JOURNAL OF MANAGEMENT STUDIES

Journal of Management Studies 48:5 July 2011
doi: 10.1111/j.1467-6486.2010.00961.x

The Influence of Top Management Team's Corporate Governance Orientation on Strategic Renewal Trajectories: A Longitudinal Analysis of Royal Dutch Shell plc, 1907–2004

Zenlin Kwee, Frans A. J. Van Den Bosch and Henk W. Volberda

Delft University of Technology; Rotterdam School of Management, Erasmus University; Rotterdam School of Management, Erasmus University

ABSTRACT Using the upper echelons perspective together with corporate governance and strategic renewal literature, this paper investigates how top managers' corporate governance orientation influences a firm's strategic renewal trajectories over time. Through both a qualitative analysis (1907–2004) and a quantitative analysis (1959–2004), we investigate this under-researched question within the context of a large incumbent firm: Royal Dutch Shell plc. Our results indicate that top managers having an Anglo-Saxon corporate governance orientation are more likely to pursue exploitative and external-growth strategic renewal trajectories, while those having a Rhine corporate governance orientation are more likely to pursue exploratory and internal-growth strategic renewal trajectories. We also found a positive moderating effect of the proportion of shareholders from the Anglo-Saxon countries on exploitative and external-growth strategic renewal trajectories. Our findings indicate that top managers' corporate governance orientation can be an important antecedent of strategic renewal and of organizational ambidexterity, both of which influence corporate longevity.

INTRODUCTION

Research on strategic renewal has focused mainly on processes and outcomes of strategic renewal in large established firms (e.g. Agarwal and Helfat, 2009; Baden-Fuller and Volberda, 1997; Capron and Mitchell, 2009; Flier et al., 2003; Kim and Pennings, 2009; Volberda et al., 2001a, 2001b). However, previous research also suggests that current literature on strategic renewal could benefit from studying the underlying organizational antecedents of strategic renewal using a longitudinal approach.

Address for reprints: Zenlin Kwee, Department of Innovation Systems, Faculty of Technology, Policy and Management, Delft University of Technology, Postbus 5015, 2600 GA Delft, The Netherlands (z.kwee@tudelft.nl).

This paper intends to contribute to the following two research gaps. First, the role of top managers and their corporate governance orientation are an underexplored organizational antecedent of strategic renewal (e.g. Filatotchev et al., 2006; Floyd and Lane, 2000; Hurst et al., 2007; Volberda et al., 2001a). Upper echelons literature pinpoints that compositional and background characteristics of top managers play a crucial role in recognizing and pursuing strategic choices (Hambrick and Mason, 1984; Wiersema and Bantel, 1992). In this research stream, Johnson et al. (2005, p. 171) put forward a much-neglected question: 'What is the purpose of a board and their deliberations on strategy?' While most studies have focused on linking top managers' characteristics with financial performance (e.g. Buyl et al., in press; Certo et al., 2006), few have examined how these characteristics affect strategic choices and actions (Goodstein and Boeker, 1991; Hambrick, 2007). Carter (2006) and Hambrick (2007) encourage scholars to explore this research area, particularly factors that influence the way managers interpret strategic choices they face. We contribute to this research gap by exploring top managers' corporate governance orientation as an antecedent of strategic renewal trajectories. Second, strategic renewal trajectories develop over time (Agarwal and Helfat, 2009; Chakravarthy and Doz, 1992). This implies that research on strategic renewal requires a longitudinal approach to investigate successive strategic renewal trajectories of a firm over the years (Volberda and Lewin, 2003). The number of such empirical studies is limited (e.g. Burgelman and Grove, 2007; Flier et al., 2003; Jenkins and Floyd, 2001; Kwee et al., 2008; Uotila et al., 2009; Volberda et al., 2001b). Our study answers this call for more longitudinal research by investigating strategic renewal trajectories for a period of almost a century, i.e. 1907–2004.

To address the aforementioned two research gaps, we use the upper echelons perspective together with corporate governance and strategic renewal literature to address the research question of *how top managers' corporate governance orientation influences a firm's strategic renewal trajectories*. To this end, we conducted a longitudinal study of a large incumbent firm: Royal Dutch Shell plc (Shell).

Shell is an interesting case for studying the evolvement of successive strategic renewal trajectories for two main reasons. First, during the period 1959–2004, Shell had a governance structure called 'Committee of Managing Directors' (CMD). Under this structure, Shell was governed by chairmen from either the Dutch (Rhine corporate governance orientation) or the British (Anglo-Saxon corporate governance orientation) side of the company. Prior to this period (1907–58), Shell comprised two separate companies with two separate management boards, i.e. Royal Dutch and Shell Transport and Trading. It was under the CMD structure that Anglo-Saxon and Rhine corporate governance orientations were combined and institutionalized. Although these two corporate governance orientations coexisted in the CMD structure, we can determine which orientation was more dominant at a particular point in time by studying the composition of top managers in the CMD at that time. This unique governance structure of the CMD allows us to investigate variation in top managers' corporate governance orientation within one firm over time and how such alternating orientation influences the firm's strategic renewal trajectories (Filatotchev et al., 2006). A previous study about Shell by Stadler et al. (2006) has indicated that chief executive officers (CEOs) have their own preferred governance orientation with British CEOs favouring the Anglo-Saxon corporate governance orientation and European CEOs favouring the Rhine orientation. However, it remains to be investigated how the variation in governance orientation due to changes in top managers may influence successive strategic renewal trajectories. Additionally, while Stadler et al. (2006) focus on CEO level of analysis only and build on a qualitative case study approach for a much shorter period (in the 1990s), our study is based on different data by employing both qualitative and quantitative longitudinal designs with the focus beyond the CEO level of analysis. More specifically, regarding top managers' corporate governance orientation as an independent variable, we focus on two levels of analysis: *CEO (i.e. CMD chairmen)* and *top management team (i.e. CMD members)*. Additionally, we incorporate a *firm-level* measure of the proportion of shareholders based on geographical distribution as a moderating factor of the relationships between the top managers' corporate governance orientation and strategic renewal. Here, the dependent variables of our study relate to *firm-level* measures of strategic renewal actions. Through these multilevel measures, we investigate multilevel interaction effects of top managers' corporate governance orientation on strategic renewal trajectories.

Second, the long history of Shell's company records provides a rich dataset of publicly available data to investigate the firm's longitudinal strategic renewal trajectories (e.g. Cummins and Beasant, 2005; Gabriëls and Jongmans, 1990; Gerretson, 1959; Howarth, 1992, 1998; Howarth and Jonker, 2007; Jones, 1977; Jonker and Van Zanden, 2007; Sluyterman, 2007; Van Zanden, 2007; Yergin, 1993). These public data are enriched and triangulated by supplementary internal data and by in-depth interviews with both active and retired top managers of Shell. While the CMD governance structure enables us to conduct a *quantitative study* (1959–2004), the rich company records of Shell enable us to conduct also a *qualitative study* of the firm's successive strategic renewal trajectories for the whole period (1907–2004).

In sum, our research design enables us to make three contributions. First, through multilevel measures, this paper contributes to both strategic renewal and upper echelons literature by examining multilevel interaction effects of top managers' corporate governance orientation on strategic renewal trajectories. The focus on a single firm in this paper enables us to investigate these effects, which may be difficult to observe with comparative case studies or cross-sectional studies involving different firms from different countries. Second, we contribute to the organizational antecedents of strategic renewal literature by exploring the role of top managers in regulating the speed, direction, and trajectory of a firm's strategic renewal actions (Volberda et al., 2001a). The length of the period investigated (1907–2004) enables us to contribute to this research stream by providing a more encompassing investigation of successive strategic renewal trajectories. Finally, our findings contribute to empirical evidence of the extant corporate governance literature on the Anglo-Saxon and the Rhine models (e.g. Albert, 1993, 1995; Letza et al., 2004; O'Sullivan, 2000; Smith, 2003; Tylecote and Conesa, 1999). In particular, we provide evidence regarding the effects of top managers' alternating corporate governance orientations on a single firm's strategic renewal trajectories.

The paper is structured as follows. First, we provide an overview of the literature on strategic renewal, upper echelons, and corporate governance models. Subsequently, we develop our research framework and hypotheses. Next, we describe our research methodology and present our findings. Finally, we conclude by discussing theoretical and managerial implications of our findings and outlining potential directions for future research.

THEORETICAL OVERVIEW

Theory and Dimensions of Strategic Renewal

Broadly defined, strategic renewal relates to 'the activities a firm undertakes to alter its path dependence' (Volberda et al., 2001a, p. 160) to achieve a fit between the firm and its environment (Lamberg et al., 2008; Miller, 1992). More recently, Agarwal and Helfat (2009, p. 282) propose that strategic renewal 'includes the process, content, and outcome of refreshment or replacement of attributes of an organization that have the potential to substantially affect its long-term prospects'.

Key aspects of the definitions of strategic renewal relate to *patterns* that emerge over a long period of time resulting from strategic actions that a firm undertakes towards path dependence or path creation (Garud and Karnøe, 2001; Garud et al., 2010). While path dependence is associated with exploitation, path creation is associated with exploration (March, 1991). Like organizational ambidexterity, strategic renewal requires both exploiting existing competencies and exploring new ones (Gibson and Birkinshaw, 2004; Jansen et al., 2009; March, 1991). In this line of inquiry, we study exploitation and exploration by identifying and analysing realized strategic renewal actions rather than perceived or planned actions (Mintzberg, 1978; Mintzberg and Waters, 1985). This is consistent with Volberda et al. (2001a) who investigated strategic renewal trajectories based on realized strategic renewal actions.

Like other recent studies of a firm's exploitation and exploration actions (e.g. Uotila et al., 2009), we build upon the studies of Volberda et al. (2001b) and Flier et al. (2003) by investigating strategic renewal as a three-dimensional construct, consisting of content, context and process dimensions. The exploitation and exploration constructs are related to the *content* dimension of strategic renewal. Exploratory strategic renewal actions, indicating initiatives for long-term strategic renewal, are actions such as starting up new business; launching new products/services, technologies and activities; and entering new markets or new geographic regions (Cao et al., in press; He and Wong, 2004; Lubatkin et al., 2006; Uotila et al., 2009). Such actions add new activities to the current repertoire of the organization's range of activities and competencies or increase the geographic scope of the firm. In this respect, exploratory strategic renewal actions create a new path or alter existing paths and are considered to be relatively radical or discontinuous strategic transformations (Agarwal and Helfat, 2009; March, 1991). Exploitative strategic renewal actions, however, denote a shorter-term orientation and consist of actions that focus on the current range of activities within the current geographic scope of a firm. For instance, exploitative actions include expanding existing markets, improving existing competencies, and initiating rationalized activities such as closure, consolidation, or downscoping (Cao et al., in press; He and Wong, 2004; Lubatkin et al., 2006; Uotila et al., 2009). In this respect, exploitative strategic renewal actions are path-dependent and associated with incremental renewal (Agarwal and Helfat, 2009; March, 1991).

The *context* dimension of strategic renewal reflects the interaction of a firm with its external environment when initiating strategic renewal actions. Do firms originate strategic renewal actions based on their internal resources or based on external resources and cooperation with external parties? Here we query the internal- versus external-growth strategic renewal trajectories (Capron and Mitchell, 2009; Flier et al., 2003; Galunic and Eisenhardt, 1996). Examples of external-growth strategic renewal actions include mergers, acquisitions, and joint ventures. Internal-growth strategic renewal actions include internal corporate venturing, launching new products or new services, and closing product lines or offices.

Finally, the *process* dimension deals with the temporal processes of strategic renewal actions and includes the speed and volatility of strategic renewal actions (Flier et al., 2003). In this respect, a longitudinal research design of sufficient duration is required to provide process explanations of strategic renewal trajectories (Chakravarthy and Doz, 1992; Pettigrew, 1990).

Top Management as Organizational Antecedent of Strategic Renewal

Recent studies (e.g. Eggers and Kaplan, 2009; Tripsas, 2009) show that the question of how top management teams of large incumbent firms manage their strategic renewal is central to both strategy and organizational fields. As mediators between external environmental demands and internal organizational dynamics (Keck and Tushman, 1993), top managers are considered to have latitude of action in making strategic choices (Hambrick, 2007). Upper echelons literature has emphasized the role of top managers in strategy formation and the resulting organizational outcomes (Hambrick, 2007; Hambrick and Mason, 1984). For example, by engaging in external and internal advice-seeking, top management teams (TMTs) are able to signal internal and external environmental developments and to influence strategic renewal actions (Alexiev et al., in press). At its core, the upper echelons literature is based on the premise that top managers' compositional and background characteristics, such as nationality (e.g. Hambrick et al., 1998) and functional background (e.g. Carpenter, 2002; Hambrick et al., 1996), determine their orientation in making strategic choices. Research in this stream focuses either on CEO- or TMT-level characteristics. Scholars who focus on TMTs rather than CEOs argue that it is the combined capacity of the members of TMTs that influences long-term success (Carpenter et al., 2004). However, the interaction between CEO and TMT is also widely recognized as important (Peterson et al., 2003). TMTs of large incumbent firms are often not created from scratch, but evolve over time through replacement of members (Shen and Cannella, 2002). New chairmen may appoint new members which, in turn, may change the shared context and norms of interaction of a TMT (Chatman and Flynn, 2001; Harrison et al., 2002). Therefore, in this paper, we incorporate both TMT- (i.e. Shell's CMD members) and CEO-level (i.e. the chairman of the CMD) characteristics.

An important feature of the upper echelons theory is that strategic renewal trajectories are viewed as reflections of the values and cognitive bases of powerful actors in the organization. The mix of backgrounds and expertise represented in TMTs relate to their propensity to pursue certain strategic renewal trajectories. Hambrick and Mason (1984) argue that managers with differing histories of functional experiences are likely to differ in their attitudes, knowledge, and perspectives. Furthermore, Floyd and Lane (2000) describe strategic renewal as an intensely social process, involving certain crucial interactions among top management. They contend that given the importance of social interactions between an organization (through its managers) and its environment, strategic renewal 'can be understood best as a system of relational or social exchanges' (Floyd and Lane, 2000, p. 160).

Top managers need to use their social skills in and around their firms in order to pursue a strategy effectively. The expectations from society and the values of the managers' socioeconomic roots may influence their perspectives on how their firms should be governed, which strategies they should pursue, and how their performance should be evaluated. Methods of such evaluation vary according to the national systems of corporate governance, i.e. the systems of corporate ownership and control (La Porta et al., 1997, 1998; Moerland, 1995).

Two types of corporate governance orientation can be distinguished: market-oriented systems and network-oriented systems (Moerland, 1995). *Market-oriented* systems are characterized by the so-called *Anglo-Saxon model* which is prevalent in countries like the United States, the United Kingdom, Canada, and Australia. *Network-oriented* systems are characterized by the continental European models consisting of the Rhine and Latin models (Albert, 1993; Letza et al., 2004; Moerland, 1995; Smith, 2003). The *Rhine model* is prevalent in Germanic countries of continental Europe such as Germany, The Netherlands, Switzerland, and Austria; while the *Latin model* is prevalent in Latinic countries of the European Community such as Italy, Spain, France, and Belgium (Moerland, 1995). In this paper, we focus on the Anglo-Saxon and the Rhine models considering that during the period 1959–2004, these two models were prevalent in Shell's CMD structure as an Anglo-Dutch firm operating under English and Dutch law.

These two corporate governance models tend to prioritize key issues differently. The Anglo-Saxon model is characterized by a one-tier board comprised of both executives and non-executives. Controlling shareholders appoint directors, executives, and non-executives (Moerland, 1995). The short-termism of the Anglo-Saxon model directs the board to focus on shareholder value through dynamic market orientation and a fluid capital investment system (Lazonick and O'Sullivan, 2000; O'Sullivan, 2000). Such attributes are related to the common law system, majoritarian electoral system, and a liberal market economy that tend to offer strong investor/shareholder protection but less strong employment protection (Bebchuk and Roe, 1999; Hall and Gingerich, 2009; La Porta et al., 1997, 1998; Pagano and Volpin, 2005). Moerland (1995, p. 29) points out the danger of the Anglo-Saxon short-termism that 'managers may bother so much about presenting favourable financial results in the short run that they overlook the importance of basic investments to sustain the firm's performance in the long run'. This short-termism may influence managers to neglect long-term investments (Stein, 1988). In this model, financial performance indicators are mainly based on property or other tangible assets rather than firm-specific intangible assets such as employee knowledge.

By contrast, the Rhine model is characterized by a two-tier board structure consisting of an executive board and a supervisory board (Maassen and Bosch, 2002; Moerland, 1995). The executive board consists of the top-level management team, while

Table I. Differences between Anglo-Saxon and Rhine models

Characteristics	*Anglo-Saxon model*	*Rhine model*
Country	UK, USA, Canada, Australia	Continental Europe: e.g. Germany, The Netherlands, Switzerland, Austria
Board system	One-tier	Two-tier
Corporate system	Market-oriented, market for corporate control	Network-oriented, board as main control instrument
Political system	Majoritarian electoral system with strong investor protection and less strong employment protection	Proportional electoral system with less strong investor protection and strong employment protection
Legal origin	Common law with better legal protections to shareholders	Civil law with lower legal protections to shareholders
Focus	Shareholder value	Stakeholder value
Time horizon	Short-term orientation: high importance of short-term financial objectives in order to increase shareholder value	Long-term orientation: financial and non-financial objectives of importance for long-term survival
Ownership concentration	Dispersed with few large shareholders (individuals, pension funds, insurers)	Concentrated among a few investors (companies, individuals, banks)
Performance indicator	Property, tangible assets	Knowledge, intangible assets
Market economy	Liberal market economy	Coordinated market economy
Investment system	Fluid capital, with larger equity markets and better access of firms to equity finance	Dedicated capital, with smaller equity markets and lower access of firms to equity finance

Source: Adapted from Albert (1993), Bebchuk and Roe (1999), Hall and Gingerich (2009), Johnson et al. (2005), La Porta et al. (1997, 1998), Letza et al. (2004), Pagano and Volpin (2005), and Smith (2003).

the supervisory board comprises outside non-executives, such as bankers, executives from other corporations (e.g. interlocking directorship), and employee representatives. Boards operating under this model are expected to focus on stakeholder value in the context of a dedicated capital investment system. The Rhine model adopts the civil law system, proportional electoral system, and a coordinated market economy that tends to offer strong employment protection and less strong shareholder protection compared to the Anglo-Saxon model (Bebchuk and Roe, 1999; Hall and Gingerich, 2009; La Porta et al., 1997, 1998; Pagano and Volpin, 2005). Unlike the short-termism of the Anglo-Saxon model, the Rhine model is associated with a more long-term orientation (Albert, 1995; Freeman, 1984). Besides tangible assets, Rhine managers tend to use intangible assets such as employee knowledge to gauge firm performance. Table I summarizes the main differences between these two models.

In an international setting, corporate governance varies among countries with respect to their historical origins, their methods of capital mobilization, and their structures of ownership and control (La Porta et al., 1997; Moerland, 1995). Those varying institutional settings raise a number of interesting questions concerning the relationships between institutional differences and corporate behaviour, like strategic renewal and firm performance (Pugliese et al., 2009).

During the period investigated (1907–2004), Shell had two parent companies: Royal Dutch (RD) and Shell Transport and Trading (STT). Legally, the company was embedded in two countries: The Netherlands (associated with the Rhine model), and the UK (associated with the Anglo-Saxon model). Prior to the firm's unification in 2005, Shell had no American-style CEO (Sluyterman, 2007). The unique leadership structure of Shell can be distinguished in two periods: the period before the introduction of Committee of Managing Directors (CMD) (i.e. 1907–58), and the period from the start of the CMD until the unification (i.e. 1959–2004).

RESEARCH FRAMEWORK AND HYPOTHESES

We conducted two studies: (1) a qualitative study of the exploitative and external-growth strategic renewal trajectories of Shell for the whole period of 1907–2004; and (2) a quantitative study of the influence of top managers' governance orientation on strategic renewal trajectories during Shell's CMD period (1959–2004). For the quantitative study, we developed a research framework as depicted in Figure 1. This research framework comprises three main constructs: top managers' corporate governance orientation as an organizational antecedent of strategic renewal; the moderating role of the geographical distribution of shareholders; and the resulting strategic renewal trajectories. With respect to top managers' governance orientation, we develop measures at two levels: CEO (i.e. CMD chairman) and top management team (i.e. CMD members). These measures include top managers' background characteristics, i.e. nationality and functional background. Next, with regard to the moderating variable, we incorporate a firm-level measure by using the proportion of the geographical distribution of Shell's shareholders from Anglo-Saxon countries. The methodology section elaborates the measures in more detail.

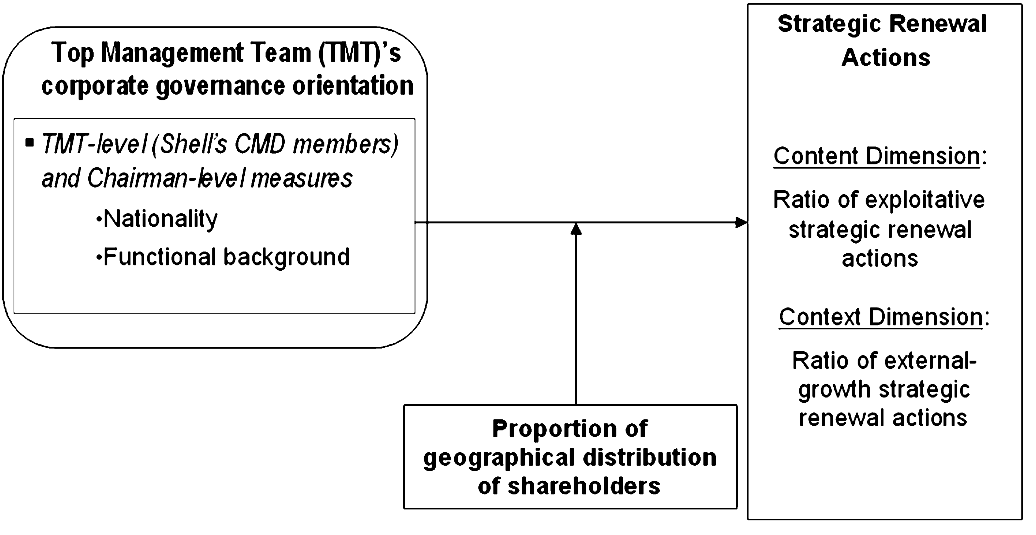

Figure 1. Research framework for examining the influence of top managers' corporate governance orientation on strategic renewal trajectories during the period of Shell's CMD (1959–2004)

Note that for the quantitative study, we focus on one of the two discerned models of corporate governance orientation, i.e. the Anglo-Saxon and Rhine models. However, as the Anglo-Saxon and the Rhine models are effectively opposites for the purposes of this study (see Table I), the results of the Anglo-Saxon corporate governance orientation also reflect the opposite results regarding the Rhine orientation. Therefore, to limit the number of hypotheses, we test the hypotheses only for the Anglo-Saxon corporate governance orientation.

One of the critical TMT background characteristics is the nationality of top managers. Hambrick et al. (1998) observe that nationality affects a person's underlying values and cognitive schema which, in turn, affect one's behaviour as well as how the person is perceived in a multinational group. Top managers' deeply-rooted values and cognitions influence their perceptions during the decision-making process 'because their values frame how they make sense of the organizational environment and their ensuing actions' (Clark and Soulsby, 2007, p. 948). These values are expected to vary on a continuum anchored, at one end, by the Anglo-Saxon corporate governance orientation and, at the other end, by the Rhine corporate governance orientation (Wood, 1994). In Shell's context, although both models of corporate governance orientation coexisted in the CMD, the two orientations tended to wax and wane in dominance over time as composition of top managers in the CMD evolved. CMD chairmen or members from countries associated with the Anglo-Saxon corporate governance orientation (e.g. UK, USA) are more likely to exert the influence of the short-termism corporate governance orientation than those from countries associated with the Rhine orientation (e.g. The Netherlands, Germany). For instance, Aguilera and Jackson (2003, pp. 460–1) note that 'whereas the dominance of functional orientations among German managers helps balance financial and strategic interests, U.S. managers are mostly aligned with shareholders' financial interests'. The more dominant Anglo-Saxon corporate governance orientation may, in turn, make managers more myopic and likely to sacrifice long-term investments to boost short-term profits for shareholders (Stein, 1988). For example, managers may sell off productive assets that have an immediate impact on the firm's profit and stock values. Such a focus on financial performance may result in managers cutting research and development expenditures or investments in employee knowledge. This reflects exploitative strategic renewal trajectories. As such, we hypothesize that:

Hypothesis 1a: Top managers from countries associated with the Anglo-Saxon corporate governance orientation are more likely to pursue exploitative strategic renewal trajectories than those from countries associated with the Rhine corporate governance orientation.

Additionally, under the common law marked by strong investor protection, managers from the Anglo-Saxon countries are more familiar with equity finance than those from the civil law (Rhine) countries (La Porta et al., 1997, 1998). With larger equity markets, fluid capital markets are more tolerant of mergers and acquisitions, including hostile takeovers, than the more dedicated capital markets that characterize the Rhine model (see Table I). As such, managers from the Anglo-Saxon countries tend to be more familiar with mergers and acquisitions than those from the Rhine countries, allowing them to more easily access different technologies by acquiring other firms or engaging in short-term strategic collaboration with other firms (Hall and Gingerich, 2009). Such activities are associated with external-growth strategic renewal trajectories. Based on this line of reasoning, we hypothesize that:

Hypothesis 1b: Top managers from countries associated with the Anglo-Saxon corporate governance orientation are more likely to pursue external-growth strategic renewal trajectories than those from countries associated with the Rhine corporate governance orientation.

Previous studies have shown that functional backgrounds affect managers' perceptions, attitudes, and knowledge (Hambrick and Mason, 1984; Waller et al., 1995), which in turn influence their strategic choices. In this connection, Bouwman (2009) argues that due to social network effects, directors may exert influence on a firm's governance practices causing such practices to be propagated across the firm. The direction of this influence depends on the previous experience of the individual TMT member. As such, we adopt Canella et al.'s (2008, p. 769) definition of dominant functional background: 'the functional area in which each TMT member has spent the most time'.

Hambrick and Mason (1984, p. 199) identify three functional categories: output functions (e.g. marketing, sales, and product R&D), throughput functions (e.g. production/operation, finance and accounting), and peripheral/non-core functions (e.g. law). Considering that during the period of investigation, Shell's top managers consistently had functional backgrounds associated with the firm's core activities, we focus only on two of these functional categories: *output* and *throughput functions*. Output-function managers tend to have higher levels of corporate social performance and tend to be more sensitive to stakeholders than throughput-function managers (Simerly, 2003). In contrast, since throughput-function managers face more intense pressure related to financial issues than output-function ones, throughput-function managers tend to be more attuned to efficiency and profitability and tend to focus more on short-term rather than long-term performance measures (Hall and Gingerich, 2009; Hayes and Abernathy, 1980). This suggests that throughput-function managers are likely to be associated with the Anglo-Saxon corporate governance orientation, while output-function managers with their focus on stakeholders and long-term performance measures are likely to be associated with the Rhine corporate governance orientation. Therefore, we hypothesize that:

Hypothesis 2a: Top managers with functional backgrounds associated with the Anglo-Saxon corporate governance orientation (i.e. throughput functions) are more likely to pursue exploitative strategic renewal trajectories than those with functional backgrounds associated with the Rhine corporate governance orientation (i.e. output functions).

Furthermore, influenced by the fluid capital system of the Anglo-Saxon model, throughput-function managers are more familiar with and tend to rely more heavily on extensive equity markets for their investments than output-function managers (La Porta et al., 1997). As such, in comparison with output-function managers, throughput-function managers tend to engage in activities such as mergers, acquisitions, or takeovers to promote rapid achievement of high profitability (Hall and Gingerich, 2009). Related to this argument, Finkelstein (1992) has found that the greater the proportion of TMT members with finance backgrounds, which is a throughput function, the more acquisitions firms make. Accordingly, we hypothesize that:

Hypothesis 2b: Top managers with functional backgrounds associated with the Anglo-Saxon corporate governance orientation (i.e. throughput functions) are more likely to pursue external-growth strategic renewal trajectories than those with functional backgrounds associated with the Rhine corporate governance orientation (i.e. output functions).

The proportion of the geographical distribution of shareholders from the Anglo-Saxon countries is likely to moderate the direct effect of the TMT's corporate governance orientation on a firm's strategic renewal actions. Since this moderating variable focuses on shareholders by country, we investigate the interaction effect between this variable and top managers' nationalities. The argument here is that the larger the proportion of shareholders from the Anglo-Saxon countries, the stronger the focus on shareholder values which, in turn, may increase pressure on managers to pursue short-term profitability (Bebchuk and Roe, 1999; Pagano and Volpin, 2005). In this respect, top managers from countries associated with the Anglo-Saxon corporate governance orientation tend to be more willing to cater to shareholders' demands for greater profits as compared to top managers from countries associated with the Rhine orientation. Based on these arguments, we hypothesize that:

Hypothesis 3a: The proportion of shareholders from Anglo-Saxon countries positively moderates the relationship between top managers from countries associated with the Anglo-Saxon corporate governance orientation and the likelihood of them pursuing exploitative strategic renewal trajectories.

Likewise, the larger the proportion of shareholders from the Anglo-Saxon countries, the stronger the tendency to encourage managers to engage in activities such as mergers and acquisitions. In comparison with Rhine managers, Anglo-Saxon managers tend to be more responsive to this propensity for external alliances. As such, we hypothesize that:

Hypothesis 3b: The proportion of shareholders from the Anglo-Saxon countries positively moderates the relationship between top managers from countries associated with the Anglo-Saxon corporate governance orientation and the likelihood of them pursuing external-growth strategic renewal trajectories.

RESEARCH SETTING

A Brief Overview of Shell's History and Management Structure, 1907–2004

Royal Dutch Shell plc was formed in 1907 after a well-documented Anglo-Dutch alliance between the UK-based 'Shell' Transport and Trading Company plc and The

Netherlands-based Royal Dutch Petroleum Company (Howarth, 1998; Jonker and Van Zanden, 2007). Instead of forming one company with one set of shareholders, the Royal Dutch/Shell Group was established as a joint venture between two companies and two groups of shareholders. The Royal Dutch Petroleum Company (RD), based in The Hague and listed on the Dutch stock exchange, owned a 60 per cent interest in the Group. Shell Transport and Trading plc (STT), headquartered in London and listed on the London stock exchange, owned a 40 per cent interest in the Group.

In the period 1907–58, preceding the introduction of the CMD governance structure, RD and STT were legally two separate companies with separate boards, operating under Dutch and English law, respectively (Howarth and Jonker, 2007; Jonker and Van Zanden, 2007). Under Dutch law, RD had a two-tier structure with both a supervisory board and a management board, consistent with the Rhine model. Operating under the British corporate system, STT had a unitary board with a non-executive chairman, a majority of non-executives, and a minority of executives, consistent with the Anglo-Saxon model. During this period, both RD and STT had their own leaders: the president of the management board of RD and the chairman of the board of STT, respectively. Due to the World War II, in particular during 1941–46, no president of RD was appointed. Instead, managing directors were in charge of RD. Note that the separate management boards make it difficult to investigate the influence of a 'collective' board on Shell's strategic renewal trajectories during this period. Therefore, we test our research hypotheses only for the period 1959–2004, when Shell's joint Committee of Managing Directors (CMD) was in existence.

In 1959, Shell introduced the CMD governance structure. This was due to a profound reorganization initiated by RD president, John Hugo Loudon, who approached an external consultant in July 1957 to review the firm's management structure (Howarth and Jonker, 2007). The review was presented in August 1958 and led to a remodelling of the organization introduced on 15 January 1959 (Howarth and Jonker, 2007). That reorganization profoundly changed both the positions of the top managers and the relations between Shell and its operating companies (Howarth and Jonker, 2007). Although both RD and STT maintained their own president/chairman and boards, the CMD acted as a joint top management team drawn from both RD and STT. The chairman of the CMD could either be the president of the management board of RD or the chairman of the board of STT. The division in time between Dutch and British leadership more or less reflected the 60–40 per cent shares in the Group (Sluyterman, 2007). Nevertheless, the proportion of the CMD members from RD and from STT varied over time. Table II lists Shell's CMD chairmen from 1959 to 2004 with their background characteristics.

During the 1980s and 1990s, when competition intensified and the environment changed, Shell stepped back from its diversified and decentralized strategy (Sluyterman, 2007). For example, in 1997, the Shell Oil Company in the USA was integrated into the group. In 2004, Shell's reputation suffered from the overestimation of oil reserves (Cummins and Beasant, 2005). Ultimately, this major event and other internal disturbances led to the unification of Shell. At two shareholder meetings on 28 June 2005, a large majority of shareholders voted for the unification proposal of Royal Dutch and Shell Transport. Incorporated in England and Wales, and headquartered in The

Table II. Chairmen of Shell's Committee of Managing Directors (CMD), 1959–2004

Chairman	*Homebase*[a]	*Chairman tenure in years (period)*[b]	*Nationality*[b]	*Dominant functional background*[b]
1. J. H. Loudon	NL – RD	6 (1959–65)	Dutch	Upstream
2. Luitzen (Jan) E. J. Brouwer	NL – RD	5 (1965–70)	Dutch	Upstream
3. D. Barran	UK – STT	2 (1970–72)	British	Downstream
4. Gerrit A. Wagner	NL – RD	5 (1972–77)	Dutch	General management and administration
5. C. C. (Michael) Pocock	UK – STT	2 (1977–79)	British	Personnel
6. Dirk de Bruyne	NL – RD	3 (1979–82)	Dutch	Finance
7. Peter B. Baxendell	UK – STT	3 (1982–85)	British	Upstream
8. Lo C. van Wachem	NL – RD	7 (1985–92)	Dutch	Upstream
9. Peter Holmes	UK – STT	1 (1992–93)	British	Downstream
10. C. A. J. Herkströter	NL – RD	5 (1993–98)	Dutch	Finance
11. M. Moody-Stuart	UK – STT	3 (1998–2001)	British	Upstream
12. P. Watts	UK – STT	2 (2001–02)	British	Upstream
13. Jeroen van der Veer	NL – RD	2 (2002–04)	Dutch	Downstream

Notes: [a] NL = The Netherlands; UK = United Kingdom; RD = Royal Dutch; STT = Shell Transport & Trading.
[b] *Source*: Howarth and Jonker (2007), Sluyterman, (2007, p. 279), and Shell Annual Reports 1959–2004.

Netherlands (The Hague), Royal Dutch Shell plc was born (Sluyterman, 2007). Following the incorporation of Royal Dutch Shell plc in 2005, Shell merged the Group's dual-ownership structure (Sluyterman, 2007). Under this new structure, the CMD structure was abolished and the company now operates with a unitary board and the leadership of a CEO.

RESEARCH METHODS

Data Collection and Coding Technique

Our data was collected from Shell's public sources comprising the annual reports of the board and company documents chronicling the history of Shell, publications on the history of Shell, industry publications, and other written materials from the period 1907–2004. In addition to the archival data collection, we conducted a series of retrospective interviews from December 2006 to December 2007 with 16 active senior and top managers of Shell from different divisions and with four retired top managers. The longest tenure of the top managers we interviewed is around 40 years, enabling us to obtain qualitative historical evidence about the early years of the CMD structure in the 1960s. The duration of the interviews ranges from one hour to two hours. All interviews were taped and were then transcribed, resulting in 118 double-spaced pages of text. We used the insights from these interviews, in addition to records from secondary data sources, to triangulate our initial coding.

We employed a structured content analysis technique (Jauch et al., 1980; Weber, 1990) to code Shell's strategic renewal actions reported in the company's annual reports.

According to Kimberley and Miles (1980), historical records of actions actually taken by an organization are often the most accurate source of their strategic decisions. To analyse the content of strategic renewal actions, we developed a manual describing key coding rules (see Appendix). The manual provides a systematic procedure to analyse strategic renewal actions of Shell and to consistently categorize each of the relevant strategic action based on the defined coding rules. To perform this procedure, we electronically scanned 4594 pages of Shell's annual reports. We cross-checked a random subset of the reported strategic renewal actions with external sources such as books, journals, and other publicly accessible documents.

The coding was performed by a team of three researchers. Researcher 1 read and coded strategic renewal actions in the annual reports for the whole period of study (1907–2004). Using the same coding manual, two other researchers, respectively, coded 20 years of the annual reports, divided in two periods, i.e. 1976–85 and 1995–2004. The coders coded realized strategic renewal actions and categorized each action into two (content and context) dimensions: exploration versus exploitation and external versus internal growth action (see Table III). The three coders agreed on 439 of the 491 strategic renewal actions (89.4 per cent) identified from the selected 20 years of annual reports. This resulted in a Cohen's kappa of 0.82, which indicates high inter-coder reliability (Weber, 1990). The different coding results among the coders were primarily due to the coder overlooking some of the realized strategic renewal actions. These discrepancies were then discussed and resolved using the coding rules in the manual as a guideline. Table III shows three illustrative examples of the coding results. We specified the year, paragraph, and page number of the annual report in which a strategic renewal action was reported. In some cases, there were cross-page references found. For instance, the general description of the realized strategic renewal actions reported in the Executive Summary page of the annual report was mentioned in more detail in the later page(s) of the annual report.

Measures

Dependent variables. Regarding the content dimension, we calculated the exploitation ratio by dividing the number of exploitative strategic renewal actions by the total number of exploitative and exploratory strategic renewal actions. As for the context dimension, we calculated the external ratio by dividing the number of external-growth strategic renewal actions by the total number of internal- and external-growth strategic renewal actions. The two dependent variables relate to the exploitative and external-growth strategic renewal trajectories, respectively. These variables are quantified for the whole period, 1907–2004.

Independent variables. Independent variables are indicators of the overall corporate governance orientation of Shell's CMD chairmen and members. These indicators represent top managers' background characteristics as described in upper echelons theory (e.g. Carpenter, 2002; Hambrick and Mason, 1984; Wiersema and Bantel, 1992). We obtained this data from various sources: Shell's Annual Reports, Howarth and Jonker (2007), Sluyterman (2007), and Shell's *Who's Who* system. Following

Table III. Illustrative examples of coding of strategic renewal actions

Year (annual report)	*Paragraph*	*Page (annual report)*	*Short name*	*Description/context*	*Exploration (1) – Exploitation (0)*	*External (1) – Internal (0)*
1969	12th	24	Canada: formation of joint venture ShelPac Research and Development; Canadian Pacific	'Innovation in action is seen in the formation of a company by Shell Canada to construct a pipeline to transport solids between Alberta and the Pacific Coast. This will benefit from an agreement between Shell Canada and Canadian Pacific to pool their research, technical and economic studies on this subject and to form a jointly owned company, ShelPac Research and Development'	1	1
1984	9th	10	Netherlands: formation of renewable energy systems	'A new company has been established in The Netherlands to develop and market solar energy systems world wide'	1	0
1993	5th, 4th	1, 18	Group companies: cost reduction and efficiency improvement programmes	'Group companies therefore continued with further cost reduction and efficiency improvement programmes, particularly in Europe and North America'	0	0

Source: Coding results of Shell's Annual Reports.

Hambrick's (2007) suggestion to incorporate temporal lags, we lagged all independent, moderating and control variables by one year to take into account the lagged effect of realized strategic renewal actions initiated by top managers. Two independent variables are used. The first independent variable relates to nationality. For the CEO-level measures, we categorize the chairmen of the CMD with respect to nationality by using a binary code. For the TMT-level measures, we calculate the proportion of the CMD members (excluding the chairmen) from Anglo-Saxon countries. The second independent variable relates to functional backgrounds. At the CEO level, i.e. the chairmen of the CMD, we use the measure of the dominant functional backgrounds of CMD chairmen. According to Howarth and Jonker (2007) and Sluyterman (2007, p. 279), Shell's CMD chairmen can be divided into five functional background categories: (1) general management and administration, (2) personnel, (3) finance, (4) upstream, and (5) downstream. The first three functions fall into the category of throughput functions consisting of operation, finance, and accounting (Hambrick and Mason, 1984). Since upstream function relies heavily on research and development activities and downstream function relates to sales and marketing activities, upstream and downstream can be categorized as output functions consisting of R&D, sales, and marketing (Hambrick and Mason, 1984). Based on this breakdown, we categorize the CMD chairmen according to functional backgrounds associated with either the Anglo-Saxon corporate governance orientation (i.e. throughput functions) or the Rhine corporate governance orientation (i.e. output functions). At the TMT level, we calculate the proportion of CMD members with Anglo-Saxon functional backgrounds by dividing the number of CMD members (excluding the chairmen) with the throughput-oriented functional backgrounds by the total number of CMD members.

Moderating variable. Using data obtained from Shell's annual reports of the period 1959–2004, triangulated with the data collected by Sluyterman (2007), we calculated the proportion of Shell shareholders from Anglo-Saxon countries. We use this proportion as a moderating variable, lagged by one year. As the moderating variable focuses on shareholders by country, we investigate the interaction effect between this variable and top managers' nationalities at the level of CMD members.

Control variables. We use control variables specific to the oil industry. The control variables are lagged by one year. First, oil prices are used to control for environmental dynamism in the oil industry. We use oil prices adjusted for inflation based on $2007 prices, as reported in BP's Statistical Review of World Energy 2008. Second, we follow Matusik and Hill (1998), defining environmental competitiveness as the extent to which external environments are characterized by intense competition. To this end, we used competitive diversity (Ferrier et al., 1999) which is the inverse of the concentration ratio computed as the percentage of market share held by the four largest firms in the oil industry (C4). The market share data is based on work by Van Zanden (2007) and the Thomson One Banker database.

ANALYSES AND RESULTS

Qualitative Study: 1907–2004

To structure the analysis of strategic renewal actions for the whole period 1907–2004, we divided the total 98-year period into five meaningful periods: (1) the early period of Shell, World War I, and the post-war period (1907–26); (2) the pre-war period and World War II (1927–46); (3) the post-war period until the mid-1960s, including the reorganization that led to the creation of Shell's CMD (1947–66); (4) the period of staying competitive and dealing with OPEC pricing policy (1967–86); and (5) the turbulent period that led to the incorporation of Royal Dutch Shell plc (1987–2004).

Table IV presents the average of strategic renewal actions for the five successive periods. For the content and context dimensions, we computed the exploitation ratio, exploration ratio, external ratio, and internal ratio. For the process dimension, we computed the frequency/speed (average strategic renewal actions in 20-year periods) and volatility (standard deviation) of strategic renewal actions. Three main long-term trends in strategic renewal appear in Table IV. First, the exploration ratio increased until the mid-1960s and subsequently decreased, i.e. a long-run change occurred from an exploratory strategic renewal trajectory towards an exploitative strategic renewal trajectory. Second, the internal ratio was high until World War II, and thereafter lower and relatively stable. Third, the frequency of strategic renewal actions increased over time; the volatility was highest in the period after World War II until the mid-1980s, before slightly decreasing in the period 1987–2004. Below, we highlight interesting developments for a few periods and relate these to indicators of top managers' corporate governance orientation.

Regarding external-growth strategic renewal trajectories, Table IV shows that Shell's external ratio generally decreased during the period 1927–46. This could be attributed to the environmental turbulence due to the Great Depression in the 1930s and World War II. During these turbulent times, the firm was relatively cautious in initiating or forming external alliances. The period 1967–86 shows the highest external ratio, indicating that Shell was focused on growth through externally-oriented initiatives such as mergers, acquisitions, joint ventures, and alliances. In the period 1987–2004, there was a slight drop in the external ratio due to intensified competition in the oil industry, which prompted Shell reduce to its diversification through external growth (Sluyterman, 2007).

The most explorative period of strategic renewal appears to have been the period 1947–66. Although World War II was an important environmental shock in the corporate landscape of the oil and gas industry, Shell appeared to grasp opportunities in the wake of the war through numerous diversified initiatives outside its core business in oil (Howarth, 1998; Howarth and Jonker, 2007; Yergin, 1993). This historical evidence is corroborated by the insight from one of our interviews. During the interview, a retired top manager indicated that in the 1960s, Shell's focus on stakeholders (associated with the Rhine corporate governance orientation; see Table I) was stronger than its focus on shareholders, encouraging the firm to focus on long-term explorations.

> In my early years at Shell that was in the 1960s, I remember that the top managers had a view of employees come first then shareholders. Shell highly valued the contribution

Table IV. Twenty-year periodization of Shell's strategic renewal actions, 1907–2004

Strategic renewal actions	*1907–26*	*1927–46**	*1947–66*	*1967–86*	*1987–2004*	*Total (1907–2004)*
Content dimension						
Exploration ratio[a]	0.23	0.32	0.70	0.53	0.42	0.48
Total exploration actions[x]	33	36	219	215	218	721
New product/service	10	14	77	52	75	228
New technology	6	9	74	79	46	214
New market	17	13	68	84	97	279
Exploitation ratio[b]	0.77	0.68	0.30	0.47	0.58	0.52
Total exploitation actions[y]	112	75	96	190	295	768
Product improvement	33	23	34	62	98	250
Technology improvement	25	20	38	73	86	242
Existing market/oil field expansion/divestment	54	32	24	55	111	276
Total exploration and exploitation actions[z]	145	111	315	405	513	1489
Context dimension						
External ratio[c]	0.32	0.23	0.51	0.53	0.49	0.47
External-growth actions[t]	47	25	162	215	250	699
Mergers and acquisitions	28	11	78	94	107	318
Joint ventures and alliances	11	9	73	89	69	251
External divestment	8	5	11	32	74	130
Internal ratio[d]	0.68	0.77	0.49	0.47	0.51	0.53
Internal-growth actions[u]	98	86	153	190	263	790
Internal venturing	88	78	138	167	175	646
Internal divestment	10	8	15	23	88	144
Total external- and internal-growth actions[v]	145	111	315	405	513	1,489
Process dimension						
Frequency[†]	7.15	8.54	15.75	20.25	28.50	16.36
Volatility[‡]	3.69	3.02	5.65	5.67	5.14	9.09

Notes: * Missing data from 1939–45 due to the World War II (7 years).
[†] Average number of yearly strategic renewal actions.
[‡] Standard deviation of strategic renewal actions.
a = x/z; b = y/z; c = t/v; d = u/v.

> of employees. Of course, as a profit-oriented company, focusing on profit maximization or shareholder values was also an important agenda for managers but not their first and foremost priority. (Interview with a former top manager of Shell, 4 August 2007)

We found support for this statement from the historical archive at Shell, i.e. in the CMD Minutes of Meeting dated 4 May 1971: 'In the late 1960s, shareholders did not necessarily come first' (Shell's CMD files, DCS, S65). The CMD chairmen during the 1960s were presidents of RD, J. H. Loudon and L. E. J. Brouwer; both were Dutchmen with upstream (output-function) backgrounds (see Table II).

In the period 1967–86, Shell's exploitative strategic renewal trajectory demonstrated an increasing trend. This trend reflected the environmental turbulence of the time, due to the energy crisis in 1973 and OPEC pricing policy from 1973 to 1986, which increased the firm's propensity to pursue exploitative strategic renewal actions. The decreasing trend of Shell's exploratory strategic renewal trajectories in the period 1987–2004 indicates a tendency of the company to focus more on improving existing competencies rather than building new competencies. This coincides with the shift towards a stronger emphasis on shareholder values.

In the annual reports, the shift towards paying more explicit attention to shareholders was noticeable. For instance, the report of 1988 mentioned 'the endeavour to maintain profitability to provide value to shareholders' (p. 3), followed by the view in 1993 that 'return on capital employed is our key profitability criterion' (p. 1). This signifies a strong orientation towards the Anglo-Saxon model. The following interview quotes reflect this shift:

> I think if we look back until, say 1990s, the shareholders were there and they were very much respected. But the shareholders didn't have a lot of influence before they got a lot more influence in the mid-1990s. (Interview with a current top manager of Shell, 14 May 2007)

> In my view, the shareholder orientation was particularly very strong in the mid 90s. We became more Anglo-Saxon. The peak of this orientation occurred at the integration of Shell Oil in 1997. (Interview with a former top manager of Shell, 29 March 2007)

Additionally, one of the top managers of Shell shared with us his experience of the difference between being led by a British chairman and by a Dutch chairman. He pointed out that he could see there was a shift towards a stronger shareholder emphasis when the chairman of CMD was a Briton:

> When the Dutch was in charge, there was a strong commitment to long-term technological excellence in the Shell culture. But when the Briton was in charge, the rising demands and pressures of shareholders were emphasized. The system of performance-related payment was created. But this transformation process did not go smoothly as it did not fit with the previous Dutchman values which were so pervasive in the Shell culture. (Interview with a current top manager of Shell, 3 April 2007)

For the period of the 1960s until the unification, the triangulation of the above qualitative historical evidence with our hypotheses indicates that top managers with the Anglo-Saxon corporate governance orientation are more likely to pursue exploitative and external-growth strategic renewal trajectories than those with the Rhine orientation. This qualitative inference will be tested in the following quantitative study.

Quantitative Study: 1959–2004

Descriptive statistics are shown in Table V. To examine the issue of multicollinearity, we calculated variance inflation factors (VIF) for each of the regression equations. The calculated VIF values range from 2.3 to 2.9, thus well below the rule-of-thumb cut-off of 10 (Hair et al., 1998). Table VI provides the results of our hierarchical regression analyses.

The baseline models (Models 1 and 4) contain the control variables. Models 2 and 5 incorporate the CEO- and TMT-level variables of top managers' Anglo-Saxon corporate governance orientation regarding exploitative and external-growth strategic renewal trajectories, respectively. Models 3 and 6 examine the moderating effect of shareholders from Anglo-Saxon countries on exploitative and external-growth strategic renewal trajectories.

Model 2 investigates the effect of top managers' Anglo-Saxon corporate governance orientation on exploitative strategic renewal trajectories. First, regarding top managers' nationality, Model 2 shows that the coefficients of the CMD members and chairmen for exploitative strategic renewal trajectories are positive and significant (β of CMD = 0.142, $p < 0.01$; β of chairman = 0.136, $p < 0.05$). Thus, Hypothesis 1a, which relates top managers from countries associated with the Anglo-Saxon corporate governance orientation to exploitative strategic renewal trajectories, is supported. Second, regarding functional backgrounds, the coefficients of the CMD members and chairmen for exploitative strategic renewal trajectories are positive and significant (β of CMD = 0.143, $p < 0.01$; β of chairman = 0.135, $p < 0.05$). Thus, Hypothesis 2a, which relates top managers with throughput-oriented functional backgrounds to exploitative strategic renewal trajectories, is also supported. Overall, these findings suggest that top managers' Anglo-Saxon corporate governance orientation by nationality and functional backgrounds relate positively to the extent to which managers pursue exploitative strategic renewal trajectories.

Model 5 investigates the effect of top managers' Anglo-Saxon corporate governance orientation on external-growth strategic renewal trajectories. Regarding the nationality of top managers, the coefficients for external-growth strategic renewal trajectories are positive and significant both for the CMD- and the chairman-level variables (β of CMD = 0.153, $p < 0.001$; β of chairman = 0.156, $p < 0.001$). Thus, Hypothesis 1b, regarding external-growth strategic renewal trajectories for top managers of Anglo-Saxon nationality, is supported. Regarding functional backgrounds, the coefficients for external-growth strategic renewal trajectories are positive and significant for both the CMD- and the chairman-level variables (β of CMD = 0.140, $p < 0.05$; β of chairman = 0.138, $p < 0.05$). This supports Hypothesis 2b that top managers with throughput functional backgrounds are more likely to pursue external-growth strategic renewal

Table V. Means, standard deviations, and correlations (period 1959–2004)

	Mean	*S.D.*	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*	*(9)*
1. Exploitation ratio	0.48	0.16	–								
2. External ratio	0.47	0.13	0.21	–							
3. Proportion of CMD members with a nationality of a country associated with the Anglo-Saxon corporate governance orientation (CMD nationality)	0.55	0.15	0.42**	0.48**	–						
4. Proportion of CMD members with functional backgrounds associated with the Anglo-Saxon corporate governance orientation (CMD functional background)	0.49	0.12	0.38*	0.13	0.20	–					
5. Chairman with a nationality of a country associated with Anglo-Saxon corporate governance orientation (Chairman nationality)	0.65	0.48	0.18	0.23	0.31*	0.37*	–				
6. Chairman with a functional background associated with Anglo-Saxon corporate governance orientation (Chairman functional background)	0.62	0.45	0.15	0.09	0.26	0.22	0.39**	–			
7. Proportion of shareholders from Anglo-Saxon countries based on geographical distribution (Shareholders proportion)	0.54	0.11	0.61**	0.39**	0.34*	0.17	0.14	0.18	–		
8. Oil prices	31.32	21.70	0.21	0.19	0.61**	0.04	−0.13	0.21	0.18	–	
9. Competitive diversity	8.58	3.55	0.52*	0.22	0.63**	0.37*	0.12	0.24	0.31*	0.64**	–

Notes: ** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).
Variables no. 3–9 are lagged by one year.

Table VI. Results of hierarchical regression analyses for exploitative and external growth strategic renewal trajectories, period 1959–2004

	Exploitative strategic renewal trajectory			*External growth strategic renewal trajectory*		
	Model 1	*Model 2*	*Model 3*	*Model 4*	*Model 5*	*Model 6*
Control variables[a]						
Oil prices	0.025 (0.001)	0.022 (0.001)	0.027 (0.001)	0.015 (0.001)	0.017 (0.001)	0.019 (0.001)
Competitive diversity	0.021 (0.002)	0.023 (0.002)	0.022 (0.002)	–0.013 (0.002)	–0.010 (0.002)	–0.016 (0.002)
TMT (i.e. CMD members) variables[a]						
CMD nationality		0.142** (0.017)	0.144** (0.019)		0.153*** (0.019)	0.058*** (0.017)
CMD functional background		0.143** (0.008)	0.146** (0.012)		0.140* (0.011)	0.042** (0.012)
CEO (i.e. Chairman of the CMD) variables[a]						
Chairman nationality		0.136* (0.007)	0.138* (0.008)		0.156*** (0.006)	0.157*** (0.006)
Chairman functional background		0.135* (0.004)	0.137* (0.005)		0.138* (0.004)	0.140* (0.003)
Moderating variable[a]						
Shareholders proportion			0.025 (0.013)			0.028 (0.011)
Interaction effect						
Shareholders proportion X CMD nationality			0.147** (0.005)			0.143** (0.004)
Adjusted R^2	0.37	0.49	0.54	0.48	0.53	0.59
ΔR^2		0.11	0.05		0.05	0.06
R^2 change F test	2.51*	5.48***	10.76***	2.67*	3.93***	7.83***

Notes: [a] Variables are lagged by one year.
Standardized regression coefficients are reported, with standard errors in parentheses.
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

trajectories. In sum, our findings indicate that by nationality and functional backgrounds, managers with an Anglo-Saxon corporate governance orientation are more likely to pursue external-growth strategic renewal trajectories than those with a Rhine corporate governance orientation.

Model 3 examines the moderating effect of proportion of shareholders from Anglo-Saxon countries on exploitative strategic renewal trajectories. The interaction between this variable and the Anglo-Saxon CMD variable increases the extent to which top managers pursue exploitative strategic renewal trajectories, as the coefficient is positive and significant ($\beta = 0.147$, $p < 0.01$). Hypothesis 3a is thus supported. Model 6 investigates the moderating effect of the proportion of shareholders from Anglo-Saxon countries on external-growth strategic renewal trajectories. The interaction between this variable and the Anglo-Saxon CMD variable strengthens the extent to which top managers pursue external growth as the coefficient is positive and significant ($\beta = 0.143$, $p < 0.01$). This result supports Hypothesis 3b.

For further analysis, we perform an equal-period comparison. Specifically, we focus on the period 1985–92 during the chairmanship of the CMD by a Royal Dutch executive (Lo van Wachem) and on the periods 1992–93 and 1998–2002 during the chairmanship of Shell Transport & Trading executives (Peter Holmes, Mark Moody-Stuart, and Phil Watts). See Table II for a chronology of the Shell chairmanship. In selecting these years, we also take into account the period following 1997 when Shell Oil Company in the USA was integrated into the group. This integration understandably increased the Anglo-Saxon orientation of Shell. Table VII shows the results of the computed average exploitation and external ratios during the two different leaderships of the CMD at Shell and the associated corporate governance orientation.

As shown, the extent to which Shell's managers pursued exploitative strategic renewal was higher during the STT chairmanship (average exploitation ratio = 0.65) than during RD chairmanship (average exploitation ratio = 0.51). The difference of the average exploitation ratio between the two chairmanships is significant (t-value = 2.35, $p < 0.05$). This finding concurs with our previous findings in support of Hypotheses 1a and 2a. However, with this smaller sample size, the difference between the external ratios under RD versus STT chairmanship is not significant.

Table VII. Results of further analysis: exploitative and external-growth strategic renewal trajectories, respectively, during the Royal Dutch (RD) leadership (1985–92) and the Shell Transport and Trading (STT) leadership (1992–93 and 1998–2002) of the CMD

	RD leadership (1985–92)		*STT leadership (1992–93, 1998–2002)*		*Differences*	
	Mean	*Standard deviation*	*Mean*	*Standard deviation*	*Difference*	*t-value*
Average exploitation ratio	0.51	0.11	0.65	0.11	0.14	2.35*
Average external ratio	0.48	0.16	0.53	0.12	0.05	0.73

* $p < 0.05$.

DISCUSSION AND CONCLUSION

While most research on strategic renewal focuses on processes and outcomes of strategic renewal with fairly short durations, little attention has been paid to (1) organizational antecedents of strategic renewal, and (2) taking a longitudinal approach. This paper intends to address these two research gaps by investigating top managers' corporate governance orientation as an antecedent of strategic renewal over an extended period of time.

To this end, we conducted two studies. First, we undertook a qualitative study of Shell's strategic renewal trajectories from 1907 until 2004. This resulted in a longitudinal analysis of strategic renewal actions, including qualitative evidence regarding the influence of corporate governance orientation on strategic renewal. Second, we conducted a quantitative study to investigate the influence of top managers' corporate governance orientation on strategic renewal by focusing on the unique governance structure of Shell's Committee of Managing Directors (CMD) that existed from 1959 to 2004. The CMD structure provides a unique opportunity to investigate how alternating corporate governance orientation of top managers within one firm can result in different strategic choices that alter the firm's strategic renewal trajectories (Filatotchev et al., 2006). To analyse this phenomenon, we investigated multilevel interaction effects of top managers' corporate governance orientation on strategic renewal using multilevel measures.

We developed and tested three hypotheses resulting in the following empirical findings. First, we found support for our hypothesis that top managers with an Anglo-Saxon corporate governance orientation are more likely to pursue exploitative strategic renewal trajectories than those with a Rhine corporate governance orientation due to their greater emphasis on short-term shareholder values. Our results by top managers' nationality (Hypothesis 1a) and functional backgrounds (Hypothesis 2a) support this hypothesis. Second, our findings by top managers' nationality (Hypothesis 1b) and functional backgrounds (Hypothesis 2b) indicate that top managers with an Anglo-Saxon corporate governance orientation are more likely to pursue external-growth strategic renewal trajectories than those with a Rhine corporate governance orientation. Finally, we examined the moderating effects of the proportion of shareholders from Anglo-Saxon countries on exploitative and external-growth strategic renewal trajectories. The results show that this moderating variable strengthens the relationship between top managers' Anglo-Saxon corporate governance orientation and the extent to which they pursue exploitative (Hypothesis 3a) and external-growth (Hypothesis 3b) strategic renewal trajectories.

In sum, the extensive scope of the longitudinal analysis of Shell's strategic renewal trajectories provides three main contributions. First, we contribute to the upper echelon research by examining multilevel interaction effects of top managers' corporate governance orientation on strategic renewal trajectories (Pelled et al., 1999). Second, we contribute to the longitudinal study of organizational antecedents of strategic renewal by studying the role of top managers' corporate governance orientation in shaping strategic renewal trajectories (Filatotchev et al., 2006; Volberda et al., 2001a). This finding also has implications for the organizational ambidexterity literature (Raisch et al., 2009) and for sustained strategic renewal research, i.e. corporate longevity (Kwee et al., 2008), by highlighting a new antecedent. Finally, we contribute to new empirical evidence regarding the influence of the Anglo-Saxon and the Rhine models of corporate governance by studying the effects of top managers within one firm alternating between these two models over time (Albert, 1993; Judge, 2010). This new evidence may also contribute to the societal debate regarding the advantages and disadvantages of focusing on shareholder value versus stakeholder value by highlighting the implications of each for firms' strategic renewal.

Overall, our results illustrate that top managers' Anglo-Saxon corporate governance orientation is positively related to the extent to which they pursue exploitative and external-growth strategic renewal trajectories. This implies that the Rhine corporate governance orientation is positively related to the extent to which top managers pursue exploratory and internal-growth strategic renewal trajectories. These findings provide complementary empirical evidence to the upper-echelon perspective (Hambrick and Mason, 1984), particularly to the understanding of the dynamic impact of top management teams and their corporate governance orientations on a firm's strategic renewal over time. These findings are also relevant for the organizational ambidexterity literature in which longitudinal research of 'sequential ambidexterity' (Raisch et al., 2009) is still under-researched. In sum, regarding research implications, our study shows that top managers' corporate governance orientation appears to be an important antecedent of strategic renewal and of organizational ambidexterity, both of which influence corporate longevity.

Limitations and Future Research

Our study has several limitations, suggesting an agenda for future research. First, as our study focuses on a single-firm context, care should be taken about generalizing our findings. In this sense, a potential issue for future research is to incorporate varying industry contexts for a further understanding of the influence of top management team corporate governance orientation on strategic renewal (Filatotchev, 2007). As Malerba (2004, 2005) and Teece et al. (1997) propound that a strategic path depends on a specific industry in which it takes place, studying the industry context may prove useful. It is possible that due to differences among industries regarding resources such as managers, knowledge, and technology (Malerba, 2004, 2005), the effect of top managers' corporate governance orientation on how firms in different industries conduct strategic renewal may differ. For instance, science-intensive industries (e.g. pharmaceuticals) that require a lot of high risk capital for research and development may encourage exploratory strategic renewal actions even when the top management teams have an Anglo-Saxon corporate governance orientation. It should also be noted that typically top managers in these sectors have functional backgrounds that make them more sensitive to new technology development and advancement.

Second, our analysis of the strategic renewal actions of a firm focuses on the managerial intentionality perspective (Hutzschenreuter et al., 2007; Volberda and Lewin, 2003). It will be useful in future research to investigate the interaction between contextual factors from the external environment and internal firm strategies (Pettigrew, 1987). Such an approach will contribute to the understanding of 'the effectiveness of corporate governance practices in terms of alignment of organizations with a more contextualized view of organizational environments' (Filatotchev, 2007, p. 1056). Taking a co-evolutionary perspective would also be interesting. For instance, it may be interesting to investigate how higher exploration ratios in strategic renewal, indicating a higher level of absorptive capacity, enable a firm's proactiveness to cope with environmental change (Van Den Bosch et al., 1999).

Third, our focus is on top managers. Future research may investigate the impact of other management levels, i.e. middle-level and operational-level managers, on strategic renewal actions, particularly regarding exploitation and exploration (Mom et al., 2007). It may also be interesting to study how managers across hierarchical levels deal with strategic role conflict in managing strategic renewal trajectories (Floyd and Lane, 2000).

Fourth, our study was limited by a lack of data to take into account the size of strategic renewal actions. As in other recent research based on content analysis (e.g. Uotila et al., 2009), we assume that each strategic action has the same weight (Flier et al., 2003; Volberda et al., 2001b). Finally, more longitudinal research is needed (Helfat, 2000; Kieser, 1994). By combining a historical analysis of a long-lived firm with theory-driven constructs, such as strategic renewal and exploitation/exploration in this paper, new and interesting long-term developments and relationships between these constructs became accessible for further investigation, such as the impact of alternating TMT's corporate governance orientation on a firm's strategic renewal trajectories. In this way, historical analysis in management research is important for informing theory development (O'Sullivan and Graham, 2010).

To conclude, drawing on an extensive body of historical data from Royal Dutch Shell plc, we have provided both qualitative and quantitative empirical evidence that top managers' corporate governance orientation plays an important role in guiding a firm's strategic renewal trajectories. This role appears to be an important organizational antecedent that needs to be embedded in the study of strategic renewal.

ACKNOWLEDGMENTS

We wish to express our gratitude to senior managers of Royal Dutch Shell plc for providing intellectual stimulation, discussions, data, and documents for the purpose of this study; to Paul Methorst and Annika Kappner for their research assistance in compiling and coding the data; and to Peter Roosenboom and Pieter-Jan Bezemer for providing valuable ideas. We are grateful for the help and support of Mike Wright (Special Issue Guest Editor), the general and associate editors, and the three anonymous reviewers for their insightful reviews that have helped us improve this paper. We acknowledge the helpful comments of the participants of the 2008 Journal of Management Studies and Society for the Advancement of Management Studies Conference entitled 'Trajectories, Paths, Patterns and Practices of Strategizing and Organizing' in Oxford.

APPENDIX: KEY CODING RULES

1. Exploratory strategic renewal actions are actions such as starting up new business, launching new products/services, entering new technology fields, and entering new markets/geographic regions; these actions are associated among others with search, variation, and risk-taking (March, 1991). Exploitative strategic renewal

actions are actions such as improving existing product quality, expanding existing markets, improving existing competencies, and reducing operational costs, e.g. closure, consolidation, downscoping; these actions are associated among others with refinement and efficiency (March, 1991). See also Cao et al. (in press), Flier et al. (2003), He and Wong (2004), Lubatkin et al. (2006), Uotila et al. (2009), and Volberda et al. (2001b).

2. External-growth strategic renewal actions include mergers, acquisitions, and joint ventures; internal-growth strategic renewal actions are actions such as initiating internal corporate venturing, launching new products or new services, and closing product lines or offices (Capron and Mitchell, 2009; Flier et al., 2003; Galunic and Eisenhardt, 1996).
3. Accept and code a strategic renewal action only if it is explicitly mentioned that the action is materialized or implemented in the year under review; otherwise do not code it.
4. Deciding on dates: look for the date of implementation. If not available, look for the date of agreement/signing of contract in the annual report. Check other sources for triangulation.
5. Actions that do not relate to strategic renewal, but that are part of daily operations (e.g. extension of production capacity), are not considered as strategic renewal actions and should thus not be coded.
6. Strategic renewal actions that are complementary should be coded as a single action, e.g. the establishment of a research consortium/joint venture and the subsequent start of production are coded as one strategic action.
7. Strategic projects started up in a joint venture, production-sharing agreement, research consortia, strategic alliances are coded as external-growth strategic actions.
8. Strategic renewal actions taken by subsidiary companies in which the parent has majority control (more than or equal to 50%), are considered as actions of the parent and should be coded. Actions of minority holdings (less than 50%) are not coded.
9. Pure financial actions such as bonds and warrants issues are not coded as strategic renewal actions.
10. Joint ventures that are established for the purpose of experimenting with new technologies or operating in new markets should be coded as exploration. If it is not clear for what purpose a joint venture is established, it should be coded as exploitation.
11. Drilling a new oilfield in a new unexploited country is coded as exploration, each additional oilfield in that same country is considered as exploitation.
12. Acquisitions of interests/territories are coded as external strategic actions since they imply participation of parties outside Shell.

REFERENCES

Agarwal, R. and Helfat, C. E. (2009). 'Strategic renewal of organizations'. *Organization Science*, **20**, 281–93.

Aguilera, R. V. and Jackson, G. (2003). 'The cross-national diversity of corporate governance: dimensions and determinants'. *Academy of Management Review*, **28**, 447–65.

Albert, M. (1993). *Capitalism against Capitalism*. London: Whurr.
Albert, M. (1995). 'The Rhine model of capitalism: an investigation'. In Nicoll, W., Norburn, D. and Schoenberg, R. (Eds), *Perspectives on European Business*. London: Whurr Publishers, 103–17.
Alexiev, A. S., Jansen, J. J. P., Van Den Bosch, F. A. J. and Volberda, H. W. (in press). 'Top management team advice seeking and exploratory innovation: the moderating role of TMT heterogeneity'. *Journal of Management Studies*, in press, doi: 10.1111/j.1467-6486.2010.00919.x.
Baden-Fuller, C. and Volberda, H. W. (1997). 'Strategic renewal: how large complex organizations prepare for the future'. *International Studies of Management and Organization*, **27**, 95–120.
Bebchuk, L. A. and Roe, M. J. (1999). 'A theory of path dependence in corporate ownership and governance'. *Stanford Law Review*, **52**, 127–70.
Bouwman, C. H. S. (2009). *Corporate Governance Propagation through Overlapping Directors*. Working Paper, MIT Sloan School of Management, Cambridge.
Burgelman, R. A. and Grove, A. J. (2007). 'Let chaos reign, then rein in chaos – repeatedly: managing strategic dynamics for corporate longevity'. *Strategic Management Journal*, **28**, 965–79.
Buyl, T., Boone, C., Hendriks, W. and Matthyssens, P. (in press). 'Top management team functional diversity and firm performance: the moderating role of CEO characteristics'. *Journal of Management Studies*, in press, doi:10.1111/j.1467-6486.2010.00932.x.
Canella, A. A., Park, J. and Lee, H. (2008). 'Top management team background diversity and firm performance: examining the roles of team member collocation and environmental uncertainty'. *Academy of Management Journal*, **51**, 768–84.
Cao, Q., Simsek, Z. and Zhang, H. (in press). 'Modelling the joint impact of the CEO and the TMT on organizational ambidexterity'. *Journal of Management Studies*, in press. doi: 10.1111/j.1467-6486.2009.00877.x.
Capron, L. and Mitchell, W. (2009). 'Selection capability: how capability gaps and internal social frictions affect internal and external strategic renewal'. *Organization Science*, **20**, 294–312.
Carpenter, M. A. (2002). 'The implications of strategy and social context for the relationship between top management team heterogeneity and firm performance'. *Strategic Management Journal*, **23**, 275–84.
Carpenter, M. A., Geletkanycz, M. A. and Sanders, W. G. (2004). 'The upper echelons revisited: antecedents, elements, and consequences of top management team composition'. *Journal of Management*, **60**, 749–78.
Carter, S. M. (2006). 'The interaction of top management group, stakeholder, and situational factors on certain corporate reputation management activities'. *Journal of Management Studies*, **43**, 1145–76.
Certo, S. T., Lester, R. H., Dalton, C. M. and Dalton, D. R. (2006). 'Top management teams, strategy and financial performance: a meta-analytic examination'. *Journal of Management Studies*, **43**, 813–39.
Chakravarthy, B. S. and Doz, Y. (1992). 'Strategy process research: focusing on corporate self-renewal'. *Strategic Management Journal*, **13**, 5–14.
Chatman, J. A. and Flynn, F. J. (2001). 'The influence of demographic heterogeneity on the emergence and consequences of cooperative norms in work teams'. *Academy of Management Journal*, **44**, 956–74.
Clark, E. and Soulsby, A. (2007). 'Understanding top management and organizational change through demographic and processual analysis'. *Journal of Management Studies*, **44**, 932–54.
Cummins, I. and Beasant, J. (2005). *Shell Shock: The Secrets and Spin of an Oil Giant*. Edinburgh and London: Mainstream Publishing.
Eggers, J. P. and Kaplan, S. (2009). 'Cognition and renewal: comparing CEO and organizational effects on incumbent adaptation to technical change'. *Organization Science*, **20**, 461–77.
Ferrier, W., Smith, K. and Grimm, C. (1999). 'The role of competitive action in market share erosion and industry dethronement: a study of industry leaders and challenger'. *Academy of Management Journal*, **42**, 372–88.
Filatotchev, I. (2007). 'Review essay: corporate governance and the firm's dynamics – contingencies and complementarities'. *Journal of Management Studies*, **44**, 1041–56.
Filatotchev, I., Toms, S. and Wright, M. (2006). 'The firm's strategic dynamics and corporate governance life-cycle'. *International Journal of Managerial Finance*, **2**, 256–79.
Finkelstein, S. (1992). 'Power in top management teams: dimensions, measurement, and validation'. *Academy of Management Journal*, **35**, 505–38.
Flier, B., Van den Bosch, F. A. J. and Volberda, H. W. (2003). 'Co-evolution in strategic renewal behaviour of British, Dutch and French financial incumbents: interaction of environmental selection, institutional effects and managerial intentionality'. *Journal of Management Studies*, **40**, 2163–87.
Floyd, S. W. and Lane, P. J. (2000). 'Strategizing throughout the organization: managing role conflict in strategic renewal'. *Academy of Management Review*, **25**, 154–77.

Freeman, R. E. (1984). *Strategic Management: A Stakeholder Approach*. Boston, MA: Pitman.

Gabriëls, H. and Jongmans, K. (1990). *Koninklijke Olie: De Eerste Honderd Jaar 1890–1990*. 's Gravenhage: Shell Internationale Petroleum Maatschappij BV.

Galunic, D. and Eisenhardt, K. (1996). 'The evolution of intracorporate domains: divisional charter losses in high-technology, multidivisional corporations'. *Organization Science*, **7**, 255–82.

Garud, R. and Karnøe, P. (2001). *Path Dependence and Creation*. Mahwah, NJ: Earlbaum.

Garud, R., Kumaraswamy, A. and Karnøe, P. (2010). 'Path dependence or path creation?'. *Journal of Management Studies*, **47**, 760–74.

Gerretson, F. C. (1959). *History of the Royal Dutch (1953–1957)*. Leiden: E.J. Brill.

Gibson, C. B. and Birkinshaw, J. (2004). 'The antecedents, consequences, and mediating role of organizational ambidexterity'. *Academy of Management Journal*, **47**, 209–26.

Goodstein, J. G. and Boeker, W. B. (1991). 'Turbulence at the top: a new perspective on governance structure changes and strategic change'. *Academy of Management Journal*, **34**, 306–30.

Hair, J. F., Anderson, R. E., Tatham, R. L. and Black, W. C. (1998). *Multivariate Data Analysis*. Upper Saddle River, NJ: Prentice Hall.

Hall, P. A. and Gingerich, D. W. (2009). 'Varieties of capitalism and institutional complementarities in the political economy: an empirical analysis'. *British Journal of Political Science*, **39**, 449–82.

Hambrick, D. (2007). 'Upper echelons theory: an update'. *Academy of Management Review*, **32**, 334–43.

Hambrick, D. C. and Mason, P. A. (1984). 'Upper echelons: the organizations as a reflection of its top managers'. *Academy of Management Review*, **9**, 193–206.

Hambrick, D. C., Cho, T. S. and Chen, M. J. (1996). 'The influence of top management team heterogeneity on firms' competitive moves'. *Administrative Science Quarterly*, **41**, 659–84.

Hambrick, D. C., Davidson, S. C., Snell, S. A. and Snow, C. C. (1998). 'When groups consists of multiple nationalities: towards a new understanding of the implications'. *Organization Studies*, **19**, 181–205.

Harrison, D. A., Price, K. H., Gavin, J. H. and Florey, A. T. (2002). 'Time, teams, and task performance: changing effects of surface- and deep-level diversity on group functioning'. *Academy of Management Journal*, **45**, 1029–45.

Hayes, R. and Abernathy, W. (1980). 'Managing our way to economic decline'. *Harvard Business Review*, **July–August**, 67–77.

He, Z. L. and Wong, P. K. (2004). 'Exploration vs. exploitation: an empirical test of the ambidexterity hypothesis'. *Organization Science*, **15**, 481–94.

Helfat, C. E. (2000). 'Guest editor's introduction to the special issue: the evolution of firm capabilities'. *Strategic Management Journal*, **21**, 955–9.

Howarth, S. (1992). *Sea Shell: The Story of Shell's British Tanker Fleets 1892–1992*. London: Thomas Reed Publication.

Howarth, S. (1998). *A Century in Oil: The 'Shell' Transport and Trading Company 1897–1997*. London: Weidenfeld & Nicolson.

Howarth, S. and Jonker, J. (2007). *Powering the Hydrocarbon Revolution, 1939–1973: A History of Royal Dutch Shell, Volume 2*. New York: Oxford University Press.

Hurst, D. K., Rush, J. C. and White, R. E. (2007). 'Top management teams and organizational renewal'. *Strategic Management Journal*, **10**, 87–105.

Hutzschenreuter, T., Pederson, T. and Volberda, H. W. (2007). 'The role of path dependency and managerial intentionality: a perspective on international business research'. *Journal of International Business Studies*, **38**, 1055–68.

Jansen, J. J. P., Tempelaar, M., Van Den Bosch, F. A. J. and Volberda, H. W. (2009). 'Structural differentiation and organizational ambidexterity: the mediating role of integration mechanisms'. *Organization Science*, **20**, 797–811.

Jauch, L. R., Osborn, R. N. and Martin, T. N. (1980). 'Structured content analysis of cases: a complementary method for organizational research'. *Academy of Management Review*, **5**, 517–25.

Jenkins, M. and Floyd, S. (2001). 'Trajectories in the evolution of technology: a multi-level study of competition in Formula 1 racing'. *Organization Studies*, **22**, 945–69.

Johnson, G., Scholes, K. and Whittington, R. (2005). *Exploring Corporate Strategy: Text and Cases*. London: Prentice Hall.

Jones, G. G. (1977). 'The British government and the oil companies 1912–1924: the search for an oil policy'. *The Historical Journal*, **20**, 647–72.

Jonker, J. and Van Zanden, J. L. (2007). *From Challenger to Joint Industry Leader, 1890–1939: A History of Royal Dutch Shell, Volume 1*. New York: Oxford University Press.

Judge, W. (2010). 'Editorial: corporate governance mechanisms throughout the world'. *Corporate Governance: An International Review*, **18**, 159–60.

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

Kieser, A. (1994). 'Why organizational theory needs historical analysis – and how this should be performed'. *Organization Science*, **5**, 608–20.

Kim, H. E. and Pennings, J. (2009). 'Innovation and strategic renewal in mature markets: a study of the tennis racket industry'. *Organization Science*, **20**, 368–83.

Kimberley, J. R. and Miles, R. H. (1980). *The Organizational Life Cycle*. San Francisco, CA: Jossey-Bass.

Kwee, Z., Van den Bosch, F. A. J. and Volberda, H. W. (2008). 'Coevolutionary competence in the realm of corporate longevity: how long-lived firms strategically renew themselves'. In Sanchez, R. (Ed.), *Research in Competence-Based Management*. Bingley: Emerald, 281–313.

Lamberg, J., Tikkanen, H., Nokelainen, T. and Suur-Inkeroinen, H. (2008). 'Competitive dynamics, strategic consistency, and organizational survival'. *Strategic Management Journal*, **30**, 45–60.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A. and Vishny, R. W. (1997). 'Legal determinants of external finance'. *Journal of Finance*, **LII**, 1131–50.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A. and Vishny, R. W. (1998). 'Law and finance'. *Journal of Political Economy*, **106**, 1113–54.

Lazonick, W. and O'Sullivan, M. (2000). 'Maximizing shareholder value: a new ideology for corporate governance'. *Economy and Society*, **29**, 13–35.

Letza, S., Sun, X. and Kirkbride, J. (2004). 'Shareholding versus stakeholding: a critical review of corporate governance'. *Corporate Governance*, **12**, 242–62.

Lubatkin, M. H., Simsek, Z., Ling, Y. and Veiga, J. F. (2006). 'Ambidexterity and performance in small-to-medium-sized firms: the pivotal role of TMT behavioural integration'. *Journal of Management Studies*, **32**, 1–17.

Maassen, G. and Bosch, F. (2002). 'On the supposed independence of two-tier boards: formal structure and reality in the Netherlands'. *Corporate Governance: An International Review*, **7**, 31–7.

Malerba, F. (2004). *Sectoral Systems of Innovation: Concepts, Issues and Analyses of Six Major Sectors in Europe*. Cambridge: Cambridge University Press.

Malerba, F. (2005). 'Sectoral systems: how and why innovation differs across sectors'. In Fagerberg, J., Mowery, D. C. and Nelson, R. R. (Eds), *The Oxford Handbook of Innovation*. Oxford: Oxford University Press, 380–406.

March, J. G. (1991). 'Exploration and exploitation in organizational learning'. *Organization Science*, **2**, 71–87.

Matusik, S. F. and Hill, C. W. L. (1998). 'The utilization of contingent work, knowledge creation and competitive advantage'. *Academy of Management Review*, **23**, 680–97.

Miller, D. (1992). 'Environmental fit versus internal fit'. *Organization Science*, **3**, 159–78.

Mintzberg, H. (1978). 'Patterns in strategy formation'. *Management Science*, **24**, 934–48.

Mintzberg, H. and Waters, J. A. (1985). 'Of strategies: deliberate and emergent'. *Strategic Management Journal*, **6**, 257–72.

Moerland, P. W. (1995). 'Alternative disciplinary mechanisms in different corporate systems'. *Journal of Economic Behavior and Organization*, **26**, 17–34.

Mom, T. J. M., Van den Bosch, F. A. J. and Volberda, H. W. (2007). 'Investigating managers' exploration and exploitation activities: the influence of top-down, bottom-up, and horizontal knowledge inflows'. *Journal of Management Studies*, **44**, 910–31.

O'Sullivan, M. (2000). *Contests for Corporate Control: Corporate Governance and Economic Performance in the United States and Germany*. Oxford: Oxford University Press.

O'Sullivan, M. and Graham, M. B. W. (2010). 'Guest editors' introduction: moving forward by looking backward: business history and management studies'. *Journal of Management Studies*, **47**, 775–90.

Pagano, M. and Volpin, P. F. (2005). 'The political economy of corporate governance'. *American Economic Review*, **95**, 1005–30.

Pelled, L. H., Eisenhardt, K. M. and Xin, K. R. (1999). 'Exploring the black box: an analysis of work group diversity, conflict, and performance'. *Administrative Science Quarterly*, **44**, 1–28.

Peterson, R. S., Martorana, P. V., Smith, D. B. and Owens, P. D. (2003). 'The impact of chief executive officer personality on top management team dynamics: one mechanism by which leadership affects organizational performance'. *Journal of Applied Psychology*, **88**, 795–808.

Pettigrew, A. M. (1987). 'Context and action in the transformation of the firm'. *Journal of Management Studies*, **24**, 649–70.

Pettigrew, A. M. (1990). 'Longitudinal field research on change: theory and practice'. *Organization Science*, **1**, 267–92.

Pugliese, A., Bezemer, P., Zattoni, A., Huse, M., Van den Bosch, F. A. J. and Volberda, H. W. (2009). 'Board of directors' contribution to strategy: a literature review and research agenda'. *Corporate Governance: An International Review*, **17**, 292–306.

Raisch, S., Birkinshaw, J., Probst, G. and Tushman, M. L. (2009). 'Organizational ambidexterity: balancing exploitation and exploration for sustained performance'. *Organization Science*, **20**, 685–95.

Shen, W. and Cannella, A. A. (2002). 'Revisiting the performance consequences of CEO succession: the impacts of successor type, postsuccession senior executive turnover, and departing CEO tenure'. *Academy of Management Journal*, **45**, 717–33.

Simerly, R. (2003). 'An empirical examination of the relationship between management and corporate social performance'. *Journal of International Management*, **20**, 353–59.

Sluyterman, K. (2007). *Keeping Competitive in Turbulent Markets, 1973–2007: A History of Royal Dutch Shell, Volume 3*. New York: Oxford University Press.

Smith, J. H. (2003). 'The shareholders vs. stakeholders debate'. *MIT Sloan Management Review*, **44**, 77–82.

Stadler, C., Matzler, K., Hinterhuber, H. and Renzl, B. (2006). 'The CEO's attitude towards the shareholder value and the stakeholder model: a comparison between the Continental European and the Anglo-Saxon perspectives'. *Problems and Perspectives in Management*, **4**, 41–8.

Stein, J. C. (1988). 'Takeover threats and managerial myopia'. *Journal of Political Economy*, **96**, 61–80.

Teece, D. J., Pisano, G. and Shuen, A. (1997). 'Explorative capabilities and strategic management'. *Strategic Management Journal*, **18**, 509–33.

Tripsas, M. (2009). 'Technology, identity, and inertia: through the lens of "The Digital Photography Company" '. *Organization Science*, **20**, 441–60.

Tylecote, A. and Conesa, E. (1999). 'Corporate governance, innovation systems and industrial performance'. *Industry and Innovation*, **6**, 25–50.

Uotila, J., Maula, M., Keil, T. and Zahra, S. A. (2009). 'Exploration, exploitation, and financial performance: analysis of S&P 500 corporations'. *Strategic Management Journal*, **30**, 221–31.

Van Den Bosch, F. A. J., Volberda, H. W. and De Boer, M. (1999). 'Co-evolution of firm absorptive capacity and knowledge environment: organization forms and combinative capabilities'. *Organization Science*, **10**, 551–68.

Van Zanden, J. L. (2007). *Appendices, Figures and Explanations, Collective Bibliography, and Index: Including Three DVDs*. New York: Oxford University Press.

Volberda, H. W. and Lewin, A. Y. (2003). 'Co-evolutionary dynamics within and between firms: from evolution to co-evolution'. *Journal of Management Studies*, **40**, 2111–36.

Volberda, H. W., Baden-Fuller, C. W. F. and Bosch, F. A. J. (2001a). 'Mastering strategic renewal: mobilizing renewal journeys in multi-unit firms'. *Long Range Planning*, **34**, 159–78.

Volberda, H. W., Van Den Bosch, F. A. J., Flier, B. and Gedajlovic, E. R. (2001b). 'Following the herd or not? Patterns of renewal in the Netherlands and the UK'. *Long Range Planning*, **34**, 209–29.

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

Weber, R. P. (1990). *Basic Content Analysis*. Newbury Park, CA: Sage.

Wiersema, M. F. and Bantel, K. A. (1992). 'Top management team demography and corporate strategic change'. *Academy of Management Journal*, **35**, 91–121.

Wood, D. J. (1994). 'Essays in "The Toronto Conference": reflections on stakeholder theory'. *Business & Society*, **33**, 101–5.

Yergin, D. (1993). *The Prize: The Epic Quest for Oil, Money and Power*. New York: Free Press.