

Corporate entrepreneurship and business performance

Role of organizational culture

The moderating role of organizational culture in selected banks in Pakistan

59

Waheed Ali Umrani

Department of Business Administration, Sukkur IBA University, Sukkur, Pakistan

Kabiru Maitama Kura

UTB School of Business, Universiti Teknologi Brunei, Brunei, Brunei Darussalam, and

Umair Ahmed

College of Administrative and Financial Sciences Gulf University, Sanad, Kingdom of Bahrain

Received 5 December 2016
Revised 13 April 2017
Accepted 4 May 2017

Abstract

Purpose – The purpose of this paper is to investigate the relationship between corporate entrepreneurship (CE), organizational culture (OC) and business performance (BP). Additionally, the study has attempted to address the moderating influence of OC on CE–BP relationship.

Design/methodology/approach – Data were collected from middle managers of Big Five banks of Pakistan. A two-step approach to structural equation modeling was used. Using confirmatory factor analysis, the measurement model fit was determined. The significance of the theoretical relationship was assessed using structural model.

Findings – The results have supported the hypothesized direct and moderated relationship.

Originality/value – The present study extends the body of knowledge in testing the resource-based view of the firm theory and contingency theory through providing empirical evidence on the hypothesized relationships. Additionally, the study has contributed in the existing theory through evaluating the moderating of OC by using interaction effect in partial least squares structural equation modeling (PLS-SEM).

Keywords Organizational culture, Entrepreneurship, Contingency theory, Structural equation modeling, Business performance, Corporate entrepreneurship

Paper type Research paper

Introduction

Nations foster their economies through boosting their financial institutions. There are several players that collectively make up the financial sector of Pakistan. Notably, banking



© Waheed Ali Umrani, Kabiru Maitama Kura and Umair Ahmed. Published in *PSU Research Review: An International Journal*. Published by Emerald Publishing Limited. This article is published under the Creative Commons Attribution (CC BY 4.0) licence. Anyone may reproduce, distribute, translate and create derivative works of this article (for both commercial and non-commercial purposes), subject to full attribution to the original publication and authors. The full terms of this licence may be seen at <http://creativecommons.org/licenses/by/4.0/legalcode>

PSU Research Review
Vol. 2 No. 1, 2018
pp. 59-80
Emerald Publishing Limited
2399-1747
DOI 10.1108/PRR-12-2016-0011

sector is the most prominent industry among them. This prominence is due to the fact that 95 per cent of the financial system of Pakistan is based on banking industry (Husain, 2006). Remarkably, 80 per cent of market capitalization is occupied by the Big Five banks in Pakistan (Khalabat, 2011). Therefore, a timely inquiry pertaining to performance of the banking industry is highly required. Business organizations at both international and national level always strive for impressive business performance (BP) results. Improving BP is not only a challenge but also a necessity for every type of business at present, thus making the market more competitive. Researchers and practitioners have mutually agreed that corporate entrepreneurship (CE) is an important consideration in determining BP (Haase and Franco, 2010).

For example, in their seminal works, Miller and Camp (1985), as well as Zahra (1986), have established that CE plays an important role in enhancing BP. Following these seminal works, researchers have reported that CE remains a prominent factor that potentially influences BP in a variety of studies (Ambad and Wahab, 2016; Barrett and Weinstein, 2015; Simsek and Heavey, 2011; Zahra and Covin, 1995; Zahra 1991; Barrett and Weinstein, 1998; Lee *et al.*, 2001; Hult *et al.*, 2003; Dimitratos *et al.*, 2004; Wood *et al.*, 2008; Zahra, 2010; George and Marino, 2011; Zahra, 2012; Heavey and Simsek, 2013; Frese *et al.*, 2014). Relatedly, studies have also indicated the importance of organizational culture (OC) for influencing BP effectively (Ogbonna and Harris, 2000; Lee and Yu, 2004; Scholz, 1987; Denison, 1990; Sadri and Lees, 2001).

Notwithstanding, despite significant breakthroughs, little work has explored when or under what conditions a CE influences BP, particularly in the multicultural context of Pakistan. Investigating the contextual factors that could affect BP would address this theoretical gap that has been identified. The contribution of this study was to test the moderating role of OC on the relationship between CE and BP. Additionally, empirical research pertaining the contextual factors that could influence BP has largely ignored banking sector despite the contribution of the sector to economic growth. Hence, the present study focused on drew from resource-based view (RBV) (Wernerfelt, 1984; Galbreath, 2005) to test the proposed model in the context of Pakistani banking sector.

Theory and hypotheses development

Resource-based theory

As noted earlier, the theoretical underpinning of this study and its hypotheses is the resource-based theory (RBT; Wernerfelt, 1984; Galbreath, 2005). RBT has become a dominant paradigm in the field of entrepreneurship and strategic management (Hitt *et al.*, 2016). RBT postulates that firms strive to distinguish themselves from rivals to gain a sustainable competitive advantage and superior performance (Hitt *et al.*, 2016; Wernerfelt, 1984; Galbreath, 2005). Accordingly, RBT suggests that a firm that implements a value creating strategy, such as CE is more likely to achieve a competitive advantage and better performance than its current or potential competitors that do not implement such strategies. This line of reasoning and thought pattern has long been articulated in the seminal contribution of Barney (1991, p. 102) that:

A firm is said to have a competitive advantage when it is implementing a value creating strategy not simultaneously being implemented by any current or potential competitors. A firm is said to have a sustained competitive advantage when it is implementing a value creating strategy not simultaneously being implemented by any current or potential competitors and when these other firms are unable to duplicate the benefits of this strategy.

Drawing from RBT, the present study develops hypotheses that identifies significant role of value creating strategies, such as creating new business within established firms or strategic renewal of existing business to improve BP (Zahra, 1991). This study also drew from RBT to hypothesize the main and moderating effect of OC on the relationship between CE and BP.

CE and business performance

The term CE roots four decades back (Kuratko, 2010). Therefore, it is not a new phenomenon for organizations to learn and understand. The current literature rather emphasizes on the implications, uses and outcomes of corporate entrepreneurial activities in the forms of firm behavior and their internal processes. One could comprehend with the serious nature of CE as it provides visible support to businesses for their development and promotions. Businesses around the globe have instigated CE due to several reasons, some of the common evidence suggested includes innovation (Baden-Fuller, 1995), knowledge acquisition (McGrath *et al.*, 1994), strategic rejuvenation (Guth and Ginsberg, 1990), global prominence (Birkinshaw, 1997), optimistic resource allocation (Kuratko and Audretsch, 2009; Borch *et al.*, 1999; Ireland *et al.*, 2003; Covin *et al.*, 2000) and financial viability (Zahra, 1993). No matter for what purpose the business enterprise exercises it, CE appears as a crucial stratagem for every business type (Morris *et al.*, 2011).

However, literature on CE extends that its significant influence over BP has resulted in varied results (Zahra, 1991, 2010, 2012; Barrett and Weinstein, 1998; Lee *et al.*, 2001; Hult *et al.*, 2003; Dimitratos *et al.*, 2004; Wood *et al.*, 2008; George and Marino, 2011; Heavey and Simsek, 2013; Frese *et al.*, 2014). Therefore, the present study proposed following hypothesis:

H1. Corporate entrepreneurship is positively related with business performance.

Organizational culture and business performance

The literature provides un-ended discussion over importance of OC in facilitating and promoting organizational effectiveness. From the perspective of the RBV theory, the OC is a capability of an organization which is unique in nature and is also inimitable (Barney, 1986, 1991; Hall, 1993; Peteraf, 1993; Wernerfelt, 1984). Suggesting prominent leaders to be able to shape the cultures of their organizations for getting competitive edge (Kuratko and Welsch, 2004). The literature on strategic management widely acknowledges that OC is a factor which is critical in explaining how organizations work and to develop effective strategies for making them more effective (Prajogo and Sohal, 2001).

These researchers beside many others have defined OC in several ways, according to Barney, (1986) no consensus is found in the literature on the definition of the construct. However, numerous scholars explained OC as a system of shared values, norms, beliefs, attitudes and ways of thinking among all organizational members (Mckinnon *et al.*, 2003; O'Reilly and Chatman, 1996). To put it simply, OC is demonstrated as the basic assumptions, values, attitudes and behaviors of all organizational members (Yilmaz and Ergun, 2008).

Similarly, literature also provides enormous support pertaining to the relationship between OC and BP (Ogbonna and Harris, 2000; Lee and Yu, 2004; Scholz, 1987; Denison, 1990; Sadri and Lees, 2001). The present study has attempted to investigate the relationship between OC and BP due to the fact that OC will vary from business to business (Wernerfelt, 1984; Hall, 1993) and should also be inimitable (Barney, 1986). Therefore, with this assertion of RBV the researchers deemed it necessary to further investigate this relationship by proposing following hypothesis:

H2. Organizational culture is positively related with business performance.

Moderating role of OC

The main objective of the present study was to investigate the moderating effect of OC on the relationship between CE and BP. The choice of OC as a moderating variable was due to the following reasons.

First, [Covin and Slevin \(1991\)](#) introduced an integrative model explaining the positive association between entrepreneurial posture of a company and its environment, strategy, internal factors and organizational performance. Similarly, [Guth and Ginsberg \(1990\)](#) claimed the reciprocal relationship between CE and organizational performance. Whereas, [Zahra \(1991\)](#) claimed that the persuasive evidence is lacking which can support the notion that corporate-entrepreneurism is significantly contributing the performance of an organization. In addition to this, there have been inconsistencies and ambiguities in operationalizing CE by those who have adopted organizational level perspective; the evidence is clearly available is the research work of [Jennings and Lumpkin \(1989\)](#), [Karagozoglu and Brown \(1988\)](#), [Morris and Paul \(1987\)](#), [Covin and Slevin \(1989\)](#) and [Covin and Covin \(1990\)](#), [Miles and Arnold \(1991\)](#) and [Zahra \(1991\)](#). In these research studies, one can underscore and pinpoint significant differences of opinion over CE and firm performance relationship. With reference to these inconsistencies in the past research on the claimed relationship, [Baron and Kenny \(1986\)](#) have recommended that when the relationship between a predictor and a criterion variable is found unexpectedly weak or inconsistent a moderating variable should be introduced.

Second, the present study proposed OC as a potential moderating variable on the relationship between CE and BP by looking into the premise of contingency theory, which suggested that the relationship between two variables is contingent or it depends on the level of a third variable. It is therefore suggested that the introduction of a moderator variable in to the relationship between two variables may allow specific understanding and prevent misleading conclusions regarding the contingency relationships. For the better understanding of inconsistent findings between the organizational strategies and organizational performance relationship, the contingency theory had a primary contribution ([Venkatraman, 1989](#)). Third, the rationale for introducing OC as a moderating variable comes from three most prominent CE models. First, the [Covin and Slevin \(1991\)](#) model for CE level of behavior in organizations provides that external, strategic and internal environment have moderating effect on corporate entrepreneurship (entrepreneurial-orientation) and BP relationship. Second, the CE model of [Zahra \(1993\)](#) called revised conceptual framework of firm-level behavior have suggested that environmental and organizational factors could influence CE–BP relationship. Lastly, [Lumpkin and Dess \(1996\)](#) have also supported the view that environmental factors such as OC could influence the link between CE and BP.

Finally, the literature on strategic management has specifically suggested that OC has the potential power to moderate the relationship between organizational strategies (such as CE and its components) and BP ([Prajogo and McDermott, 2005](#); [Sila and Ebrahimpour, 2002, 2005](#); [Zahra and Garvis, 2000](#)). Thus, it was hypothesized as under:

- H3.* The relationship between corporate entrepreneurship and business performance will be stronger when organizational culture is incorporated.

Methodology

Sample and data collection

To test our hypotheses, we used a sample of 249 Big Five banks operating in Pakistan. A survey method was used to collect data from these banks. Given that the unit of analysis in

the present study was organizational, branch managers were invited to complete a multiple-item survey. Branch managers were considered as the most appropriate key informant because they are well informed about their bank strategies and could therefore respond to the survey accurately (Sciascia *et al.*, 2014; Zahra and Covin, 1995). To ensure that nonresponse bias was not a major concern in this study, independent samples *t*-test was performed following Armstrong and Overton's (1977) suggestion. Specifically, respondents were divided into two groups based on those who responded to the first follow-up (early responders) and those who responded after third follow-up (late responders). We assumed that those who responded after third follow-up are most similar to nonrespondents (Armstrong and Overton, 1977).

The results of the independent samples *t*-test demonstrated that there was no significant difference between the early responders and late responders on CE, OC and BP. As such, it can be concluded that nonresponse bias was not a major concern in the present study. Furthermore, given that self-reporting scales were utilized in this study, Harman's single-factor test was performed to ensure that common method bias was not a major issue (Podsakoff and Organ, 1986). In particular, an exploratory factor analysis was conducted to examine the un-rotated factor solution, as well as the number of factors. The factor analysis yielded 25 factors with eigenvalues of more than 1, and the first factor explains 34 per cent of the variance. Hence, common method bias was not a serious issue in the present study.

Measures

Corporate entrepreneurship

We adapted 48 items from the works of Hornsby *et al.* (2002) to measure CE. The items in this scale reflect the extent to which develop and implement new ideas into the organization's system. Ratings were completed using a five-point Likert scale ranged from 1 = *strongly disagree* to 5 = *strongly agree*. Sample item was: "In my organization, developing one's own ideas is encouraged for the improvement of the firm". This scale was adapted in the current study because it has been successfully used in several empirical studies (Hancer *et al.*, 2009; Umrani and Mahmood, 2015).

Organizational culture

OC was assessed using 18 items adapted from Denison's (2000) OC survey. Participants were asked to respond to the items regarding the values, beliefs and principles that serve as a foundation for their organization's management system. Ratings were completed on five-point Likert scale ranged from 1 = *strongly disagree* to 5 = *strongly agree*. Sample item was: "Cooperation across different parts of the organization is actively encouraged". High reliability of the competitive intensity scale has also been demonstrated in several empirical studies (Denison *et al.*, 2014; Nazir and Lone, 2008; Zheng *et al.*, 2010), which justify its use in the present study.

Business performance

Four-items were used to assess a broad range of BP indicators. Of these items, three were adapted from the work of Deshpand *et al.* (1993), and the remaining item was drawn from Jaworski and Kohli (1993). Ratings were based on a five-point Likert scale ranged from 1 = *strongly disagree* to 5 = *strongly agree*. Sample item was: "Over the past 3 years, our market share has exceeded our largest competitors". This scale was adapted in the current study because it has been successfully used in several empirical studies (Ali *et al.*, 2010; Rettab *et al.*, 2009).

Analytical procedures

The present study used partial least square (PLS) path modeling to test the theoretical model. The rationales for choosing PLS path modeling were as follows: First, PLS path modeling has received widespread application in management and related disciplines (Hair *et al.*, 2012; Kura, 2016; Kura *et al.*, 2015; Real *et al.*, 2014; José and Manuel, 2012). Second, given that the goal of the present study was to predict the dependent variable, we considered PLS path modeling to be a suitable analytical procedure (Hair *et al.*, 2011). Finally, PLS path modeling is considered as the “most fully developed and general system” (McDonald, 1996, p. 240) of the variance-based structural equation modeling (SEM) techniques. Accordingly, the present study utilized SmartPLS 3 software (Ringle *et al.*, 2015).

Results and discussion

The present study used PLS path modeling for the data analysis due to the fact that this approach is experiencing widespread application in academic research (Hair *et al.*, 2012; Lee *et al.*, 2011). Before moving to the testing the reliability, validity and structure paths, various assumptions pertaining to normality and multicollinearity, common method bias were assessed (Hair *et al.*, 2010; Tabachnick and Fidell, 2007; Podsakoff and Organ, 1986). The present study used a two-step process, that is:

- (1) assessment of measurement model; and
- (2) assessment of structural model, for evaluating and reporting PLS-SEM results (Hair *et al.*, 2010, 2014; Henseler *et al.*, 2009).

Measurement model assessment

According to Hair *et al.* (2010, 2014) and Henseler *et al.* (2009) for assessing measurement model; researchers need to determine individual item reliability and determine internal consistency, content validity, convergent validity and discriminant validity.

Individual item reliability. The individual item reliability should be assessed by looking into the outer loadings of each of the measures (items) of each construct (Hair *et al.*, 2012, 2014; Duarte and Raposo, 2010; Hulland, 1999). Researchers have provided a rule of thumb for retaining the items whereby they have advised to retain items between 0.40 and 0.70 (Hair *et al.*, 2014). The outer loadings for each of the latent variable of the present study were sufficiently up to 0.5 or more (refer Table I) therefore, the present successfully met individual item reliability criterion.

Internal consistency reliability. Bagozzi and Yi (1988) and Hair *et al.* (2011) provided a rule of thumb for interpreting composite reliability coefficient suggesting a threshold of 0.7 or above. Table I displays the composite reliability coefficients for each of the latent variable of this study. The composite reliability coefficient, as indicated in Table I, for each of the latent variable ranged from 0.747 to 0.880; this suggesting the adequate internal consistency reliability of the measures (Bagozzi and Yi, 1988; Hair *et al.*, 2011).

Convergent validity. The assessment of convergent validity with average variance extracted (AVE) is recommended by Fornell and Larcker (1981). However, according to Chin (1998) the AVE should be at least 0.50 or more to indicate the convergent validity of a particular construct. The AVE scores provided in Table I indicated that all the constructs of the present study have achieved the minimum of 0.50 AVE; thus, it is concluded that the study demonstrated adequate convergent validity (Chin, 1998).

Discriminant validity. The discriminant validity was assessed following Fornell and Larcker (1981) criterion. As a rule of thumb, Fornell and Larcker suggested to use AVE with

Latent constructs and indicators	Standardized loadings	AVE	CR	Role of organizational culture
<i>Business performance</i>				65
BP1	0.6464	0.5129	0.8800	
BP2	0.7653			
BP3	0.7119			
BP4	0.7253			
BP5	0.7647			
BP6	0.752			
BP7	0.635			
<i>Management support</i>				
CEMS11	0.5981	0.5272	0.8686	
CEMS2	0.7714			
CEMS3	0.8293			
CEMS4	0.7779			
CEMS5	0.6856			
CEMS6	0.6691			
<i>Organizational boundaries</i>				
CEOB1	0.6879	0.5229	0.8139	
CEOB2	0.7069			
CEOB6	0.7154			
CEOB7	0.7791			
<i>Reward reinforcement</i>				
CERR1	0.6741	0.5064	0.8593	
CERR2	0.8056			
CERR3	0.6872			
CERR4	0.7702			
CERR5	0.6996			
CERR6	0.6168			
<i>Time availability</i>				
CETA1	0.533	0.5124	0.7478	
CETA4	0.6123			
CETA5	0.9372			
<i>Work discretion</i>				
CEWD10	0.8604	0.5246	0.8453	
CEWD6	0.6945			
CEWD7	0.696			
CEWD8	0.6863			
CEWD9	0.6669			
<i>Organizational culture</i>				
OC01	0.669	0.5023	0.8338	
OC11	0.7045			
OC16	0.6244			
OC03	0.7712			
OC04	0.7636			
Source: Researcher				

Table I.
Loadings, composite reliability and average variance extracted

0.5 value or higher. Furthermore, for ascertaining discriminant validity they have suggested that the square root of the AVE should be higher than the correlations among the latent variables. [Table I](#) suggests that the AVE for all the latent constructs was above minimum cutoff of 0.5. [Table II](#) indicates that the square root of AVE was higher than the correlations

among the latent variables. Therefore, it could be concluded that all the measures used in the present study have adequate level of discriminant validity.

Structural model assessment

The present study used standard bootstrapping procedure with 500 bootstraps samples and 249 cases to determine the significance of the path coefficients following Hair *et al.* (2011, 2012, 2014) and Henseler *et al.* (2009). Table III, Figure 1, provide full estimates of the structural model along with statistics pertaining to moderating variable of OC. Originally, H1 proposed that CE will be positively related with BP. Results provided in Table III and Figure 1 have revealed a significantly positive relationship between CE and BP ($\beta = 0.277$, $t = 3.58$, $p < 0.00$). Hence, supporting H1.

The results also report a positive relationship between OC and BP with ($\beta = 0.2126$, $t = 2.1972$, $p < 0.01$). Thus H2 was also supported. Similarly, the results show that OC moderates the CE–BP relationship ($\beta = 0.1807$, $t = 1.9949$, $p < 0.02$); therefore, H3 was also supported.

Assessment of variance explained in the endogenous latent variable. PLS-SEM structural model assessment recommends another important criterion; that is the R^2 value assessment also called coefficient of determination (Hair *et al.*, 2011, 2012; Henseler *et al.*, 2009). According to various scholars, the R^2 value represents the proportion of variation in the dependent variable(s) that could be explained by one or more predictor variable (Hair *et al.*, 2006, 2010; Elliott and Woodward, 2007). According to Hair *et al.* (2010), the acceptable level of R^2 value is subject to the context where a particular research is conducted. However,

Table II.
Latent variable correlations and square roots of average variance extracted

Constructs	1	2	3	4	5	6	7
BP	<i>0.71617</i>						
MS	0.3532	<i>0.726085</i>					
OB	0.345	0.0556	<i>0.723118</i>				
OC	0.5275	0.4509	0.4431	<i>0.708731</i>			
RR	0.395	0.4499	0.439	0.5472	<i>0.711618</i>		
TA	-0.1313	-0.1014	-0.3332	-0.2728	-0.2648	<i>0.715821</i>	
WD	0.1985	0.3916	0.0554	0.2607	0.3637	-0.333	<i>0.724293</i>

Note: Italicized and diagonals entries represent the square root of the AVEs while the off-diagonal entries represent the correlations among constructs
Source: Researcher

Table III.
Structural model assessment with moderator variable (full-model)

Hypothesis	Relationship	Beta	SE	t-value	p value	Decision
H1	Corporate entrepreneurship → Business Performance	0.2770	0.0773	***3.5824	0.00	Supported
H2	Organizational Culture → Business Performance	0.2126	0.0967	***2.1972	0.01	Supported
H3	Corporate entrepreneurship × Organizational Culture → Business Performance	0.1807	0.0906	***1.9949	0.02	Supported

Note: *** $p < 0.01$ (one-tailed test)
Source: Researcher

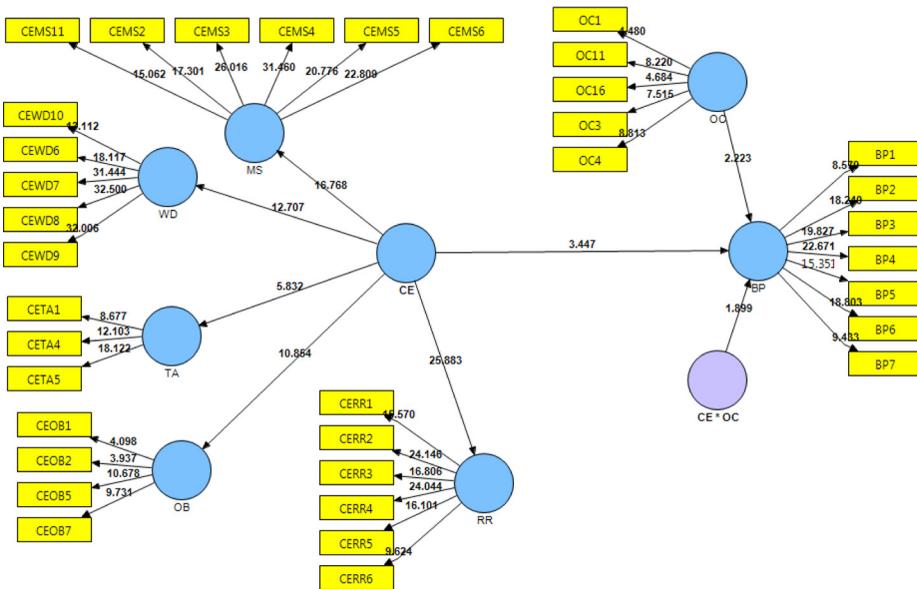


Figure 1. Structure model

according to Falk and Miller (1992), R^2 value of 0.10 is acceptable. Accordingly, Chin (1998) suggested that in PLS-SEM, the R^2 value of 0.60 can be considered as substantial, 0.33 as moderate and 0.19 as weak. The R^2 value obtained for the present study was 0.24. This suggests that CE and OC together explain 24 per cent of the variance in the BP. As per Chin's (1998) recommendation the obtained R^2 value is weak. However, as per Falk and Miller (1992), the value is sufficiently above than the minimum acceptable cutoff.

Predictive relevance of the model. Looking into the reflective nature of the endogenous latent variable, the present study used cross-validated redundancy measure (Q^2) for assessing the predictive relevance of the model as per the recommendations of Hair et al. (2013), Ringle et al. (2012) and Chin (2010). The predictive relevance is a supplementary assessment which is recommended due to the fact that the goodness-of-fit (GoF) index is not suitable for model validation as it could not separate the valid and invalid models (Hair et al., 2014; Henseler and Sarstedt, 2013). Henseler et al. (2009) stated that in a researcher model where the Q^2 value(s) is found greater than zero, it is considered that the model has a predictive relevance. Table IV provides the cross-validated redundancy Q^2 test results.

The cross-validated redundancy value (Q^2) as suggested by Chin (1998), Henseler et al. (2009) is greater than zero; (refer Table IV). This suggests that the model has predictive relevance.

Total	SSO	SSE	1-SSE/SSO
Business performance	1743	1536.892	0.118249

Source: Researcher

Table IV. Construct cross-validated redundancy

Testing moderation effect. The product indicator approach using PLS-SEM was used in this study for detecting and estimating the strength of moderating effect of OC on the CE–BP relationship (c.f., Chin *et al.*, 2003; Helm *et al.*, 2010; Henseler and Chin, 2010). The present study adopted product indicator approach due to the fact that the proposed moderating variable was continuous in nature (Rigdon *et al.*, 1998). In addition to this, Cohen’s (1988) guidelines were followed for ascertaining the moderating effects.

Recalling *H3*, it was stated that OC moderates the relationship between CE and BP. As expected, the Table III and Figure 1 suggest that the interaction terms representing CE × OC ($\beta = 0.1807, t = 1.9949, p < 0.02$) was significant. Thus, *H3* was fully supported. Following the guidelines of Aiken and West (1991), the information from path coefficients was used for plotting the moderating effect of OC on relationship between CE and BP (Figure 2), suggesting improved relationship.

Determining the strength of the moderating effects. The strength of moderating effects could be assessed by comparing the R^2 value (coefficient of determination) of the main model with the R^2 values of the full model incorporating both exogenous and moderating variables (Wilden *et al.*, 2013; Henseler and Fassott, 2010) and the moderating effects’ strength could be determined using the underlined formula (Cohen, 1988; Henseler and Fassott, 2010):

$$\text{Effect size : } (f^2) = \frac{R^2 \text{ model with moderator} - R^2 \text{ model without moderator}}{1 - R^2 \text{ model with moderator}}$$

The values of 0.02, 0.15 and 0.35 are considered as weak, moderate and strong moderating effects sizes, respectively (Cohen, 1988; Henseler and Fassott, 2010). Drawing upon the guidelines of Henseler and Fassott (2010) and Cohen (1988) the strength of the moderating effect of OC was determined. Table V illustrated that the effect size for BP was small (0.02) (c.f., Henseler *et al.*, 2007; Wilden *et al.*, 2013).

According to Chin *et al.* (2003) a low effect size does not necessarily mean that the underlying moderating effect is insignificant. “Even a small interaction effect can be meaningful under extreme moderating conditions, if the resulting beta changes are meaningful, then it is important to take these conditions into account” (Chin *et al.*, 2003,

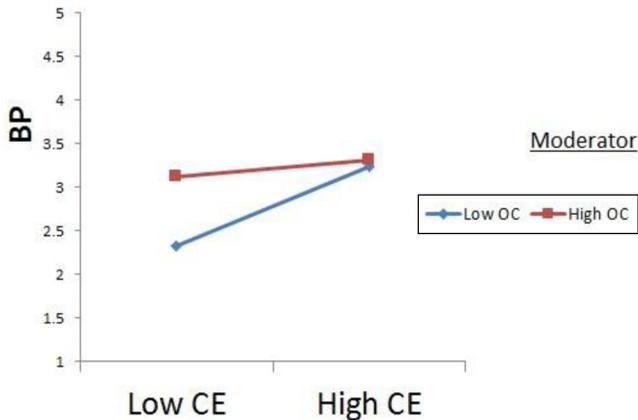


Figure 2.
Interaction effect of
CE and OC on BP

p. 211). This has suggested that the moderating role of OC over CE and BP relationship could be meaningful.

Consistent with *H1*; the PLS path modeling results revealed a positive relationship between CE and BP. This suggests that middle managers perceive that CE is a critical component for enhancing BP. Further, the results of the present study have confirmed the importance of CE to the BP as acknowledged in the existing literature (Heavey and Simsek, 2013; Phan *et al.*, 2009; Zahra and Garvis, 2000; Zahra and Covin, 1995; Simsek and Heavey, 2011). This consistency with prior studies has further strengthened the RBV of the firm that identifies CE as rare, hard to imitate, valuable and hard to substitute entrepreneurial culture that can foster BP (Wernerfelt, 1984). Furthermore, According to Makadok (2011), RBV's emphasis has remained crucial in explaining the role of resources in creating and sustaining competitive advantage. Businesses therefore, need to create their own mechanisms (similar to CE) for selecting distinctive resources that carry greater potential for augmented performance. Accordingly, one of the implications of RBV on BP concerns with organizational capabilities. According to Amit and Schoemaker (1993), organizational capabilities consist of skillful, talented and experienced human resource, information and specific processes that could be channelized for producing high quality innovative outcomes. In-line with that CE is a process (Morris *et al.*, 2011) and these processes are strongly linked with human resources that ultimately help organizations to improve their performance.

Interestingly, the value of available resources is increased by organizational capabilities; these capabilities also help to coordinate for effectively using them (Wernerfelt, 1984; Prahalad and Hamel, 1990). The present study has successfully added in the existing literature on RBV that CE as a critical organizational capability adds value to the BP. The present study has provided empirical evidence to support the above argument by successfully investigating the influence of CE over BP. Convincingly, in the turbulent environment today it is quite hard for banks to grow or even survive without being entrepreneurial (Dess *et al.*, 1999). Therefore, the present study forwards recommendations for policymakers in Pakistan's banking sector to incorporate CE as an important tool for fostering BP.

Second, the present study investigated the direct influence of organization culture over BP and formulated *H2*. Although a large stream of research over OC and BP is available but the present study elaborates it as per following rationale: First, the direct investigation of influence of OC over BP was necessary as (Kuratko and Welsch, 2004; Barney, 1986; Hall, 1993; Peteraf, 1993; Wernerfelt, 1984) has suggested that culture varies from organization to organization and even from one business unit to another and is inimitable. Second, Al-Swidi and Mahmood (2011) suggested that Denison theory and instrument are effective in investigation of entrepreneurial activates within the banking setup. Third, present study aimed at investigating the effectiveness of Denison theory in the baking industry of Pakistan as the sample was drawn from Pakistan's Big Five banks. Fourth, the cultural

Table V.
Strength of the
moderating effects
based on Cohen's
(1988) and Henseler
and Fassott's (2010)
guidelines

Endogenous latent variable	R^2		f^2	Effect-size
	Included	Excluded		
Business performance	0.27	0.249	0.0288	Small

Source: The Researcher

performance assessment is being conducted on the managerial level including middle managers (branch and operations) in the sample; as the culture is created and/or defined by the top-management and is implemented or executed with and through middle managers. Hence, investigating the status-quo, perception of middle managers has enabled the current study to conclude and recommend potential solutions to both practicing managers and theorists. Fifth, the postulated relationship between OC and BP has remained undecided (inconsistent). Lastly, the research has mainly been conducted in the context of developed countries and to the best of the knowledge of the researchers, there have been no research attempts, investigating the influence of OC over BP in the Big Five banks of Pakistan. Thus, the present study hypothesized that OC is positively related with BP in the banking sector of Pakistan.

Interestingly, consistent with *H2*, the results of the PLS path modeling have suggested that OC is positively related with BP. In line with RBV of the firm theory (Wernerfelt, 1984) the empirical findings imply that OC plays critical role in enhancing BP. This notion is also supported by the bank branch managers in the Big Five banks of Pakistan empirically. These findings have further confirmed RBV's claim that OC is a source of competitive advantage (Barney, 1986; Denison, 1990). These results have also added value in the existing literature that supported positive link between OC and BP. For example, Gordon and DiTomaso (1992) while extending the work of Denison (1984), reported significant relationship between OC and BP. Similarly, Lee and Yu (2004) in their study found that culture has profound impact on the BP. Further to this, the present study has also contributed in the body of knowledge by investigating the OC–BP relationship in the service (banking) sector and has also contributed by providing empirical support against the findings of Lee and Yu (2004) who reported greater correlation between OC and organizational performance in the manufacturing firms as compared to service firms. Thus, the results of this study have confirmed matching significance of OC–BP relationship in the service sector.

Third, this study's major contribution was to investigate the moderating effect of organization culture on CE and BP relationship under the light of contingency theory.

Consistent with *H3*, the results of the PLS path modeling reported that OC moderates the relationship between CE and BP. These empirical findings have supported the notion of RBV of the firm theory (Wernerfelt, 1984). According to RBV, OC is a source of competitive advantage (Barney, 1986; Denison, 1990). Second and the most important, it claimed that OC establishes a right fit between strategy adoption such as CE and organization's internal environment (Kanji and Wallace, 2000). Last but not the least, the results of the present study also confirmed the claim that OC has the potential moderating power over organizational strategies and organization performance relationship (Prajogo and McDermott, 2005; Sila and Ebrahimpour, 2002, 2005; Zahra and Garvis, 2000).

Theoretical implications

First, the present study has provided theoretical implications by providing additional empirical evidence on RBV of the firm theory (Wernerfelt, 1984). The theory posits that success of an organization is solely determined by its internal resources, further classifying these resources as assets or capabilities. According to Collis (1994), these assets could be tangible or intangible, whereas, Teece *et al.* (1997) stated that capabilities are intangible accumulated skill set or knowledge. The theory further adds that for ascertaining sustainable competitive advantage the critical factors for an organization are its resources (Barney, 1991). Hence, organizations need to pay more attention toward their respective resources, their development and appropriate allocation for better utilization. As these

resources make an organization capable to produce and deliver innovate and high-quality products as well as services. In doing so, these organizations develop a competitive difference (Barney, 1991; Russo and Fouts, 1997). The theory further demonstrated that, to achieve the desired competitive strategic position, organizations should develop their own competencies by looking into factors such as human capital, internal organizational strategies, regulations and useful information sources (Barney, 1986, 1991; Russo and Fouts, 1997). The present study has extended the theory with the examination of the organizational competencies; specifically, the present study has attempted to find possible answers that how Big Five banks of Pakistan look into their internal organizational strategies in the shape of corporate entrepreneurial activities which influence their performance.

Additionally, present study attempted to test the moderating role of OC in the CE and BP relationship. Extant empirical studies with regards to CE and BP relationship (Frese *et al.*, 2014; Heavey and Simsek, 2013; Zahra, 2010, 2012; Davis, 2007; George and Marino, 2011) reported findings that are inconsistent. The present study therefore received mature justification toward incorporating a moderating variable.

The current study attempted to fill these literature gaps by incorporating OC as a moderating variable for enhancing the understanding of the influence of CE on the BP in Pakistan's banking sector. While testing the RBV theory, the research findings suggested that CE had significantly positive influence on BP among the bank managers, lending empirical evidence in support of RBV theory. Based on these findings, it can be asserted that CE plays a substantial role in explaining BP.

Second, as the major purpose of this study was to examine the extent to which CE and BP are in a good fit with the OC and how these relationships influence the overall organizational performance of Pakistan's Big Five banks. This study has delivered theoretical implications by providing additional empirical evidence in the domain of contingency theory. The theory postulates that organizations can choose from many available choices and these choices are dependent upon the environment an organization operates (Schuler, 2000). The theory further posits on the necessity of the "fit" (Venkatraman, 1989), whereby it suggests that there should be an appropriate alignment between organizational strategy and other organizational variables for improving BP (Selto *et al.*, 1995; Van de Ven and Drazin, 1985).

The present study proposed OC as a potential moderating variable on the relationship between CE and BP by looking into the premise of contingency theory, which suggested that the relationship between two variables is contingent or it depends on the level of a third variable. It is therefore suggested that introduction of a moderator variable in the relationship between two variables may allow specific understanding and prevent misleading conclusions regarding the contingent relationships. For better understanding of inconsistent findings between the organizational strategies and organizational performance relationship, the contingency theory holds a primary contribution (Venkatraman, 1989). Thus, the present study has extended the contingency theory by assessing the moderating role of OC on CE and BP relationship in a broader perceptible.

Practical implications

Conclusively, the current study has forwarded numerous practical understandings in connection to CE and relevant practices in Pakistan's banking sector. First, the findings suggested that corporate entrepreneurial practices are important consideration for bank's performance. Banks can take considerable efforts to maximize their performance through fostering middle managers' perceptions of CE. Second, banks in Pakistan can maximize their performance by investing into the managerial practices for example; banks may extend

their support at managerial level, reward managers on bringing innovative ideas, allocate appropriate time and provide necessary discretion with regards to decision-making, as the present study has empirically proved that these factors are very critical in nature.

Third, the results have provided support to the notion that OC is a critical component that could potentially enhance BP of a bank. The contingency theory assumes that the lack of fit between the cultural values practiced by the middle managers in the Pakistani banking sector will hinder improvement initiatives. Hence, the intended organizational strategies of these banks in Pakistan and their OC should be brought into an appropriate fit. Finally, as stated at the outset of this study, in the turbulent environment, it is quite difficult for banks to grow or even survive without being entrepreneurial (Dess *et al.*, 1999). Specifically, corporate entrepreneurial practices help banks to grow and prosper in the competitive environment.

Therefore, the results of the present study suggested that policy makers in the banking sector of Pakistan should give serious consideration in harvesting the entrepreneurial culture for improving their BP and to survive in this competitive era. Specifically, the moderating role of OC suggested that effective alignment between bank's culture and their corporate entrepreneurial practices could potentially foster their BP and could also enhance the perception of middle managers about seriousness of their respective banks with regards to promotion of corporate entrepreneurial culture. Thus, the above results and discussions summarize that CE was a potentially significant predictor of BP in Pakistan's banking sector. Therefore, it is critical to pay-attention to these factors for fostering BP in the service sector.

Limitations and future research directions

Beside the robust results provided in the present study, it is essentially important to interpret those findings in-line with the limitations of the study. First, a cross-sectional design was adopted for the present study due to which, casual inferences from the population were not possible. Thus, the future researchers may consider a longitudinal design to test the theoretical body of the constructs over a longer period of time for responsive confirmation of the postulated relationships of the current study. Second, the present study applied self-reported measures. These measures could influence the behaviors, feelings and attitudes of the randomly selected participants hence, there is a possibility of social disability and/or common method variance (Podsakoff *et al.*, 2003; Podsakoff and Organ, 1986).

Although the present study attempted to reduce these issues by ensuring anonymity and improving the items of the scale (Podsakoff *et al.*, 2003, 2012) but still there are chances of the occurrence of these issues. Hence, future researchers may wish to use other strategies to assess OC–BP relationship. Third, it is essential to mention that BP related data provided in the present study was subjective in nature. Although researchers have demonstrated that subjective data are valid and reliable for assessing BP (Kaplan and Norton, 1996) on the contrary, researchers have also argued that subjective measures are susceptible to many types of judgmental biases (Dunlop and Lee, 2004). Although it was not an easy job to get objective data (Detert *et al.*, 2007) however, the objective measure would have strengthened the results further. Therefore, future research is required using objective measures to further ascertain the findings of the present study. Fourth, it is quite difficult to offer generalizability of the results for the present study as the sample of the study was mainly driven from Pakistan's Big Five banks and in particular, covering the four major cities of the country. Consequently, it would be appropriate to include other banks of Pakistan in the sample of the study for better generalization of the findings. Banks may also be studied and

compared with other financial institutions of the country for thorough understanding of the entire financial sector and its performance prospects.

Fifth, in the present study, the research model explained 24 per cent of the variance. This suggested that other factors may notably elaborate and explore variance toward BP. Therefore, future researchers may possibly consider other factors that could improve BP. Particularly, further investigation of the phenomenon is encouraged in service-based industries such as health care, education, insurance and hotel industries. Finally, the presented study potentially tested moderating influence of the OC on CE and BP relationship. This provides that OC is critical component in facilitating BP through facilitating organizations to enhance their corporate entrepreneurial practices. Therefore, future researchers may put more efforts in determining how OC can help organizations to foster their performance and enhance their entrepreneurial ability. In doing so, the researchers may also attempt to answer the questions such as what type of OC enhances CE that ultimately leads toward improved BP.

Conclusion

While extant research has established a positive relationship between CE and BP, the present study argues that this relationship may depend on contextual factors. Consequently, this study incorporated and tested OC as a boundary condition between CE and BP relationship. Therefore, the primary contribution of the present study lies in having found OC to moderate the relationship between CE and BP. Additionally, this study contributed to scholarship by focusing on Pakistan banking sector, which has been largely ignored by the previous studies despite the contribution of this sector to economic development. The results of this study are also of potential practical significance to bank managers. In particular, the results suggest that when CE and OC interacted together, a superior BP is likely to be achieved. Thus, if all employees share culture that is characterized by empowerment, coordination and integration, capability development and teamwork; their banks are likely to achieve complete advantage and superior performance.

References

- Aiken, L.S. and West, S.G. (1991), *Multiple Regression: Testing and Interpreting Interactions*, Sage Publications, Newbury Park, CA.
- Ali, I., Rehman, K.U., Ali, S.I., Yousaf, J. and Zia, M. (2010), "Corporate social responsibility influences, employee commitment and organizational performance", *African Journal of Business Management*, Vol. 4 No. 13, pp. 2796-2801.
- Al-Swidi, A.K. and Mahmood, R. (2011), "How does organizational culture shape the relationship between entrepreneurial orientation and the organizational performance of banks?", *European Journal of Social Sciences*, Vol. 20 No. 1, pp. 28-46.
- Ambad, S.N.A. and Wahab, K.A. (2016), "The relationship between corporate entrepreneurship and firm performance: evidence from Malaysian large companies", *International Journal of Business and Society*, Vol. 17 No. 2, pp. 259-280.
- Amit, R. and Schoemaker, P.J. (1993), "Strategic assets and organizational rent", *Strategic Management Journal*, Vol. 14 No. 1, pp. 33-46.
- Armstrong, J.S. and Overton, T.S. (1977), "Estimating nonresponse bias in mail surveys", *Journal of Marketing Research*, Vol. 14 No. 3, pp. 396-402.
- Baden-Fuller, C. (1995), "Strategic innovation, corporate entrepreneurship and matching outside-in to inside-out approaches to strategy research", *British Journal of Management*, Vol. 6 No. S1, pp. S3-S16.

-
- Bagozzi, R.P. and Yi, Y. (1988), "On the evaluation of structural equation models", *Journal of the Academy of Marketing Science*, Vol. 16 No. 1, pp. 74-94.
- Barney, J. (1991), "Firm resources and sustained competitive advantage", *Journal of Management*, Vol. 17 No. 1, pp. 99-120.
- Barney, J.B. (1986), "Organizational culture: can it be a source of sustained competitive advantage?", *Academy of Management Review*, Vol. 11 No. 3, pp. 656-665.
- Baron, R.M. and Kenny, D.A. (1986), "The moderator–mediator variable distinction in social psychological research: conceptual, strategic, and statistical considerations", *Journal of Personality and Social Psychology*, Vol. 51 No. 6, pp. 1173-1182.
- Barrett, H. and Weinstein, A. (1998), "The effect of market orientation and organization flexibility on corporate entrepreneurship", *Entrepreneurship Theory and Practice*, Vol. 23 No. 1, pp. 57-70.
- Barrett, H. and Weinstein, A. (2015), "Corporate entrepreneurship, the marketing mix, and business performance", in Wilson, E.J. and Hair, J.J.F. (Eds), *Proceedings of the 1997 Academy of Marketing Science (AMS) Annual Conference*, Springer International Publishing, Cham, pp. 144-150.
- Birkinshaw, J. (1997), "Entrepreneurship in multinational corporations: the characteristics of subsidiary initiatives", *Strategic Management Journal*, Vol. 18 No. 3, pp. 207-229.
- Borch, O.J., Huse, M. and Senneseth, K. (1999), "Resource configuration, competitive strategies, and corporate entrepreneurship: an empirical examination of small firms", *Entrepreneurship Theory and Practice*, Vol. 24 No. 1, pp. 49-70.
- Chin, W. (2010), "How to write up and report PLS analyses", in Vinzi, V.E., Chin, W.W., Henseler, J. and Wang, H (Eds), *Handbook of Partial Least Squares*, Springer, Berlin Heidelberg, pp. 655-690.
- Chin, W.W. (1998), "The partial least squares approach to structural equation modeling", *Modern Methods for Business Research*, Vol. 295 No. 2, pp. 295-336.
- Chin, W.W., Marcolin, B.L. and Newsted, P.R. (2003), "A partial least squares latent variable modeling approach for measuring interaction effects: results from a Monte Carlo simulation study and an electronic-mail emotion/adoption study", *Information Systems Research*, Vol. 14 No. 2, pp. 189-217.
- Cohen, J. (1988), *Statistical Power Analysis for the Behavioral Sciences*, Lawrence Erlbaum Associates, Hillsdale, NJ.
- Collis, D.J. (1994), "Research note: how valuable are organizational capabilities?", *Strategic Management Journal*, Vol. 15 No. S1, pp. 143-152.
- Covin, J.G. and Covin, T.J. (1990), "Competitive aggressiveness, environmental context, and firm performance", *Entrepreneurship Theory and Practice*, pp. 35-50.
- Covin, J.G. and Slevin, D.P. (1989), "Strategic management of small firms in hostile and benign environments", *Strategic Management Journal*, Vol. 10 No. 1, pp. 75-87.
- Covin, J.G. and Slevin, D.P. (1991), "A conceptual model of entrepreneurship as firm behavior", *Entrepreneurship Theory and Practice*, Vol. 16 No. 1, pp. 7-24.
- Covin, J.G., Slevin, D.P. and Heeley, M.B. (2000), "Pioneers and followers: competitive tactics, environment, and firm growth", *Journal of Business Venturing*, Vol. 15 No. 2, pp. 175-210.
- Davis, J.L. (2007), *Firm-Level Entrepreneurship and Performance: An Examination and Extension of Relationships and Measurements of the Entrepreneurial Orientation Construct*, University of Texas, Arlington.
- Denison, D., Nieminen, L. and Kotrba, L. (2014), "Diagnosing organizational cultures: a conceptual and empirical review of culture effectiveness surveys", *European Journal of Work and Organizational Psychology*, Vol. 23 No. 1, pp. 145-161.
- Denison, D.R. (1984), "Bringing corporate culture to the bottom line", *Organizational Dynamics*, Vol. 13 No. 2, pp. 4-22.

-
- Denison, D.R. (1990), *Corporate Culture and Organizational Effectiveness*, John Wiley and Sons, New York, NY.
- Denison, D.R. (2000), "Organizational culture: can it be a key lever for driving organizational change", in Cartwright, S. and Cooper, C. (Eds), *The Handbook of Organizational Culture*, John Wiley and Sons, London.
- Deshpand, R., Farley, J.U. and Webster, F.E. (1993), "Corporate culture, customer orientation, and innovativeness in Japanese firms: a quadrad analysis", *Journal of Marketing*, Vol. 57 No. 1, pp. 23-37.
- Dess, G.G., Lumpkin, G.T. and McGee, J.E. (1999), "Linking corporate entrepreneurship to strategy, structure, and process: suggested research directions", *Entrepreneurship Theory and Practice*, Vol. 23 No. 3, pp. 85-85.
- Detert, J.R., Treviño, L.K., Burris, E.R. and Andiappan, M. (2007), "Managerial modes of influence and counter productivity in organizations: a longitudinal business-unit-level investigation", *Journal of Applied Psychology*, Vol. 92 No. 4, pp. 993-1005.
- Dimitratos, P., Lioukas, S. and Carter, S. (2004), "The relationship between entrepreneurship and international performance: the importance of domestic environment", *International Business Review*, Vol. 13 No. 1, pp. 19-41.
- Duarte, P.A.O. and Raposo, M.L.B. (2010), "A PLS model to study brand preference: an application to the mobile phone market", *Handbook of Partial Least Squares*, Springer, Heidelberg, Berlin, pp. 449-485.
- Dunlop, P.D. and Lee, K. (2004), "Workplace deviance, organizational citizenship behavior, and business unit performance: the bad apples do spoil the whole barrel", *Journal of Organizational Behavior*, Vol. 25 No. 1, pp. 67-80.
- Elliott, A.C. and Woodward, W.A. (2007), *Statistical Analysis Quick Reference Guidebook: With SPSS Examples*, Sage, Thousand Oaks.
- Falk, R.F. and Miller, N.B. (1992), *A Primer for Soft Modeling*, University of Akron Press, Akron.
- Fornell, C. and Larcker, D.F. (1981), "Evaluating structural equation models with unobservable variables and measurement error", *Journal of Marketing Research*, Vol. 18 No. 1, pp. 39-50.
- Frese, M., Rousseau, D.M. and Wiklund, J. (2014), "The emergence of evidence-based entrepreneurship", *Entrepreneurship Theory and Practice*, Vol. 38 No. 2, pp. 209-216.
- Galbreath, J. (2005), "Which resources matter the most to firm success? An exploratory study of resource-based theory", *Technovation*, Vol. 25 No. 9, pp. 979-987.
- George, B.A. and Marino, L. (2011), "The epistemology of entrepreneurial orientation: conceptual formation, modeling, and operationalization", *Entrepreneurship Theory and Practice*, Vol. 35 No. 5, pp. 989-1024.
- Gordon, G.G. and DiTomaso, N. (1992), "Predicting corporate performance from organizational culture", *Journal of Management Studies*, Vol. 29 No. 6, pp. 783-798.
- Guth, W.D. and Ginsberg, A. (1990), "Corporate entrepreneurship", *Strategic Management Journal*, Vol. 11, pp. 5-15.
- Haase, H. and Franco, M. (2010), "Learning alliances, corporate entrepreneurship and business performance: is there really a linkage?", *International Journal of Business Environment*, Vol. 3 No. 1, pp. 57-73.
- Hair, J.F., Jr, Hult, G.T.M., Ringle, C. and Sarstedt, M. (2013), *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*, Sage Publications, Thousand Oaks.
- Hair, J.F., Jr, Black, W., Babin, B., Anderson, R. and Tatham, R. (2006), *Multivariate Data Analysis*, 6th ed., Prentice Hall, Upper Saddle River, NJ.
- Hair, J.F., Black, W.C., Babin, B.J. and Anderson, R.E. (2010), *Multivariate Data Analysis*, 7th ed., Prentice Hall, Upper Saddle River, NJ.

- Hair, J.F., Hult, G.T.M., Ringle, C.M. and Sarstedt, M. (2014), *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*, Sage Publications, Thousand Oaks, CA.
- Hair, J.F., Ringle, C.M. and Sarstedt, M. (2011), "PLS-SEM: indeed a silver bullet", *Journal of Marketing Theory and Practice*, Vol. 19 No. 2, pp. 139-152.
- Hair, J.F., Sarstedt, M., Pieper, T.M. and Ringle, C.M. (2012), "The use of partial least squares structural equation modeling in strategic management research: a review of past practices and recommendations for future applications", *Long Range Planning*, Vol. 45 Nos 5/6, pp. 320-340.
- Hair, J.F., Sarstedt, M., Ringle, C.M. and Mena, J.A. (2012), "An assessment of the use of partial least squares structural equation modeling in marketing research", *Journal of the Academy of Marketing Science*, Vol. 40 No. 3, pp. 414-433.
- Hall, R. (1993), "A framework linking intangible resources and capabilities to sustainable competitive advantage", *Strategic Management Journal*, Vol. 14 No. 8, pp. 607-618.
- Hancer, M., Ozturk, A.B. and Ayyildiz, T. (2009), "Middle-level hotel managers' corporate entrepreneurial behavior and risk-taking propensities: a case of Didim, Turkey", *Journal of Hospitality Marketing and Management*, Vol. 18 No. 5, pp. 523-537.
- Heavey, C. and Simsek, Z. (2013), "Top management compositional effects on corporate entrepreneurship: the moderating role of perceived technological uncertainty", *Journal of Product Innovation Management*, Vol. 30 No. 5, pp. 837-855.
- Helm, S., Eggert, A. and Garnefeld, I. (2010), "Modeling the impact of corporate reputation on customer satisfaction and loyalty using partial least squares", *Handbook of Partial Least Squares*, Springer, Heidelberg, Berlin, pp. 515-534.
- Henseler, J. and Chin, W.W. (2010), "A comparison of approaches for the analysis of interaction effects between latent variables using partial least squares path modeling", *Structural Equation Modeling: A Multidisciplinary Journal*, Vol. 17 No. 1, pp. 82-109.
- Henseler, J. and Fassott, G. (2010), "Testing moderating effects in PLS path models: An illustration of available procedures", *Handbook of Partial Least Squares*, Springer, Heidelberg, Berlin, pp. 713-735.
- Henseler, J. and Sarstedt, M. (2013), "Goodness-of-fit indices for partial least squares path modeling", *Computational Statistics*, Vol. 28 No. 2, pp. 565-580.
- Henseler, J., Ringle, C.M. and Sinkovics, R.R. (2009), "The use of partial least squares path modeling in international marketing", *Advances in International Marketing (AIM)*, Vol. 20, pp. 277-320.
- Henseler, J., Wilson, B., Götz, O. and Hautvast, C. (2007), "Investigating the moderating role of fit on sports sponsorship and Brand equity", *International Journal of Sports Marketing and Sponsorship*, Vol. 8 No. 4, pp. 321-329.
- Hitt, M.A., Xu, K. and Carnes, C.M. (2016), "Resource based theory in operations management research", *Journal of Operations Management*, Vol. 41, pp. 77-94.
- Hornsby, J.S., Kuratko, D.F. and Zahra, S.A. (2002), "Middle managers' perception of the internal environment for corporate entrepreneurship: assessing a measurement scale", *Journal of Business Venturing*, Vol. 17 No. 3, pp. 253-273.
- Hulland, J. (1999), "Use of partial least squares (PLS) in strategic management research: a review of four recent studies", *Strategic Management Journal*, Vol. 20 No. 2, pp. 195-204.
- Hult, G.T.M., Snow, C.C. and Kandemir, D. (2003), "The role of entrepreneurship in building cultural competitiveness in different organizational types", *Journal of Management*, Vol. 29 No. 3, pp. 401-426.
- Husain, I. (2006), "Pakistan banking sector", *Dawn*, available at: http://ishrathusain.iba.edu.pk/speeches/WordDocs/Pakistan_Banking_Sector.doc (accessed 4 May 2006).
- Ireland, R.D., Kuratko, D.F. and Covin, J.G. (2003), "Antecedents, elements, and consequences of corporate entrepreneurship strategy", *Academy of Management Proceedings, Academy of Management*, Vol. 2003 No. 1, pp. L1-L6.

- Jaworski, B.J. and Kohli, A.K. (1993), "Market orientation: antecedents and consequences", *Journal of Marketing*, Vol. 57 No. 3, pp. 53-70.
- Jennings, D.F. and Lumpkin, J.R. (1989), "Functioning modeling corporate entrepreneurship: an empirical integrative analysis", *Journal of Management*, Vol. 15 No. 3, pp. 485-502.
- José, L.R. and Manuel, J.S.-F. (2012), "Variance-based structural equation modeling: guidelines for using partial least squares in information systems research", in Manuel, M., Ovsei, G., Annette, L.S. and Mahesh, R. (Eds), *Research Methodologies, Innovations and Philosophies in Software Systems Engineering and Information Systems*, IGI Global, Hershey, PA, pp. 193-221.
- Kanji, G.K. and Wallace, W. (2000), "Business excellence through customer satisfaction", *Total Quality Management*, Vol. 11 No. 7, pp. 979-998.
- Kaplan, R.S. and Norton, D.P. (1996), "Using the balanced scorecard as a strategic management system", *Harvard Business Review*, Vol. 74 No. 1, pp. 75-85.
- Karagozoglu, N. and Brown, W.B. (1988), "Adaptive responses by conservative and entrepreneurial firms", *Journal of Product Innovation Management*, Vol. 5 No. 4, pp. 269-281.
- Khalabat, A. (2011), "History of banking in Pakistan – of humble origins and vast potential", *The Express Tribune*, available at: <https://tribune.com.pk/story/286458/history-of-banking-in-pakistan-of-humble-origins-and-vast-potential/> (accessed 4 November 2011).
- Kura, K.M. (2016), "Linking environmentally specific transformational leadership and environmental concern to green behaviour at work", *Global Business Review*, Vol. 17 No. S3, pp. 1S-14S.
- Kura, K.M., Shamsudin, F.M. and Chauhan, A. (2015), "Does self-regulatory efficacy matter? Effects of punishment certainty and punishment severity on organizational deviance", *SAGE Open*, Vol. 5 No. 2, p. 2158244015591822.
- Kuratko, D.F. (2010), "Corporate entrepreneurship: an introduction and research review", *Handbook of Entrepreneurship Research*, Springer, New York, NY, pp. 129-163.
- Kuratko, D.F. and Audretsch, D.B. (2009), "Strategic entrepreneurship: exploring different perspectives of an emerging concept", *Entrepreneurship Theory and Practice*, Vol. 33 No. 1, pp. 1-17.
- Kuratko, D.F. and Welsch, H.P. (2004), *Strategic Entrepreneurial Growth*, 2nd ed., Thomson, South-Western, Ohio.
- Lee, C., Lee, K. and Pennings, J.M. (2001), "Internal capabilities, external networks, and performance: a study of technology bases ventures", *Strategic Management Journal*, Vol. 22 No. 6-7, pp. 615-640.
- Lee, L., Petter, S., Fayard, D. and Robinson, S. (2011), "On the use of partial least squares path modeling in accounting research", *International Journal of Accounting Information Systems*, Vol. 12 No. 4, pp. 305-328.
- Lee, S.K.J. and Yu, K. (2004), "Corporate culture and organizational performance", *Journal of Managerial Psychology*, Vol. 19 No. 4, pp. 340-359.
- Lumpkin, G.T. and Dess, G.G. (1996), "Clarifying the entrepreneurial orientation construct and linking it to performance", *Academy of Management Review*, Vol. 21 No. 1, pp. 135-172.
- McDonald, R.P. (1996), "Path analysis with composite variables", *Multivariate Behavioral Research*, Vol. 31 No. 2, pp. 239-270.
- McGrath, R.G., Venkataraman, S. and MacMillan, I.C. (1994), "The advantage chain: antecedents to rents from internal corporate ventures", *Journal of Business Venturing*, Vol. 9 No. 5, pp. 351-369.
- McKinnon, J.L., Harrison, G.I., Chow, C.W. and Wu, A. (2003), "Organizational culture (OC): association with commitment, job satisfaction, propensity to remain, and information sharing in Taiwan", *International Journal of Business Studies*, Vol. 11 No. 1, pp. 25-44.
- Makadok, R. (2011), "The four theories of profit and their joint effects", *Journal of Management*, Vol. 37 No. 5, pp. 1316-1334.
- Miles, M.P. and Arnold, D.R. (1991), "The relationship between marketing orientation and entrepreneurial orientation", *Entrepreneurship Theory and Practice*, Vol. 15 No. 4, pp. 49-65.

- Miller, A. and Camp, B. (1985), "Exploring determinants of success in corporate ventures", *Journal of Business Venturing*, Vol. 1 No. 1, pp. 87-105.
- Morris, M.H. and Paul, G.W. (1987), "The relationship between entrepreneurship and marketing in established firms", *Journal of Business Venturing*, Vol. 2 No. 3, pp. 247-259.
- Morris, M.H., Kuratko, D.F. and Covin, J.G. (2011), *Corporate Entrepreneurship and Innovation*, 3rd ed., Cengage, Mason.
- Nazir, N.A. and Lone, M.A. (2008), "Validation of denison's model of organisational culture and effectiveness in the Indian context", *Vision: The Journal of Business Perspective*, Vol. 12 No. 1, pp. 49-58.
- Ogbonna, E. and Harris, L.C. (2000), "Leadership style, organizational culture (OC) and performance: empirical evidence from UK companies", *International Journal of Human Resource Management*, Vol. 11 No. 4, pp. 766-788.
- O'Reilly, C.A. and Chatman, J.A. (1996), "Culture as social control: corporations, cults, and commitment", *Research in Organizational Behavior*, Vol. 18 No. 18, pp. 157-200.
- Peteraf, M.A. (1993), "The cornerstones of competitive advantage: a resource-based view", *Strategic Management Journal*, Vol. 14 No. 3, pp. 179-191.
- Phan, P.H., Wright, M., Uchasaran, D. and Tan, W.L. (2009), "Corporate entrepreneurship: current research and future directions", *Journal of Business Venturing*, Vol. 24 No. 3, pp. 197-205.
- Podsakoff, P.M. and Organ, D.W. (1986), "Self-reports in organizational research: problems and prospects", *Journal of Management*, Vol. 12 No. 4, pp. 531-544.
- Podsakoff, P.M., MacKenzie, S.B. and Podsakoff, N.P. (2012), "Sources of method bias in social science research and recommendations on how to control it", *Annual Review of Psychology*, Vol. 63 No. 1, pp. 539-569.
- Podsakoff, P.M., MacKenzie, S.B., Lee, J.Y. and Podsakoff, N.P. (2003), "Common method biases in behavioral research: a critical review of the literature and recommended remedies", *Journal of Applied Psychology*, Vol. 88 No. 5, p. 879.
- Prahalad, C.K. and Hamel, G. (1990), "The core competence of the corporation", *Harvard Business Review*, Vol. 68 No. 3, pp. 79-91.
- Prajogo, D.I. and McDermott, C.M. (2005), "The relationship between total quality management practices and organizational culture", *International Journal of Operations & Production Management*, Vol. 25 No. 11, pp. 1101-1122.
- Prajogo, D.I. and Sohal, A.S. (2001), "TQM and innovation: a literature review and research framework", *Technovation*, Vol. 21 No. 9, pp. 539-558.
- Real, J.C., Roldán, J.L. and Leal, A. (2014), "From entrepreneurial orientation and learning orientation to business performance: analysing the mediating role of organizational learning and the moderating effects of organizational size", *British Journal of Management*, Vol. 25 No. 2, pp. 186-208.
- Rettab, B., Brik, A.B. and Mellahi, K. (2009), "A study of management perceptions of the impact of corporate social responsibility on organisational performance in emerging economies: the case of Dubai", *Journal of Business Ethics*, Vol. 89 No. 3, pp. 371-390.
- Rigdon, E.E., Schumacker, R.E. and Wothke, W. (1998), "A comparative review of interaction and nonlinear modeling", in Randall, E. and Marcoulides, G.A. (Eds), *Interaction and Nonlinear Effects in Structural Equation Modeling*, Lawrence Erlbaum Associates, Mahwah, NJ, pp. 1-16.
- Ringle, C.M., Sarstedt, M. and Straub, D. (2012), "A critical look at the use of PLS-SEM", *MIS Quarterly (MISQ)*, Vol. 36 No. 1.
- Ringle, C.M., Wende, S. and Becker, J.M. (2015), "SmartPLS 3", *SmartPLS*, GmbH, Bönningstedt.
- Russo, M.V. and Fouts, P.A. (1997), "A resource-based perspective on corporate environmental performance and profitability", *Academy of Management Journal*, Vol. 40 No. 3, pp. 534-559.
- Sadri, G. and Lees, B. (2001), "Developing corporate culture as a competitive advantage", *Journal of Management Development*, Vol. 20 No. 10, pp. 853-859.

- Scholz, C. (1987), "Corporate culture and strategy: the problem of strategic fit", *Long Range Planning*, Vol. 20 No. 4, pp. 78-87.
- Schuler, R.S. (2000), "The internationalization of human resource management", *Journal, International Management*, Vol. 6 No. 3, pp. 239-260.
- Sciascia, S., D'Oria, L., Bruni, M. and Larrañeta, B. (2014), "Entrepreneurial orientation in low- and medium-tech industries: the need for absorptive capacity to increase performance", *European Management Journal*, Vol. 32 No. 5, pp. 761-769.
- Selto, F.H., Renner, C.J. and Young, S.M. (1995), "Assessing the organizational fit of a just- in-time manufacturing system: testing selection, interaction and systems models of contingency theory", *Accounting, Organizations and Society*, Vol. 20 Nos 7/8, pp. 665-684.
- Sila, I. and Ebrahimpour, M. (2002), "An investigation of the total quality management survey based research published between 1989 and 2000: a literature review", *International Journal of Quality & Reliability Management*, Vol. 19 No. 7, pp. 902-970.
- Sila, I. and Ebrahimpour, M. (2005), "Critical linkages among TQM factors and business results", *International Journal of Operations & Production Management*, Vol. 25 No. 11, pp. 1123-1155.
- Simsek, Z. and Heavey, C. (2011), "The mediating role of knowledge-based Capital for corporate entrepreneurship effects on performance: a study of small- to medium-sized firms", *Strategic Entrepreneurship Journal*, Vol. 5 No. 1, pp. 81-100.
- Tabachnick, B.G. and Fidell, L.S. (2007), *Using Multivariate Statistics*, 5th ed., Allyn and Bacon/Pearson Education, Boston, MA.
- Teece, D.J., Pisano, G. and Shuen, A. (1997), "Dynamic capabilities and strategic management", *Strategic Management Journal*, Vol. 18 No. 7, pp. 509-533.
- Umrani, W.A. and Mahmood, R. (2015), "Examining the dimensions of corporate entrepreneurship construct: a validation study in the Pakistani banking context", *Mediterranean Journal of Social Sciences*, Vol. 6 No. 6, pp. 278-283.
- Van de Ven, A.H. and Drazin, R. (1985), "The concept of fit in contingency theory", *Research in Organizational Behavior*, Vol. 7, pp. 333-365.
- Venkatraman, N. (1989), "Strategic orientation of business enterprises: the construct, dimensionality, and measurement", *Management Science*, Vol. 35 No. 8, pp. 942-962.
- Wernerfelt, B. (1984), "A resource-based view of the firm", *Strategic Management Journal*, Vol. 5 No. 2, pp. 171-180.
- Wilden, R., Gudergan, S.P., Nielsen, B.B. and Lings, I. (2013), "Dynamic capabilities and performance: strategy, structure and environment", *Long Range Planning*, Vol. 46 Nos 1/2, pp. 72-96.
- Wood, C.C., Holt, D.T., Reed, T.S. and Hudgens, B.J. (2008), "Perceptions of corporate entrepreneurship in air force organizations: antecedents and outcomes", *Journal of Small Business and Entrepreneurship*, Vol. 21 No. 1, pp. 117-131.
- Yilmaz, C. and Ergun, E. (2008), "Organizational culture and firm effectiveness: an examination of relative effects of culture traits and the balanced culture hypothesis in an emerging economy", *Journal of World Business*, Vol. 43 No. 3, pp. 290-306.
- Zahra, S. (1986), "A canonical analysis of corporate entrepreneurship antecedents and impact on performance", *Academy of Management Best Papers Proceedings, 46th Annual Meeting*, pp. 71-77.
- Zahra, S.A. (1991), "Predictors and financial outcomes of corporate entrepreneurship: an exploratory study", *Journal of Business Venturing*, Vol. 6 No. 4, pp. 259-285.
- Zahra, S.A. (1993), "Environment, corporate entrepreneurship, and financial performance: a taxonomic approach", *Journal of Business Venturing*, Vol. 8 No. 4, pp. 319-340.
- Zahra, S.A. (2010), "Harvesting family firms' organizational social Capital: a relational perspective", *Journal of Management Studies*, Vol. 47 No. 2, pp. 345-366.

- Zahra, S.A. (2012), "Organizational learning and entrepreneurship in family firms: exploring the moderating effect of ownership and cohesion", *Small Business Economics*, Vol. 38 No. 1, pp. 51-65.
- Zahra, S.A. and Covin, J.G. (1995), "Contextual influences on the corporate entrepreneurship-performance relationship: a longitudinal analysis", *Journal of Business Venturing*, Vol. 10 No. 1, pp. 43-58.
- Zahra, S.A. and Garvis, D.M. (2000), "Entrepreneurship and firm performance: the moderating effect of international environmental hostility", *Journal of Business Venturing*, Vol. 15 Nos 5/6, pp. 469-492.
- Zheng, W., Yang, B. and McLean, G.N. (2010), "Linking organizational culture, structure, strategy, and organizational effectiveness: mediating role of knowledge management", *Journal of Business Research*, Vol. 63 No. 7, pp. 763-771.

Further reading

- Denison, D.R. and Mishra, A.K. (1995), "Toward a theory of organizational culture (OC) and effectiveness", *Organization Science*, Vol. 6 No. 2, pp. 204-223.
- Hornsby, J.S., Montagno, R.V. and Kuratko, D.F. (1992), "Critical organizational elements in corporate entrepreneurship: an empirical study", *Academy of Management*.
- Krejcie, R.V. and Morgan, D.W. (1970), "Determining sample size for research activities", *Educational and Psychological Measurement*, Vol. 30 No. 3, pp. 607-610.
- Pakistan Bank's Association (2014), available at: www.pakistanbanks.org/ (accessed April 28, 2014).
- Wang, C.L. (2008), "Entrepreneurial orientation, learning orientation, and firm performance", *Entrepreneurship Theory and Practice*, Vol. 32 No. 4, pp. 635-657.

Corresponding author

Kabiru Maitama Kura can be contacted at: kmkura@gmail.com