Corporate Governance

Does compliance with corporate governance code hinder corporate entrepreneurship? Evidence from the UK

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Abstract

Purpose – *This paper aims to investigate the possible trade-off between accountability and enterprise in the context of comply or explain governance. The issue was addressed through examining the effect of compliance with the corporate governance code (CGC) on corporate entrepreneurship (CE) and organisational performance.*

Design/methodology/approach – *Based on cross-sectional survey and content analysis of annual reports, the level of CE and compliance with the CGC were measured in the large and medium-listed companies in the UK during 2010. Partial least squares structural equation modelling (PLS-SEM) was used for data analysis.*

Findings – *The results suggest no conflict between compliance with the CGC and CE in the UK, which can be attributed to the flexibility of the "comply or explain" approach. This implies that no trade-off between accountability and enterprise in the context of comply or explain governance.*

Practical implications – *The study provides evidence in support of the regulatory governance framework in the UK and the comply or explain approach at large. This evidence contributes to the debate on the rules-based or principles-based governance, which may affect future CG regulations. It can also guide the directors to achieve the balance between their conformance and performance roles.*

Originality/value – *The study bridges the gap between CG and CE disciplines through developing a theoretical model that integrate contingency and agency theories lenses. Adopting a holistic approach provides insights into the relationships between CG and CE, rather than investigating the effect of each of these practices separately on organisational performance.*

Keywords *Performance management, Corporate governance, Organizational performance*

Paper type *Research paper*

1. Introduction

Too much attention has been paid to corporate governance (CG) since the latest financial crisis (Moxey and Berendt, 2008). CG deals with the ways in which suppliers of finance to corporations assure themselves of getting a return on their investment (Shleifer and Vishny, 1997). CG reforms have been proposed to safeguard shareholders' rights and reinstate investors' confidence in the capital market. These reforms have significantly contributed to the evolution of a number of CG mechanisms to mitigate agency conflicts resulting from the separation of ownership from control (Jensen and Meckling, 1976; Dey, 2008; Adams *et al.*, 2010). However, the recurring and cyclic nature of these crises raised concerns over the efficacy of these reforms in controlling management behaviour, as well as motivating their entrepreneurial behaviour towards improving performance (Keasey *et al.*, 2005). Therefore, there is a need for a wider perspective of CG that addresses the accountability and enterprise aspects of governance.

There is little agreement in the literature on the relationship between accountability and enterprise in the governance setting (Spira, 2001). For example, some scholars argue that overemphasis on accountability could hinder business prosperity and constraint enterprise (Hampel, 1998; Short *et al.*, 1999), while other scholars argue that there is no conflict

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between accountability and enterprise (Tricker, 1997; Charkham, 1998; Connell, 2004). However, none of these arguments is conclusively supported with empirical evidence, which necessitates further research (Cornforth, 2004; Spira, 2001; Spira and Bender, 2004; Kovacevic, 2009). Our research contributes to this issue and responds to calls from several scholars (Short *et al.*, 1998, 1999; Spira, 2001; Connell, 2004; Keasey *et al.*, 2005; Lees, 2005, 2010) to find out why such discrepancies exist in previous research. Thus, a wide perspective of CG was adopted by investigating the effect of compliance with the corporate governance code (CGC) on corporate entrepreneurship (CE) and the organisational performance. CG structure, especially the board of directors, plays a key role in enabling CE. Surprisingly, the literature related to structure and routines needed for CE, in general, has not addressed the role of CG. Therefore, the relationship between CG and CE remained unclear and needs further investigation (Phan *et al.*, 2009). A contingency theory perspective was used in this study, which assumes that a fit between contingencies, CG and CE is associated with organisational performance. Arguably, the comply or explain approach is flexible and help companies tailor their CG systems to fit their needs, instead of incurring additional costs for compliance with unnecessary practices (Adams *et al.*, 2010).

The empirical study was conducted in a leading country for the comply or explain approach, which is widely adopted across countries (Aguilera and Cuervo-Cazurra, 2009). A cross-sectional survey was undertaken over a sample of 113 UK-listed companies during 2010. In addition, a content analysis of the CG reports was performed. The results in general support the argument that the flexibility embedded in the comply or explain approach provides a healthy environment for companies to pursue their CE activities.

This study contributes to the literature at different levels. At the theoretical level, this study bridges the gap between the CG and the entrepreneurship disciplines through developing a contingency model that addresses the link between CG and CE. Integrating contingency and agency theories lenses contributes to the development of a comprehensive model of CG and CE and explaining mixed results in both CG and CE literature.

At the methodological level, using multiple data collection methods and a multivariate data analysis technique (PLS-SEM) provide a consistent body of evidence that increases the confidence in the findings (Ittner and Larcker, 2001) and robust findings that are based on an examination of multiple relationships among constructs simultaneously. In addition, using subjective and objective performance measures enhanced the credibility of performance tests (Ittner and Larcker (2001).

At the empirical level, the study was undertaken in the UK, the context which is under researched in the CG and CE literature, despite the differences between the legal and economic environments in the USA and the UK. Unlike previous studies, which have focused mainly on large quoted companies, the sample of this study comprises a wide range (medium and large) of quoted companies in the UK to gain insights into the relationship between CG and CE in different size of companies.

The remainder of this paper is organised in five sections. Next section reviews the relevant literature related to CG and CE. Section 3 explains the theoretical model, Section 4 summarises the research methods used in this study. The last two sections explain the results and conclude the paper.

2. Literature review

2.1 Corporate governance

From the agency theory perspective, CG mechanisms align managers' and shareholders' interests and resolve the agency problems (Renders and Gaeremynck, 2012). These mechanisms can be either internal or external mechanisms. Internal mechanisms include management ownership (Jensen and Meckling, 1976), independent board of directors, board committees and the separation of CEO and chair positions (Dalton *et al.*, 1998; Daily *et al.*, 2003; Keay and Loughrey, 2015). External mechanisms include competitive labour market (Fama, 1980), market for corporate control (Kosnik, 1987), external auditor, stakeholder activism, legal environment, rating organisation and media (Aguilera *et al.*, 2015). CG mechanisms in general and the board of directors in particular play an important role in monitoring managers and mitigating agency conflicts (Fama and Jensen, 1983; Dey, 2008; McKnight and Weir, 2009; Adams *et al.*, 2010; Keay and Loughrey, 2015).

Previous studies examined the relationship between CG mechanisms and performance. However, the mixed findings of these studies cast doubt on the notion of a direct and universal relationship between CG mechanisms and performance (Aguilera *et al.*, 2008; Chen and Nowland, 2010). Such inconsistency in the findings can be explained by the fact that governance–performance relationship seems to vary with respect to organisational contexts (Aguilera *et al.*, 2008; Chen and Nowland, 2010). For instance, Dey (2008) concluded that the governance structures vary across companies, as a result of variation in the level of agency conflicts. Some CG mechanisms demonstrate opposite effects in different countries or even in the same country from one period to another (Aguilera *et al.*, 2008; Chen and Nowland, 2010). Therefore, using a contingency theory perspective to address this issue can explain the mixed results in the governance literature.

2.2 Corporate entrepreneurship

Entrepreneurship is used in the literature to entail "new entry". The new entry can take various forms, such as business start-ups, launching new products or technology and expansion to a new market (Miller, 2011). However, CE is used to refer to entrepreneurship in established mature firms (Brunninge and Nordqvist, 2004).

CE is a multi-dimensional construct, and the literature suggests different typologies to gauge its dimensions (Miller, 1983; Covin and Slevin, 1989; Lumpkin and Dess, 1996; Short *et al.*, 2010). According to Miller (1983), three dimensions are commonly used in previous studies: innovativeness, risk taking and proactiveness. Innovativeness represents the company propensity to create new ideas and to develop new products or services. It also includes technological leadership through R&D in new progressions (Lumpkin and Dess, 1996; Rauch *et al.*, 2009). Risk taking represents the extent to which managers are willing to assume large and risky resources arrangements (Miller and Friesen, 1978). Proactiveness denotes looking for new opportunities including launching of new products or brands and removal of operations that are in the mature or deteriorating phases of life cycle (Venkatraman, 1989). Two additional dimensions were proposed by Lumpkin and Dess (1996) including autonomy and competitive aggressiveness. Autonomy denotes the ability of taking action free of organisational constraints. Competitive aggressiveness refers to the ability of companies to respond to the current competitive trends and demands in the market (Lumpkin and Dess, 2001).

Previous studies attempted to gauge the various aspects of CE. However, there is no agreement in the literature about the dimensions of entrepreneurship. The lack of agreement motivated research to test a wider theory of entrepreneurship, which has contributed to the difficulty of examining the effect of entrepreneurship on performance (Lumpkin and Dess, 1996). The main stream of research in CE scrutinises the performance implications of CE directly or under different environments and strategies (Miller, 2011). However, previous studies have focused on testing correlations between contingency factors and CE, instead of building a comprehensive CE model (Antoncic and Hisrich, 2004). Further, there is little agreement on what can be considered as moderators or contingency factors (Rauch *et al.*, 2009). Therefore, more research in different organisational settings is needed (Kurtako *et al.*, 2015) to warrant a better understanding of the domain of CE (Kurtako and Audretsch, 2013; Kurtako *et al.*, 2014).

2.3 Corporate governance and corporate entrepreneurship

The relationship between CG and CE has become controversial since the collapse of large companies in the USA such as Enron and WorldCom. The CEOs and boards of directors were more entrepreneurial and held less accountable (Taylor, 2003). Arguably, board of directors have to achieve a balance between entrepreneurship and CG (Taylor, 2003) or the conformance and performance roles of the board (Tricker, 2015).

Although calls for studying the association of governance with entrepreneurial activity is not new (Porter, 1992), few studies have been conducted. These studies focused on investigating the impact of governance structure on R&D (e.g. Daily and Dalton, 1992), but their results were contradictory (Zahra, 1996). For instance, Hitt *et al.* (1996) concluded that companies that engage in acquisitions and divestitures pay more attention to financial controls and less attention to strategic controls and internal innovation. Zahra (1996) found that CE is negatively associated with the proportion of non-executive directors because of their limited time and ability to absorb a massive amount of information about a company's operations (Zahra, 1996). Similarly, Zahra *et al.* (2000) concluded that commitment to CE is high when the stock ownership is high, CEO and chairman posts are separated and board size is medium.

In summary, despite the fact that both CG and CE have the same objective of improving performance and creating value, the two constructs at the theoretical level seem to be conflicting and may be incompatible. CG emphasises control, monitoring management performance and ensuring accountability (Keay and Loughrey, 2015). CE focuses more on innovation and creating new opportunities, where less control and restrictions on the decision-making are needed. In this study, the current research is extended by examining the extent to which the organisational performance is affected by the interaction of CG and CE. This will be discussed in details in the theoretical model in the next section.

3. Contingency model and hypotheses development

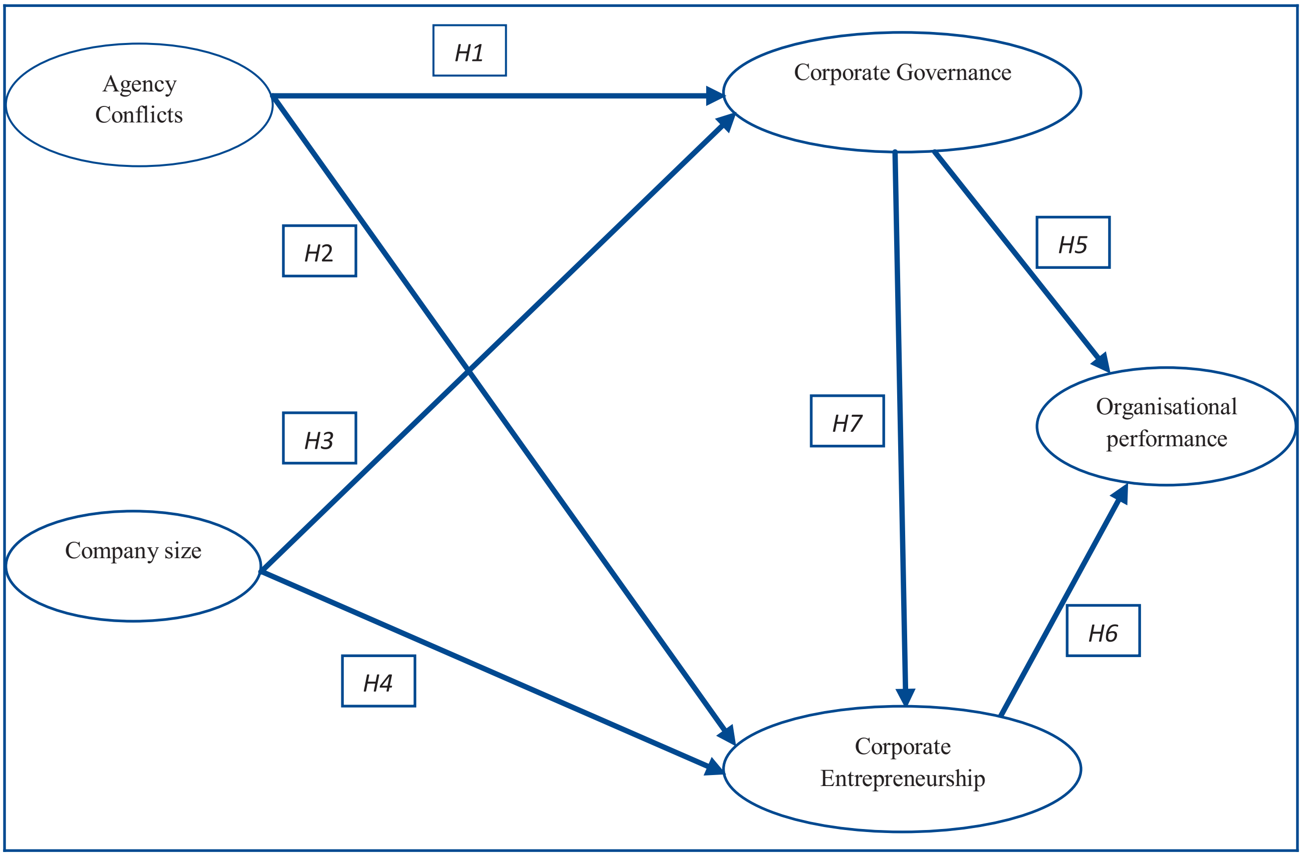
This study develops a contingency model, which assumes that business success is a function of the interaction between accountability and enterprise (Short *et al.*, 1999). To attain a better performance, the company needs to use a set of CG mechanisms to ensure accountability (Connell, 2004; Keay and Loughrey, 2015). In parallel, it should engage in entrepreneurial activities that contribute to value creation (Zahra, 1996). Following Gerdin and Greve's (2004), a Cartesian-contingency-mediation form of fit is used in this study.

Prior studies in the CE literature suggest some contingency factors (uncertainty, strategy, structure, company size and agency conflicts) influence CE decisions (Lumpkin and Dess, 1996; Jones and Butler, 1992). Similarly, limited number of contingencies have been suggested (e.g. company size, age, life cycle and agency conflicts) in CG studies (Dey, 2008; Dedman and Filatotchev, 2008). Thus, the model developed for this study (Figure 1) comprises the two key contingencies that commonly influence both CG and CE. Agency conflicts should be a key factor in this contingency model, as the research problem is merely based on the existence of the agency problems that arise from the separation between ownership and control. Company size should also be a relevant contingency factor, as agency conflicts increase with the increase in company's size (Jones and Butler, 1992). In addition, the literature suggests that company size affects both CG and CE (Lumpkin and Dess, 1996; Dey, 2008).

3.1 Contingency factors, corporate governance and corporate entrepreneurship

CG mechanisms minimise agency costs, align the interests of principal and agent (Dey, 2008; McKnight and Weir, 2009) and create value (La Porta *et al.*, 2000). Mitton (2002) analysed the CG mechanisms during the East Asian financial in the late 1990s and concluded that strong CG structures help to protect companies during the crisis time. Also, Ting (2006) and Dey (2008) argue that CG structure required to mitigate agency conflicts

Figure 1 The contingency model



varies from one company to another (Dey, 2008). Thus, the higher the agency conflicts the stronger is the CG structure to mitigate these conflicts (Elgharbawy and Abdel-Kader, 2013):

H1. The strength of CG structure is positively associated with agency conflicts.

From the agency theory perspective, agents are risk averse (Jensen and Meckling, 1976) and do not have an incentive to perform entrepreneurially (Jones and Butler, 1992). Further, the existence of agency conflicts and information asymmetries between managers and shareholders create agency costs (Jensen and Meckling, 1976). Agency costs consume company resources and may limit innovation and CE (Miller, 2011), particularly if the board of directors is conservative (Morck *et al*., 2005). Thus, the higher the agency conflicts the lower is the CE (Elgharbawy and Abdel-Kader, 2013):

H2. CE is negatively associated with agency conflicts.

Company size triggers agency problems in more than one way (Jones and Butler, 1992). For instance, the managers in large companies have a tendency to minimise risk by focusing on control functions at the expense of value creation functions (Ettlie, 1983). In addition, the moral hazard problem is more serious in large companies, as a result of the increasing number of agents involved in the entrepreneurial activities (Jones and Butler, 1992). Therefore, large company demands a strong CG structure to mitigate agency conflicts. Further, large companies can afford compliance with code provisions, which is sometimes costly (Arcot *et al*., 2010). Therefore, companies with large size are likely to implement a strong CG structure (Elgharbawy and Abdel-Kader, 2013):

H3. The strength of CG structure is positively associated with company size.

CE is normally associated with large public firms (Nason *et al.*, 2015). Company size was mostly used as a control variable in previous studies. However, there is some evidence that it would directly affect CE (Rauch *et al.*, 2009; Nason *et al.*, 2015). Hitt *et al.* (1996) argue that company size is negatively related to internal innovation. Also, Covin and Covin (1990) consider competitive aggressiveness as an effective strategic posture for small companies in a hostile environment. Furthermore, Rauch *et al.* (2009) concluded that small companies can quickly adapt to changes in the environment than large companies that suffer from organisational inertia and bureaucratic systems (Zahra *et al.*, 2000; Bierwerth *et al.*, 2015). Therefore, company size is likely to be negatively related to CE (Elgharbawy and Abdel-Kader, 2013):

H4. CE is negatively associated with company size.

3.2 Corporate governance, corporate entrepreneurship and performance

Previous CG studies focused on examining a small subset of CG characteristics. The results suggest that some characteristics are linked to firm performance and others are not (Brown and Caylor, 2009; Larcker *et al.*, 2007; Bebchuk and Weisbach, 2010). Studies that examined the impact of CG index on firm performance found that CG indices impede firm valuation (Gompers *et al.*, 2003; Bebchuk and Cohen, 2005; Cremers and Nair, 2005). Other studies could not find consistent results (Core *et al.*, 2006). The mixed results were explained by being period-specific, inadequate risk-adjustment and the endogenity problems (Bhagat and Bolton, 2008). However, the proponents of CG have notably cited the results of Gompers *et al.* (2003) as an evidence that good CG has a positive impact on corporate performance (Bhagat and Bolton, 2008):

H5. The strength of CG structure is positively associated with organisational performance.

CE is a key element for organisational success (Lumpkin and Dess, 1996). In a rapidly changing environment, adopting CE can result in improved organisational performance (Ireland *et al.*, 2003). Nonetheless, the magnitude of the relationship between CE and performance varies in the literature (Rauch *et al.*, 2009). For instance, Hult *et al.*, 2003; Avlonitis and Salavou, 2007 concluded that companies with high entrepreneurial orientation surpass companies with low entrepreneurial orientation. Other studies (Zahra, 1991; Lumpkin and Dess, 2001) found a weaker correlation between CE and performance or even no significant relationship at all (Covin *et al.*, 1994). However, the results of meta-analysis of prior literature support the positive association between CE and performance (Rauch *et al.*, 2009; Bierwerth *et al.*, 2015):

H6. CE is positively associated with organisational performance.

Studying the relationship between CE and CG is essential because strategic competitive advantages might not be shaped when CG structure does not encourage management to exploit opportunities (Phan *et al.*, 2009). The role of board of directors in identifying opportunities of growth by supporting CE is significant (Zahra *et al.*, 2009). Board of directors can also encourage value-creating CE through providing the required resources and political support (Huse, 2007). However, little is known in research about the structures and routines necessary for CE (Phan *et al.*, 2009). For instance, Zahra (1996) concluded that there is a negative impact for the high ratio of non-executive directors in the board and the short-term institutional ownership on CE. Similarly, Hitt *et al.* (1996) concluded that the market for corporate control has a negative impact on internal innovation. In summary, the literature tends to assume that a more focus on control and accountability is negatively associated with enterprise and innovation (Hitt *et al.*, 1996; O'Sullivan, 2000):

H7. The strength of CG structure is negatively associated with CE.

4. Research method

This study adopted a cross-sectional survey methodology, which is very common in the CG and CE literature. This methodology permits collecting a large amount of data from a considerable population economically and allows more control over the research process to reach generalizable findings (Saunders *et al.*, 2015).

4.1 Research context

To address the research problem of this study, the UK was selected as a context for a number of reasons. First, the research problem rests on the existence of the agency problem, which makes the UK an appropriate context where the agency problem is persistent (Solomon, 2013). In addition, the UK has one of the largest and most developed capital markets in the world, with a large number of companies listed in the LSE.

Second, most of previous studies have been conducted in the USA, and little is known about these practices in the UK. Although there are some similarities between the USA and the UK, significant differences still exist such as the regulatory framework of CG and the listing rules (Aguilera *et al.*, 2009), the concentration of institutional ownership and the balance of insiders and outsiders in board structures (Short *et al.*, 1999). These differences may make the results of empirical studies conducted in the USA not applicable to the UK (Short *et al.*, 1999).

Third, the UK is generally recognised as a world leader in CG reforms (Solomon, 2013). Unlike the regulated (rules-based) approach adopted by the USA to CG reforms, a principles-based approach has been adopted in the UK to persuade companies to comply more in substance than in form (Solomon, 2013). The flexibility in compliance with the CGC permits different levels of compliance with the code provisions to take place among companies. This variation in level of compliance enables capturing different levels of CG practices to be related to other constructs in the theoretical model.

In addition, the development of the CGC in the UK provides an interesting example of the continuous debate on accountability and enterprise in the governance context, which makes it an appropriate context to address the research problem. For instance, the Cadbury report (1992) emphasised the control role of board of directors, transperency and communication issues with shareholders and the role of institutional investors (Solomon, 2013). It has been criticised for being too prescriptive and overemphasising accountability and control aspects of governance at the expense of enterprise (Short *et al.*, 1999). Therefore, the Hampel Report (1998) addressed these concerns criticising the "box-ticking" approach used by many companies. Instead, the report proposed a CG system based on principles rather than prescription and compliance with the spirit of the code, not the form and letters (Short *et al.*, 1999; Keasey *et al.*, 2005).

Further, in the wake of the corporate scandals in the USA at the beginning of this century, the Higgs Report (2003) recommended increasing the proportion of non-executive directors in the boards (at least half), making their remuneration more reasonable, and establishing stronger links between non-executive directors and shareholders (Higgs Report, 2003). In response to concerns regarding the somewhat prescriptive recommendations of the Higgs Report, the Combined Code relaxed some of these recommendations (FRC, 2003). For instance, allowing small companies under FTSE 350 not to comply with the recommendation that at least half of the board members are independent non-executives. Also, following the financial crisis, Sir David Walker has revised the CG of banks and other financial institutions and the Financial Reporting Council (FRC) has issued a revised version of the code (CGC) in 2010 for the UK-listed companies based on Walker report (FRC, 2010). This was further revised in 2014.

4.2 The sample and data collection

Multiple methods have been used for data collection. The main method used was a postal questionnaire to collect data about CE and perceived performance. Archival data were collected from databases (FAME, Thomson One Banker and DataStream) about company size, Total Shareholder Return (TSR) and Beta. Further, content analysis was used to identify the level of compliance with the CGC.

The medium and large (more than 50 employees) companies in the UK were the target sample for this study. Small companies were eliminated, as they are unlikely to adopt strong CG structure. Only listed companies were used where the agency problem is persistent. Financial institutions were excluded from the sample, as they are more regulated and are subject to more scrutiny in terms of information disclosure, governance and other legal requirements, especially after the financial crisis (Garay and González, 2008). The study used a convenience sample of companies who positively responded to the survey questionnaire. However, the survey has targeted the entire population of the study to improve the response rate and to obtain a representative sample. FAME database was used to identify the list of companies and the details of key informants (CFOs) in these companies. Both FAME and Thomson One Banker databases were used to identify the number of employees for the participating companies in the survey.

DataStream was used to collect data related to the risk measure (Beta), as an operationalisation to the agency conflicts (Lovata and Costigan, 2002). Using risk as a surrogate for agency conflicts can be justified as the increased level of risk makes it difficult for the principal to decide whether changes in shareholder value are related to agent's actions or outside reasons; thus, the need for monitoring becomes imminent (Bloom and Milkovich, 1998; Lovata and Costigan, 2002). Beta was adopted as it is the most commonly used measure of the systematic risk that cannot be eliminated through diversification (Cooper *et al.*, 2001). Beta was measured by conducting a least squares regression between adjusted prices of the stock and the related DataStream market index.

In addition, the market-based performance (TSR) for 2010 was measured using the DataStream Return Indexto measure the growth in value of a shareholding over the year ending 2010 for the responding companies. TSR was used to proxy for shareholder value as the most popular and cited measure for shareholder wealth (Cooper *et al.*, 2001; Dulewicz and Herbert, 2004). It captures the two sources of shareholder value creation, i.e. the increase in share price during the year and the dividends received in that year. Arguably, stock price is the best measure of market expectations of a company's future performance (Rappaport, 1986). Accordingly, TSR is a good measure for shareholder value creation, as it can be used to estimate the stock's future value and the expected risk.

However, TSR is affected with unexpected and unexplained fluctuations in the stock market and failing to directly consider the efficiency of using assets to generate profits, regardless of how profits are delivered to shareholders in the forms of dividends or capital appreciation (Dulewicz and Herbert, 2004). To address these problems, TSR was not used as the only performance measure; perceived performance measures were used in addition to gauge the multiple-aspects of performance.

4.3 The questionnaire

The questionnaire measured was used to measure CE and perceived performance. As CE is a multi-dimensional construct and different typologies have been used in the literature to capture its dimensions, a comprehensive instrument containing five dimensions of CE was used (Table I for more details). The dimensions include Covin and Slevin (1989), Lumpkin and Dess (1996) and Lumpkin *et al.* (2009). A semantic differential instrument was used to derive the attitude of the CFOs towards innovativeness, risk-taking, proactiveness, autonomy and competitive aggressiveness on a seven-point rating scale.

Table I

Construct	*Dimensions*	*Source*	*Description of measure*
CE	Innovation	Covin and Slevin (1989)	Emphasis on R&D and innovation New lines of products Change in product lines
	Proactiveness	Covin and Slevin (1989)	Initiatives in dealing with competitors Introducing new products, administrative techniques and operating technologies Competitive posture
	Competitive aggressiveness	Lumpkin and Dess (2001)	Aggressiveness and intense competition
	Risk taking	Covin and Slevin (1989)	Tendency to accept high risk projects Bold, wide-ranging acts to achieve firm's objectives Aggressive posture to exploit potential opportunities
	Autonomy	Lumpkin *et al.* (2009)	Supporting individuals/teams to work autonomously Individuals/teams decide themselves business opportunities Individuals/team take decisions without constantly referring to supervisors Employee initiatives and input play important role in deciding entrepreneurial opportunities

To capture the multiple-aspects of organisational performance, this study adopted both subjective and objective performance measures. Combining survey data with objective performance data from publicly available sources helps to enhance the credibility of performance tests (Ittner and Larcker, 2001). The perceived performance was used as it contains the financial and non-financial aspects of performance. It is also the most commonly used measure in the CE literature and the contingency-based studies in particular. Because CG studies mainly depend on the market-based performance measures for shareholder value creation, this study adopted the market-based performance, as a complementary to the perceived performance measures.

The perceived performance was measured using an adapted instrument from Khandwalla (1977) that comprises financial measures, as well as non-financial measures. On a seven-point Likert scale, the instrument comprises six questions as respondents were asked to rate their performance relative to the major competitors in the following areas: profitability (measured by ROI for example), sales growth, development of new products, customer satisfaction and public image and goodwill.

Questionnaires were posted to the CFOs of 700 companies in September 2010. Within four weeks, 82 valid responses and 20 non-valid responses had been received. Afterwards, a reminder letter was sent to the non-respondents. As a result, 25 valid responses were received and 14 questionnaires were returned as unreachable, refused to participate or ineligible. A second follow-up to the non-respondents was undertaken. Consequently, six valid responses were received taking the total responses to 113; that is a response rate 16 per cent. The *t*-tests were used to check for non-response. The results showed no significant difference between the late and early respondents.

4.4 Content analysis

The lack of information about the level of compliance with the CGC necessitated the use of content analysis to measure the level of compliance of each sampled company. The content of CG report was analysed to identify which provisions a company complies with and which provisions are not. In addition, governance information available on companies' websites was used. The analysis was made for 2010, which is the same year of conducting the survey. The coding process was based on the Combined Code on CG (FRC, 2008) provisions[1], which was the effective version of the code during the study period. The first version of the combined code was issued in 1998 endorsing the Cadbury, Greenbury and Hampel recommendations. Later on, a number of versions (e.g. the Combined Code, 2003, 2006, 2008) have been issued to include the recommendations in the Turnbull, Higgs and Smith Reports. The code provisions cover four areas including board of directors, remuneration, accountability and audit and relationship with shareholders. The coding was made giving each provision a code of either 0 or 1 for non-compliance and compliance, respectively. Then, the codes were added up to measure the total compliance score of each company up to 49 (the number of provisions). The next step was converting the compliance score into percentage of compliance to standardize the value of compliance and minimise the variation in its value.

4.5 Constructs measurement and data analysis

Table II summarises the measures used for the constructs included in the model. Data were examined to check for any missing data and outliers. The missing data were less than 10 per cent, which can be ignored (Hair *et al.*, 2010). Also, the results of Little's MCAR test (Chi-square, 3.427; df, 3806; Sig., 1.00; $p > 0.05$) ensured the randomness of missing data.

This study also used exploratory factor analysis (EFA) to assess the unidimensionality of the theoretical constructs (CE and perceived performance) using the principal component method (Hair *et al.*, 2010). The results of the EFA presented in Table III indicate that one factor has emerged from this analysis for each construct (CE and perceived performance) after excluding two indictors from each construct. All loadings were high, greater than 0.50, which confirm the unidimensionality of both CE and the perceived performance. The EFA excluded profitability and customer satisfactions from the perceived performance, as well as risk taking and autonomy from CE.

Partial least squares structural equation modelling (PLS-SEM) was adopted for data analysis and hypotheses testing. PLS-SEM helps statistical modelling to move forward without the restrictions of large sample size, strong underlying theory and normally distributed data (Smith and Langfield-Smith, 2004). As the PLS-SEM algorithm requires standardised data for latent variables, software (e.g. SmartPLS) transform all data entered for indicators using z-standardisation. The two-step approach of the PLS-SEM, i.e. measurement model and structural model was used to test the hypotheses.

The results of EFA were refined using the measurement model assessment procedures in PLS-SEM. These procedures include examining the loadings of measures with their respective constructs, which were well above 0.50, Cronbach's alpha (0.78 and 0.74)and composite reliability (0.87 and 0.85) for CE and perceived performance, respectively. These results suggest that the reliability of the constructs is satisfactory.

To assess the validity of the constructs, convergent validity was measured using average variance extracted (AVE), which should be ≥0.5 to indicate a sufficient level of convergent

Table II Constructs measurements

Construct	*Measurement*	*Source of data*	*References*
Agency conflicts	Beta (Risk Measure)	DataStream	Cooper *et al.* (2001), Lovata and Costigan (2002)
Company size	Log (Number of employees)	FAME and Thomson One Banker	Merchant (1981), Ezzamel (1990)
Corporate Governance Code (CGC)	Compliance with the Combined Code on Corporate Governance	Content Analysis	Current Study
Corporate Entrepreneurship (CE)	Innovativeness, Proactiveness, Risk taking, Competitive aggressiveness Autonomy	Questionnaire	Covin and Slevin (1989), Lumpkin and Dess (2001), Lumpkin *et al.* (2009)
Perceived performance	Sales growth, Development of new products, Public image and goodwill, Profitability and Customer satisfaction	Questionnaire	Adapted from Khandwalla (1977)
Market-based performance	Total Shareholder Return (TSR)	DataStream	Cooper *et al.* (2001), Dulewicz and Herbert (2004)

Table III Descriptive statistics

Constructs	Mean	SD	Minimum	Maximum	Skewness	Kurtosis
Agency conflicts[a]						
Beta (AG)	0.793	0.397	0.07	2.19	0.649	0.371
Company size[a]						
Log (no. of employees) (SZ)	6.5489	2.113	3.93	12.97	0.780	0.226
No. of employees	11,394	53,868	51	428,202		
Compliance[a]						
Percentage of compliance with the CGC provisions	0.80	0.21	0.14	1	−0.103	0.155
Corporate entrepreneurship[a]	4.433	1.035	1	7	−0.536	1.190
Innovativeness	4.10	1.40	1	7	−0.153	−0.639
Proactiveness	4.49	1.099	1	7	−0.576	0.888
Competitive aggressiveness	4.70	1.32	1	7	−0.651	0.991
Perceived performance[a]	4.618	0.867	1.67	6.33	−0.213	0.477
Sales growth	4.43	1.209	1	7	−0.260	0.135
Development of new products	4.59	1.067	1	7	−0.0179	0.674
Public image and goodwill	4.80	1.104	1	7	−0.431	0.754
Market-based performance[a]						
Total shareholder return	0.20	0.67	−2.17	3.34	0.166	0.886

Notes: [a]Descriptive data of the main constructs averaged across all measures for the sample ($N = 113$) are shown in italic; measures statistics are shown in regular font below the construct name

validity (Hair *et al.*, 2010). The value of AVE was 0.691 and 0.659 for CE and the perceived performance, respectively. Two criteria were used to assess the discriminant validity including Fornell–Larcker's criterion and cross loadings. The correlation matrix of indicators shows that all indicators have high loadings (above 0.50) with their respected constructs compared with their loadings to the other constructs in the same row or column, which means no cross loading. In addition, the AVE for each construct was higher than the squared inter-correlation between this construct and any other constructs (Fornell and Larcker, 1981).

5. Empirical results

5.1 Descriptive statistics

The data examination was followed by descriptive analysis as detailed in Table IV. The descriptive statistics of the contingency factors reveal that company size, measured by the number of employees, in the sample tends to be large (11,394 employees in average), which might be affected by the existence of some companies with extremely large numbers of employees. As the number of employees is a continuous variable and comprises a wide range of values, it has been transformed using the logarithm term to minimise the variation in this variable and to avoid violations of some statistical assumptions underlying the multivariate techniques (Hair *et al.*, 2010). The value of the risk measure (Beta), which was used as a surrogate for agency conflicts ranges from 0.07 to 2.19 depending on the

Table IV Exploratory factor analysis

Construct	Dimensions	Communalities	Final loadings	Eigen value	Variance extracted	KMO	Bartlett's test (sig.)
CE	Innovativeness	0.626	0.791	2.073	0.691	0.690	0.00
	Proactiveness	0.726	0.852				
	Competitive aggressiveness	0.722	0.850				
Perceived performance	Sales growth	0.698	0.835	1.878	0.659	0.652	0.00
	Development of new products	0.742	0.861				
	Public image and goodwill	0.538	0.734				

industry type, with mean equal to 0.793. However, no standardisation was needed as there was no much variation in these values.

The descriptive statistics indicate above average scores of CE (4.43 of 7). These results suggest that companies, in general, tend to be entrepreneurially oriented. There is also above the average score of perceived performance (4.618 of 7), which suggest that companies tend to have high perceived performance. The market-based performance, measured by TSR, indicates a wide range of values from −2.17 to 3.34, with mean value of 0.20, depending on the type of industry.

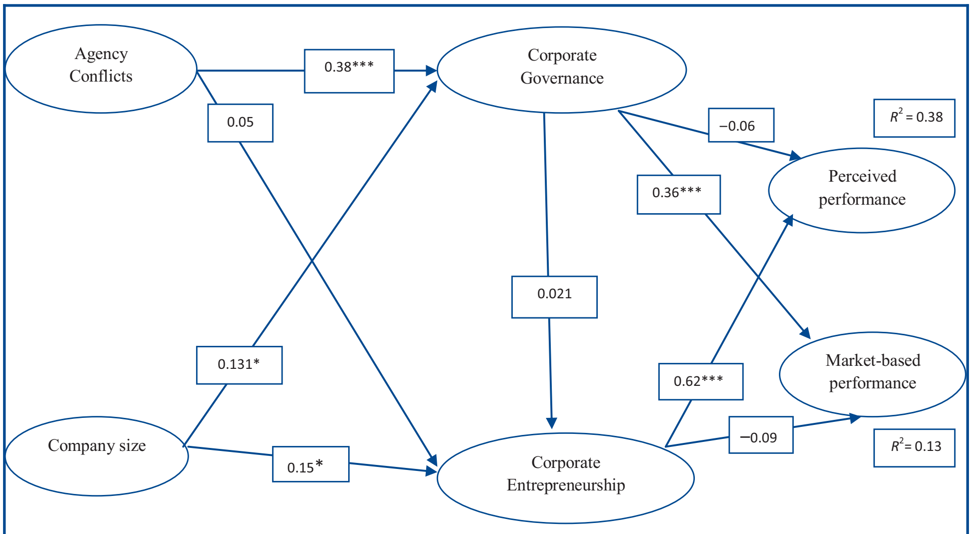
5.2 Structural model

Evaluating PLS-SEM models was performed using non-parametric prediction-oriented measures because it assumes a distribution free variance (Chin, 1998). The coefficient of determination (R-square) and path coefficients was used to assess PLS structural model (Chin, 1998; Hair *et al.*, 2011). Bootstrapping resampling method was used to assess the significance and stability of path coefficient estimates (Figure 2). The results of hypotheses testing and their implications are as follows:

The results related to the relationships between the contingencies and compliance with CGC indicate significant positive association between agency conflicts and company size on the one hand, and compliance with the CGC on the other hand, at the levels of 1 and 10 per cent, respectively, which support both *H1* and *H3*. However, the results related to the relationships between the contingencies and CE indicate non-significant association between agency conflicts and CE rejecting *H2*. Interestingly, a significant association was found between company size and CE at the level of 10 per cent but in the opposite direction. Hence, the association was not negative as hypothesised in *H4*.

Regarding the relationships between CG, CE and performance, the results suggest that compliance with the CGC is significantly and positively associated with market-based performance at the level of 1 per cent, but not significantly associated with perceived performance. Therefore, *H5* is supported. Consistent with *H6*, CE is significantly and positively associated with perceived performance at the level of 1 per cent, but not significantly associated with market-based performance. Hence, *H6* is supported.

Figure 2 Path diagram with path coefficients



Notes: *$p \leq 0.10$; **$p \leq 0.05$; ***$p \leq 0.01$

Finally, the hypothesised negative association between CG and CE was not supported because of the non-significant relationship between compliance with the CGC and CE. Accordingly, *H7* was rejected. In a nutshell, the analysis of results supported all the hypotheses of the study except for the second, fourth and last hypothesis (Table V). In other words, the results failed to support neither the negative relationship between agency conflicts and CE nor the negative relationship between CG and CE. Moreover, the results suggest positive association between company size and CE instead of the hypothesised negative association.

6. Discussion

The significant association between agency conflicts and CG (*H1*) is consistent with the agency theory argument that resolving agency conflicts require monitoring management (Denis, 2001) through selecting suitable monitoring and bonding control methods to align interests and optimise performance (Jones and Butler, 1992). It is also in line with the findings of the survey conducted by Shleifer and Vishny (1997) and the evidence provided by Dey (2008) on a positive association between agency conflicts and CG mechanisms. However, the insignificant association between agency conflicts and CE (*H2*) does not support the view that agency conflicts cause agency costs, consume a company's resources and limit CE (Miller, 2011). Possibly, the negative effect of agency conflicts on CE has been ameliorated by the CG mechanisms that mitigate agency conflicts. This highlights the importance of examining the effect of both agency conflicts and CG mechanisms at the same time on CE. Also, the relationship between agency conflicts and CE was well articulated at the theoretical level in the agency theory literature. However, there is no enough empirical evidence to support this relationship, the area which needs further investigation.

Moreover, the significant association between company size and CG (*H3*) is consistent with the agency theory argument that increased company size causes agency conflicts (Jones and Butler, 1992) which, in turn, leads to a greater demand on CG mechanisms to mitigate these conflicts (Dey, 2008). It is also consistent with prior studies, which concluded that the fit between compliance with CG codes and company size is important in predicting performance (Haniffa and Hudaib, 2006). Also, compliance with some provisions of CG codes can be costly and not appropriate to small companies (Arcot *et al.*, 2010) such as having a high percentage of non-executive directors in the board of directors. In contrast, large companies are in a better position in terms of the availability of resources to comply with the CGC.

Interestingly, the significant positive association between company size and CE (*H4*) contradicts the view that smaller companies are flexible and can quickly adapt to changes in environment to take new opportunities (Rauch *et al.*, 2009). Hence, they are more entrepreneurial (Mintzberg, 1973). It also contradicts the results of some empirical studies, which suggest that company size is negatively associated with internal innovation (Hitt *et al.*, 1996; Bierwerth *et al.*, 2015), but in line with the results of other studies (Miles and Arnold, 1991). The inconclusive results in the literature can be attributed to the different

Table V Hypotheses testing results

Hypothesis	*Description*	*Predicted sign*	*Coefficients*	*Results*
H1	Agency conflicts → CG	+	0.38***	Accepted[a]
H2	Agency conflicts → CE	–	0.05	Not accepted
H3	Company size → CG	+	0.131*	Accepted[b]
H4	Company size → CE	–	0.15*	Not Accepted
H5	CG → Performance	+	0.36***	Accepted[b]
H6	CE → Performance	+	0.62***	Accepted[a]
H7	CG → CE	–	0.021	Not accepted

Notes: [a]$p \leq 0.01$; [b]$p \leq 0.10$

operational definitions of company size in different studies and different contexts (Nason *et al.*, 2015). For instance, small size companies in the USA are companies with less than 500 employees, while small companies in the UK are companies with less than 50 employees (Antoncic and Hisrich, 2004). The greater resource availability of larger firms might also explain these results. Slack resources available in large companies enable these companies to absorb failure, while limited resources in small companies make unsuccessful strategic renewal a real threat to their survival (Bierwerth *et al.*, 2015). Further, the heterogeneous nature of CE assumes companies engage in CE activities differently. While small companies use CE for growth to overcome liabilities of smallness, large companies use CE for learning to overcome liabilities of inertia (Nason *et al.*, 2015). Therefore, further investigation of this relationship is needed (Antoncic and Hisrich, 2004; Nason *et al.*, 2015).

The significant association between CG and market-based performance (*H5*) is consistent with the argument of agency theory that monitoring agents' behaviour minimises agency costs, protect shareholders' investments (Hendrey and Keil, 2004) and achieve a high level of performance (Aguilera *et al.*, 2008). The results are also consistent with previous studies, which suggest that CG structure is one of the critical factors in shaping firm value and development of financial markets across countries (La Porta *et al.*, 2000). These results contribute to the literature, as it provides evidence form the UK, where most of previous studies examine the effect of compliance with Cadbury Report on performance (Dedman, 2002). Hence, little is known about compliance with the recent versions of the CGC (Arcot *et al.*, 2010). However, the result with respect to the perceived performance was insignificant because CG mechanisms are normally connected in the literature to the investors' reactions and stock market returns.

Similarly, the significant association between CE and perceived performance (*H6*) is consistent with the view that CE is a key element of organisational success (Lumpkin and Dess, 1996) and prerequisite for yielding a high performance from a new entry (Covin and Slevin, 1991; Zahra, 1993). This argument has been criticised for being normative (Lumpkin and Dess, 1996); however, the results of the current study provide evidence that support this argument, which can be attributed to the multi-measures of performance (e.g. financial and non-financial measures in the perceived performance). Because performance is a multidimensional construct, the relationship between CE and organisational performance is sensitive, to a large extent, to the type of performance measures used (Lampkin and Dess, 1996; Rauch *et al.*, 2009).

Finally, the insignificant association between CG and CE (*H7*) does not support the notion of tension between conformance and performance, which is based on the argument that more focus on control and accountability may negatively affect enterprise and innovation (O'Sullivan, 2000). One possible explanation is the flexible regulatory regime in the UK, which has been established the principle-based or comply or explain approach to CG (Arcot and Bruno, 2005; Keay, 2014; Luo and Salterio, 2014). Additionally, the code provisions in the UK are constantly subject to revisions and amendments to respond to any concerns raised by companies and any changes in the business environment. Therefore, many versions were issued from the CGC since issuing its first version in 1998. Non-compliance with some provisions of the code for genuine reasons, explained in the annual report, does not negatively affect the company performance (Arcot and Bruno, 2005; Keay, 2014).

The results also can be explained as compliance with some provisions in the code (e.g. outside directors) may negatively affect CE, while compliance with other provisions (e.g. stock ownership by outside directors) may positively affect CE and can somewhat mitigate the negative impact of other mechanisms (Zahra, 1996). Therefore, the final effect of compliance with the code provisions may depend on the relative significance of each effect. This can justify the importance of examining the overall effect of compliance with the code provisions, compared with examining the effect of complying with single provisions.

7. Conclusion

This study analysed the possible trade-off between accountability and enterprise in the context of comply or explain governance, where the regulatory framework emphasises the need for a CG system to address both accountability and enterprise (Short *et al.*, 1999). The results could not provide evidence of conflict or tension between CG and CE, which imply that compliance with CGC does not hinder companies to pursue their entrepreneurial orientation in the comply or explain governance context.

The study contributes to the debate over the regulatory approach to CG, whether principles-based or rules-based approach would efficiently ensure accountability without compromising enterprise. This debate has noticeably increased since passing the controversial Sarbanes-Oxley Act of 2002 in the USA, which provides a good example of the rules-based approach. Though it has increased investor confidence and reduced fraud (FERF, 2005), it has been criticised for significantly increasing the cost of compliance to the limit that small companies cannot afford. This has encouraged a lot of companies to go private and to deregister their common stock from SEC. Even large companies lowered their investments and risk-taking because of the increase in director liability and the increased focus on internal controls, which distract them from core business concerns (Coates and Srinivasan, 2014).

The results of this study provide evidence in support of the regulatory governance framework in the UK and the comply or explain (principle-based) approach at large. This can be attributed to the flexibility embedded in the "comply or explain" approach adopted in the UK (Keay, 2014; Luo and Salterio, 2014). This approach allows companies to tailor their CG practices taking into account their size, shareholding structure, sectoral specificities and the challenges they are facing. For instance, in countries where combining the board chairman and CEO posts is not allowed according to the CGC, the flexibility embedded in the code enables a board chairman to temporarily become the executive chairman if the CEO is forced to step down or due to a sudden accident. It also encourages companies to act more responsibly by considering whether their CG practices are appropriate and providing them with a target to meet (Ecoda, 2012). Contrasting the impact the governance regulatory approaches have on CE can help in shaping future regulations. It can also guide the directors to achieve the balance between their conformance and performance roles. Also, studying the impact of the governance regulatory approaches on CE under different contingencies helps academics to draw conclusions about the best CG practices and regulatory approaches in different contexts.

However, this study examined only limited contingencies. Future research can examine other contingencies such as uncertainty and strategy. The study also does not examine the effect of compliance with each of the CGC provisions on CE and organisational performance. Therefore, future research can examine these relationships to gain insights into the effect of compliance with the individual provisions of the CGC on CE and organisational performance In addition, the theoretical framework of this study is based on agency theory and contingency theory, though integrating both theories has contributed to the development of a comprehensive theoretical framework to address the research problem, both theories have been criticised for ignoring the social power and factors that may affect the choices and practices of a company. Future research can use other theoretical lenses, such as institutional theory or stakeholder theory, to gain insights into other social factors that influence the relationship between CG and CE from a wider perspective. Also, using a cross-sectional survey methodology does not establish causality relationships between constructs. Studies which embrace a longitudinal perspective and panel data for a number of years would help to see how the dynamics of compliance with CGG and CE develop and change over time. Finally, this study is limited to a sample of UK-quoted companies, which may result in the findings being applicable only to this context. Future research can benefit from conducting comparative studies in different contexts with different regulatory frameworks, to develop a better understanding of the relationship between CG and CE.

Note

1. To be consistent with the responses of the questionnaire received in 2010, we used the financial reports of the same year. Thus, we used The Combined Code on Corporate Governance (2008) provisions, which were in effect at that time. The latest version issued by the FRC was in September 2014 and called The UK Corporate Governance Code (the Code).

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