2010), assist in developing better interlocking relationships between the firm and its external stakeholder groups (Zahra and Pearce, 1989).

Studies which investigate the relationship between board size and IC performance produce inconclusive results (Abidin et al., 2009; Ho and Williams, 2003). Based on the resource dependency theory and the foregoing arguments we test the following hypothesis:

Hypothesis 4: There is a positive relationship between board size and bank IC performance.

2.4 Board independence and IC performance

From resource dependency perspective, independent directors provide more resources, information, and legitimacy to a firm. They also improve the quality of managerial decisions leading to improved firm performance (Gabrielsson and Huse, 2005; Hillman et al., 2000; Johnson et al., 1996). It is argued that independent directors are more likely than inside directors to support managerial long-term oriented decisions that enhance firm long term performance (see e.g. Ibrahim, Howard and Angelidis, 2003). Hence, it is reasonable to expect that independent directors, through giving advice and counsel, are more likely to support IC-related strategies such as investing in human resources, R&D activities and information technology. Several studies documented the positive association between director independence and R&D activities and innovation (see.e.g. Chen and Hsu, 2009), firm's legitimacy and linkages with its external environment, (Gabrielsson and Huse, 2005; Zahra and Pearce, 1989), and firm's engagement in social responsibility programs (Johnson and Greening, 1999; Ibrahim et al., 2003). In line with resource dependency theory and based on the above discussion, the following hypothesis is proposed:

Hypothesis 5: There is a positive relationship between board independence and bank IC performance.

3. RESEARCH METHODS

3.1 Sample

The sample frame comprises of all listed banks in GCC countries which encompass Bahrain, Saudi Arabia, Qatar, Kuwait, Oman and the United Arab Emirates during the period 2008-2010. The dataset consists of 74 GCC listed banks. However, all Kuwaiti listed banks (11 banks) and several banks in other GCC countries are excluded from the sample due to missing relevant information. The final sample consists of 49 banks or 147 observations over the period.

3.2 Measurement of variables

3.2.1 IC performance

We measure IC performance by using value added intellectual coefficient (VAIC) method developed by Pulic (1998). The instrument is widely used in studies of IC performance (see Abdulsalam et al., 2011; Ku Ismail and Abdul Kareem, 2011; Goh, 2005; Ho and Williams, 2003). This method is very important because it allows us to measure the contribution of both tangible (physical and financial) and intellectual (human and structural) resources to create value added (VA) by the firm. Algebraically, VAIC is expressed as follows:

$$\text{VAIC} = \text{CEE} + \text{HCE} + \text{SCE} \quad (1)$$

Where: (i) CEE is an indicator of Value Added efficiency of capital employed ($\text{CEE} = \text{VA}/\text{CE}$); $\text{CE} = (\text{book value of total assets}) - (\text{intangible assets}) = (\text{financial assets}) + (\text{physical assets})$, (ii) HCE is an indicator of Value Added efficiency of human capital ($\text{HCE} = \text{VA}/\text{HC}$); $\text{HC} = \text{total salaries and wages}$, and (iii) SCE is an indicator of Value Added efficiency of structural capital ($\text{SCE} = \text{SC}/\text{VA}$), $\text{SC} = \text{VA} - \text{HC} = (\text{value added}) - (\text{total salaries \& wages})$. 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:

$$\text{VA} = \text{OP} + \text{EC} + \text{D} + \text{A} \quad (2)$$

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

3.2.2 Independent variables

We use Blau's index to measure board diversity (in terms of educational level and nationality). Board interlocking is measured as the total number of board seats that each board member holds in other firms and organizations (Wincent et al., 2010). Board size is the number of directors on the board. We measure board independence by the number of independent directors on the board. This measurement is similar to the study by Abeysekera (2010), which argues that the number of independent directors is better than using a percentage when the resource dependency theory is used.

3.2.3 Control variables

We control for other determinants of IC performance identified in the existing literature, that is bank size and financial performance, measured by the natural log of total assets and return on equity (ROE), respectively.

3.3 Statistical analyses

The regression model utilized to test the relationship between the board characteristics and ICP is as follows:

$$\text{ICP} = \alpha + \beta_1 \text{EDU} + \beta_2 \text{NAT} + \beta_3 \text{BINLCK} + \beta_4 \text{BOSIZE} + \beta_5 \text{INDD} + \beta_6 \text{BASIZE} + \beta_7 \text{FINPRF} + \varepsilon$$

where, EDU = diversity of educational level of directors; NAT = diversity of nationality of directors; BINLCK = board interlocking; BOSIZE = board size; INDD = board independence; BASIZE = bank size; FINPRF = financial performance; and ε = error term.

4. FINDINGS

Table 1 reports the descriptive statistics of the intellectual capital performance and the independent variables. The mean intellectual capital performance (ICP) for the banks throughout the study period is 4.04 which is consistent with figures reported by Al-Musalli and Ku Ismail (2011) in United Arab Emirates (4.4). The

average IC performance of the GCC listed banks in this study is low compared to the findings by El-Bannany (2008) for UK banks (10.80), Goh (2005) for Malaysian banks (7.11), but it is better compared to the findings by Joshi et al. (2010) in Australia (3.80). The table also shows that the average number of directors on the board in the GCC banks is 9 which is consistent with the figure reported by Chahine (2007) for GCC listed banks. The mean educational level diversity is 0.47. This indicates that the educational level diversity is moderate. The mean for nationality diversity is low with a score of 0.22. The statistics for board interlocking and number of independent directors indicate that GCC banks have on average 28 interlocking directorates and about 5 independent directors.

The results presented in Table 2 show that the regression model is significant ($F=18.361$, $P<0.000$) with an adjusted R square of .454. The table reveals that there is insufficient evidence to infer that there is a linear relationship between all measures of board diversity and IC performance of GCC banks.

Table (1) Descriptive statistics

	N	Min	Max	Mean	SD
ICP	147	-4.28	12.72	4.04	2.68
EDU	147	.00	.69	.47	.17
NAT	147	.00	.50	.24	.19
BINLCK	147	2.00	74.00	27.71	14.89
BOSIZE	147	3.00	13.00	9.06	2.00
INDD	147	1.00	10.00	4.69	2.08
BASIZE	147	7.36	10.89	9.81	.69
FINPR	147	-4.45	.36	.11	.13

Table (2) Regression results

	Coefficients	Std. Error	t-stat	Sig.
(Constant)	-.269	2.666	-.101	.920
EDU	-.397	1.083	-.366	.715
NAT	-.582	.888	-.656	.513
BINLCK	.006	.015	.364	.717
BOSIZE	-.180	.132	-1.369	.173
INDD	-.185	.096	-1.915	.058
BASIZE	.578	.301	1.919	.057
FINPR	12.149	1.288	9.433	.000

Adjusted R square: 0.454; F-stat: 18.361; Sig.: 0.000

The possible reason of the insignificant effect of educational level diversity is that the work carried out on GCC bank boards does not require any specific educational level. Just as long as board members have a university degree/or equivalent skills, board members have sufficient human capital in order to understand IC-related information that is provided by the board of managing directors. Human capital may be obtained from a career as directors in other firms or from a substantial experience in business life. We suggest two possible reasons to interpret the insignificant relationship between nationality and IC performance. First, it can be argued that the lack of any relationship between nationality diversity and IC performance may be due to the low number of foreigners on the boards of GCC banks. Another plausible reason is that the social psychological dynamics of locals may lead to a resistance toward foreign directors. Due to their common cultural and social ties, local directors may categorize themselves as the national group and foreign directors as foreigners group. In making decisions, local directors may favour the national group due to their commonality. Given the power of locals in the decision making and resource allocation processes of the firm, the effect of self-categorization by local directors is that the decisions of foreign directors will be given limited consideration or ignored completely.

The insignificant effect of board interlocking on IC performance suggests that serving on boards of multiple firms makes it difficult for directors to gain an adequate understanding of the issues facing any one firm and so, directors with multiple appointments have no way to influence IC related strategies. Board size does not influence IC performance. This finding is similar to the findings by Ho and Williams (2003), who conducted the study in South Africa, Sweden and the UK.

Table 2 also shows the number of independent directors is significant at explaining IC performance, at the 10% level. However, the coefficient is negative, suggesting that there is significant negative relationship between number of independent directors and IC performance. This is contrary to the theoretical model and the stated hypothesis, which predicts a positive relationship between number of independent directors and IC performance. The negative relationship is may be because of the lack of a clear definition of independent director in the various corporate governance codes and guidelines issued by regulatory authorities in the GCC region (Mujtaba and William, 2011) that might prevent banks from appointing 'truly' independent directors. Another reason is that boards need specialized, expert-provided information about firms' activities to evaluate and ratify the firm's long-term strategies such as IC related strategies. But, the attainment of this knowledge requires both time and firm-specific expertise on the part of the director, two things that inside directors have but independent directors lack (Klein 1998). The regression results also show that the relationship between the control variables and IC performance, as expected are positive and significant at the 1% level for financial performance and 10% for bank size..

5. CONCLUSION

This study provides evidence that the number of independent directors on the board has a negative impact on bank's IC performance. The results imply that the request for a minimum number (one-third of the board) of independent directors on the board by the corporate governance codes in GCC countries may not be to the banks' advantage and that banks may need to reevaluate their nominating procedures and board composition with respect to selecting future board members. The results further imply that a GCC bank with a larger board size, larger board interlocking, larger diversity will have no advantage over their smaller counterparts in context of IC performance. The insignificant impact of these four characteristics on GCC banks' performance may be interpreted by the absence of a real application for the appropriate principles and standards of corporate governance to listed banks in GCC countries.

The findings seems to support the theoretical assumption by scholars like Talke et al., (2010) and Certo et al. (2006) that board diversity exhibits no main effect on firm performance suggesting that instead of investigating a simple direct relationship between board diversity and firm performance, variables that affect this relationship should be explored.

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