



Evidence on formal strategic planning and company performance

Evidence on formal strategic planning

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Abstract

Purpose – This empirical study of 113 UK companies attempts to examine the relationship between formal strategic planning and financial performance in a non-US context while taking into consideration the important contingent variables identified by previous researchers of organizational size, environmental turbulence and industry.

Design/methodology/approach – Based on a postal questionnaire primary data was collected from 113 UK companies. A series of multivariate analyses were undertaken to test the hypothesized relationships.

Findings – While hypotheses explaining the formality of a company's planning process were well accounted for, no relationship between formal planning process and subjective company performance was observed.

Research limitations/implications – Measurement validity may be a problem. The data are cross-sectional, therefore causal linkages among the variables cannot be firmly established. Related to this point is the fact that firm performance is a function of prior, not current, planning and other management practices. Longitudinal data would be needed in order to prove that causal relationships exist and control for time lag effects.

Originality/value – Despite the continued importance of performance objectives in the prescriptive literature, recent attention has not been given to strategic planning and performance in empirical research. One function of this paper is to re-ignite this area of research. More specifically, the empirical study reported in this paper draws on data from UK companies, which is novel in this stream of research. In a review of 29 relevant studies by Greenley (1994) the only study identified reporting UK data was that of Grinyer and Norburn (1975), the majority of the remaining studies reporting data from the USA. Greenley notes that while this represents a stream of research from a single business culture, the major issue is one of relevance to the practice of strategic planning in Europe and other countries. Although the principles of strategic planning should, of course, have universal application, there may be national differences in strategic planning, country dependent influences from business culture, and influences from different national trading conditions. The strategic management field can be criticized for not examining particular phenomena in non-US contexts, with respect to the impact of FSP and organizational performance this study attempts to rectify this imbalance.

Keywords Strategic planning, Company performance, United Kingdom

Paper type Research paper



Introduction

The relationship between formal strategic planning (FSP) and an organization's economic performance is "a controversial, problematic and unresolved issue" (Pearce

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et al., 1987). FSP has been associated with the field of strategic management from its earliest foundations. These early developments significantly include that of Andrews (Learned *et al.*, 1965) and of Ansoff (1965). Strategic planning has also been known under various labels encompassing “long range planning”, “corporate planning”, “strategic management” in addition to “Strategic Planning” (e.g. Steiner, 1963, 1979; Steiner and Cannon, 1966; Ackoff, 1970; Ansoff *et al.*, 1976). It is not the purpose of this paper to review and dissect the nuances these different labels bring to the subject. For our purposes we use FSP as a label to describe an organizational managerial process, which can be broadly “defined as the process of determining the mission, major objectives, strategies, and policies that govern the acquisition and allocation of resources to achieve organizational aims” (Pearce *et al.*, 1987, p. 658). These authors and others (e.g. Mintzberg and Lampel, 1999) point out that when the term formal strategic planning is used the intent is to convey that a firm’s strategic planning process involves explicit systematic procedures used to gain the involvement and commitment of those principal stakeholders affected by the plan.

Research on the relationship between FSP and organizational performance has proved inconclusive. Early studies suggested that FSP enhanced performance (Herold, 1972; Thune and House, 1970). Later studies concluded that there was no clear systematic relationship between FSP and firm performance (e.g. Shrader *et al.*, 1984; Scott *et al.*, 1981). Some have argued that FSP may be dysfunctional if it introduces rigidity and encourages excessive bureaucracy (Bresser and Bishop, 1983). It is recognized, however, that there may be non-financial consequences of strategic planning which provides benefits to the organization (Greenley, 1986).

The main purpose of this paper is to provide new empirical evidence on the relationship between strategic planning and performance, and to consider the effect of a set of contextual variables on this relationship. Despite the continued importance of performance objectives in the prescriptive literature, Greenley (1994) has pointed out that attention has not been given to strategic planning and performance in empirical research. One function of this paper is to re-ignite this area of research. More specifically, the empirical study reported in this paper draws on data from UK companies, which is novel in this stream of research. In a review of 29 relevant studies by Greenley (1994) the only study identified reporting UK data was that of Grinyer and Norburn (1975), the majority of the remaining studies reporting data from the USA. Greenley notes that while this represents a stream of research from a single business culture, the major issue is one of relevance to the practice of strategic planning in Europe and other countries. “Although the principles of strategic planning should, of course, have universal application, there may be national differences in strategic planning, country dependent influences from business culture, and influences from different national trading conditions” (Greenley, 1994, p. 392). As Kotha and Nair (1995) note in the context of studies on Japanese firms and industries, the strategic management field can be criticized for not examining particular phenomena in non-US contexts, with respect to the impact of FSP and organizational performance this study attempts to rectify this imbalance.

The rest of the paper is set out in the following manner. The next section considers the literature on strategic planning and performance and develops the paper’s hypotheses. The research methods are set out in the fourth section, followed by results and discussion. Conclusions are in the final section.

Literature review and hypotheses development

There is general agreement among strategic planning researchers that the strategic planning process consists of three major components (Hopkins and Hopkins, 1997):

- (1) Formulation (which includes developing a mission, setting major objectives, assessing the external and internal environments, and evaluating and selecting strategy alternatives).
- (2) Implementation.
- (3) Control.

Strategic planning can be considered from a content or a process viewpoint (O'Regan and Ghobadian, 2002, p. 418). The content relates to the distinct elements of the strategic plan which differ from firm to firm. Process relates to the mechanisms for the development of the strategic plan and its subsequent deployment. Grant (2003) notes that empirical research in strategic planning systems has focused on two areas: the impact of strategic planning on firm performance (the focus of this paper) and the role of strategic planning in strategic decision making. The latter area of research explored the organizational processes of strategy formulation, which is briefly considered here in order to locate the main concerns of this paper in context.

There are contrasting perspectives on the process of strategy formulation, for instance, Mintzberg and Lampel (1999) have classified ten. Broadly, they distinguish between prescriptive schools: design, planning and positioning and descriptive schools: cognitive, learning, power, cultural and environmental, and two which have elements of both: entrepreneurial and configuration. According to Mintzberg and Lampel (1999) some of the more recent approaches to strategy formation cut across these ten schools. The "dynamic capabilities" approach (Prahalad and Hamel, 1990) embodying notions of core competence, strategic intent and stretch, Mintzberg and Lampel see as prescriptive and practitioner-focused and classify it as a hybrid of the learning and design schools. The resource-based view (Wernerfelt, 1984; Barney, 1991; Grant, 1991), to Mintzberg and Lampel appears to be descriptive and research-focused and they classify it as a hybrid of the learning and cultural school. The tendency has been to view the ten different schools as representing fundamentally different processes to strategy formation, although Mintzberg and Lampel (1999) are ambiguous on this issue.

Essentially, the question regarding the nature of strategy formulation in organizations has centred on the so-called "design versus process" debate, which emphasizes the difference between deliberate and emergent strategies (Mintzberg and McHugh, 1985; Mintzberg and Waters, 1985). Deliberate strategies are defined as "intentions rebased" from strategies that are formulated in advance, whereas an emergent approach produces evolving strategic patterns despite or in the absence of intentions' (Mintzberg and McHugh, 1985, p. 161). One side advocates a formal, systematic, rational, strategic planning process (Ansoff, 1991; Goold, 1992). Others support an emergent process (Mintzberg, 1991, 1994; Mintzberg and Waters, 1982; Mintzberg and McHugh, 1985; Pascale, 1984). Grant (2003) argues that this debate has occurred in the context of a lack of empirical investigation of the phenomenon itself as it has concentrated on a few case examples of "dubious validity". Further, Grant maintains that much of the debate between the "strategy-as-rational-design" and "strategy-as-emergent-process" schools has been based upon a misconception of how

strategic planning works in the real world. From his investigation of the strategic planning practices of the major oil companies, Grant (2003) found that the strategic planning systems of the international oil majors “could be described as processes of “planned emergence.” The primary direction of planning was bottom-up – from the business units to the corporate headquarters – and with business managers exhibiting substantial autonomy and flexibility in strategy making. At the same time, the structure of the planning systems allowed corporate management established constraints and guidelines in the form of vision and mission statements, corporate initiatives, and performance expectations.”

Harrington *et al.* (2004) reach a similar conclusion. They note that the debate between Mintzberg (1990, 1991) and Ansoff (1991) typifies the view that firms’ strategy formulation processes are either deliberate or emergent. Consequently, the norm has been to separate strategy formulation into deliberate and emergent categories. However, Harrington *et al.* (2004) argue that it should be treated as a continuum in order to better tap into the idea that both approaches can be present in organisations. From their empirical findings they conclude that “Because dynamism and its associated uncertainty are on a continuum, managers do not have an either/or approach to strategy formulation . . . managers are cognizant of the environment and they respond by manipulating the strategy formulation process” (Harrington *et al.*, 2004, p. 29). Further, Andersen (2004b, p. 270) findings demonstrate that decentralized strategic emergence, where relatively autonomous managers are empowered to take initiatives of potential strategic consequences, and strategic planning activities that integrate diverse market experiences and coordinate strategic actions are both important to achieve superior performance. From a cross-sectional study of 112 manufacturing firms, Andersen confirmed that decentralized strategic emergence in conjunction with strategic planning is associated with higher performance for organizations with a high degree of international business activities that operate in turbulent industrial environments. Hence, the study contradicts conventional views that present the two strategy-making modes as alternatives contingent upon the level of environmental turbulence. Andersen concludes that the two strategy making modes are complementary elements of the strategy formation process and enhance organizational performance particularly for internationally engaged firms operating under the turbulence of global markets.

The prescriptive strategic management literature implies that there is a positive association between strategic planning and company performance, with directional causality from strategic planning to performance (Greenley, 1994). Greenley provides two kinds of answer to the question: why do companies need strategic planning? First, it should improve the performance of companies. The standard theory of strategic management focuses around the planning of a mission and objectives, of which company performance is part, the implementation of strategies to achieve these objectives, and control to ensure that the objectives are achieved. Second, the purpose of strategic planning is to improve the effectiveness of management throughout an organization. This in turn could lead to indirect improvements in performance, although its efficacy may, of course, be lost in the complexity of variables with the potential to influence performance. However, managers may perceive that it contributes to effectiveness, giving them a feeling of confidence and control. Some authors have claimed that it is the act of planning which is of real value (Sinha, 1990;

Ramanujam and Venkatraman, 1987), while Greenley (1986) has identified a range of advantages to be gained from using strategic planning. Strategic planning may therefore be effective as a process of management, regardless of the performance achieved. Despite this, Greenley (1994) argues the issue can be easily reverted back to performance: Even if these dimensions or features of planning are actually identified in a company's strategic planning, what purpose has been achieved by profiling their planning in a particular way if the company is unable to achieve higher levels of performance? Indeed, the whole focus of strategic management evolves around the attainment of sets of objectives, which represent aspirations for future performance.

Boyd (1991) notes that strategic planning is one tool to manage environmental turbulence, which has been adopted by a wide range of organizations. Further, formal strategic planning is an explicit and ongoing organizational process, with several components, including establishment of goals and generation and evaluation of strategies. An effective strategic planning system will link long-range strategic goals with both mid-range and operational plans. Planners collect data, forecast, model and construct alternative future scenarios. Ostensibly, these activities should allow organizations to outperform other firms, which did not engage in planning. Capon *et al.* (1994) argue that the greater the degree of sophistication of the planning process, the better the performance. In their view, strategic planners should perform better than financial planners because of their focus on adaptation to the environment, and the formal thinking through of strategic issues and resource allocation priorities. This practice should lead to the better identification of opportunities and threats, and appropriate firm action. Similarly, corporate planners should outperform division planners since an integrated corporate perspective should offer advantage over individual subunit perspectives. They also expect division strategic planners to outperform corporate financial planners because the adaptive environmental focus, albeit at a divisional level, should outweigh the benefits of corporate-wide financial integration. Overall they hypothesize that planners should outperform non-planners.

Despite the presumed positive association between strategic planning and company performance in the prescriptive literature, Boyd (1991) notes that after decades of research, the effect of strategic planning on a firm's performance is still unclear. While some studies have found significant benefits from planning, others have found no relationship, or even small negative effects. The results from the prior research appear mixed, largely due to different conceptualizations and measurement of both planning system dimensions and organization performance (Pearce *et al.*, 1987; Veliyath and Shortell, 1993).

The first empirical test of this relationship, was conducted by Thune and House (1970), who reported better economic performance by groups of formal planners compared to non-planners. In the time since this study numerous papers conducting similar analyses have been published resulting in dozens of empirical tests of the planning-performance relationship. This body of research is, however, more ambiguous than Thune and House's original findings. Some studies have reported strong benefits of planning (Karger and Malik, 1975; Rhyne, 1986), many report no quantifiable benefit (Grinyer and Norburn, 1975; Kudla, 1980), and others (Fulmer and Rue, 1974; Whitehead and Gup, 1985) have even reported that planners perform worse on some measures than their non-planning counterparts.

Several papers have reviewed this body of empirical work in an effort to integrate these findings. Greenley (1994), for instance, identified a total of 29 relevant and published empirical studies, where the overall aim of each study was to investigate whether or not an association can be identified between strategic planning and performance. Greenley classifies these studies into three groups. In the first group there are nine studies where the researchers concluded that there is no association between strategic planning and company performance (Rhenman, 1973; Rue and Fulmer, 1973, 1974; Grinyer and Norburn, 1975; Kallman and Shapiro, 1978; Kudla, 1980, Leontiades and Tezel, 1980; Robinson and Pearce, 1983; Fredrickson and Mitchell, 1984; and Whitehead and Gup, 1985). In the second group there are 12 studies, which support an association between strategic planning and company performance (Ansoff *et al.*, 1970; Eastlack and McDonald, 1970; Guth, 1972; Burt, 1978; Klein, 1981; Sapp and Seiler, 1981; Fredrickson, 1984; Robinson *et al.*, 1984; Welch, 1984; Bracker and Pearson, 1986; Pearce *et al.*, 1987; and Robinson and Pearce, 1988). In the third group of nine studies it was concluded that companies with strategic planning outperform companies without strategic planning (Gershefski, 1970; Thune and House, 1970; Herold, 1972; Karger and Malik, 1975; Wood and LaForge, 1979; Robinson, 1982; Ackelsberg and Arlow, 1985; and Rhyne, 1986, 1987).

Greenley (1994) notes that an initial examination of these results suggests that, on balance, the evidence supports an association between strategic planning and company performance. However, this conclusion does not include an appraisal of the methodological rigor of these results. He argues that there were many methodological weaknesses, which challenge this initial conclusion.

Armstrong (1982) considered 12 studies reporting positive, null or negative benefits to formal planning, and concluded that these studies supported the usefulness of formal planning, but that "serious research problems were found in these studies, so few conclusions could be drawn about how to plan and when to plan" (p. 209). Pearce *et al.* (1987) examined 18 studies and concluded that empirical support for the effect of formal planning "has been inconsistent and contradictory" (p. 671) and that only a "tenuous link" between formal strategic planning and financial performance had been identified. Shrader *et al.* (1984) examined 18 studies and concluded that "there is no clear relationship between formal-long range planning and organizational performance". For Boyd a logical extension of these narrative reviews was to aggregate statistically the previous research in a meta-analysis in order to estimate a weighted "average" correlation. Boyd (1991) results from his meta-analysis using 29 empirical studies, which sampled 2,496 organizations in all, found the overall effect of planning on performance very weak.

Mintzberg (1994) in a caustic review of the survey evidence on planning and performance claims that the "studies did not prove their own point", noting that some studies supported the relationship while others did not, with the overall results "inconclusive" (Bresser and Bishop, 1983: 588). "What Pearce *et al.* referred to in 1987 as a 'problematic and unresolved issue' remains problematic and unresolved" (Mintzberg, 1994, p. 97). In conclusion, Mintzberg (1994) maintains that "a number of biased researchers set out to prove that planning paid, and collectively they proved no such thing."

In a more balanced view Boyd (1991) makes the following conclusions: Early adopters of strategic planning took comfort in the findings of Thune and House (1970),

and Ansoff *et al.* (1970) and other initial studies regarding the financial rewards of strategic planning. Unfortunately, later analyses were not as reassuring. Boyd argues that firms which are questioning the need for strategic planning should remember two points from this body of research: first, existing research is subject to a great deal of measurement error, thus seriously underestimating the benefits of planning. Second, while the average effect size is small, many firms do report significant and quantifiable benefits from participating in the strategic planning process.

One basic problem associated with the prior research is that of the direction of the association (Mintzberg, 1994, Greenley, 1994). Although studies might report correlation, clearly, this is not causation. High levels of performance may result in strategic planning, as greater performance allows for the allocation of resources to planning. Or, as Mintzberg (1994) puts it “only rich organizations can afford planning, or at least planners”. While Rhyne (1986) in his study found that firms with planning systems more closely resembling strategic management theory were found to exhibit superior long-term financial performance, both relative to their industry and in absolute terms, he concluded that “whether strategic planning resulted in superior performance or superior performance permitted strategic planning remains difficult to specify” (Rhyne, 1986, p. 432).

The main methodological shortcomings in the prior empirical literature have been identified by a number of reviews (Pearce *et al.*, 1987; Rhyne, 1986; Greenley, 1994). Briefly, these may be summarized as follows: First, the definition of planning adopted in prior studies. Most studies have characterized firms as either planners or non-planners based on the extensiveness of the formal planning system. The presence of an elaborate system does not necessarily insure, however, that a firm’s planning process will be effective.

Second, consideration of industry effects. Several studies did not separate out industry effects. To the extent that industry profitability is a significant predictor of firm performance (Beard and Dess, 1979), this appears to be a major shortcoming (Rhyne, 1986). This issue is considered further below.

Third, the selection of performance measures. It is generally recognized that it is difficult to select a single measure of firm performance. Greenley(1994) notes that the strategic management literature lists several quantitative objectives that can be set to guide performance over a period of time, as well as qualitative objectives (Hunger and Wheelen, 1993; Thompson, 1993; Thompson and Strickland, 1992). Shrader *et al.* (1984) note that the dependent (performance) variables have been measured in numerous ways in the literature (sales, profit, productivity, revenue, dividends, growth, stock price, capital, cash flow, return on assets, return on capital, return on equity, return on investment, earnings per share, as well as other financial ratios), and point out that some performance variables may be more susceptible than others to strategic planning intervention. Greenley, further argues that despite obvious difficulties in measuring qualitative objectives, there is a strong a priori case that they should be included in assessments of performance (Chakravarthy, 1986). Therefore, care needs to be taken in identifying the adopted measures of performance.

The issue of the measurement of organization performance is a controversial area (Goodman and Pennings, 1980; Cameron, 1986; Chakravarthy, 1986; Lewin and Minton, 1986; Venkatraman and Ramanujam, 1986; Jacobson, 1987; Varadarajan and Ramanujam, 1990). A major problem is the choice of the appropriate yardstick(s) to be

used when assessing organization performance. Essentially, this debate concerns the appropriateness of traditional financial measures (for example ROI, growth) as providing a unique measure of performance versus the relevance of other indicators (such as maximizing shareholders' wealth; qualitative returns to non-financial stakeholders such as customer satisfaction). Rhyne (1986) notes that with the exception of Kudla (1980) most of the prior studies examining the planning-performance relationship utilized measures which did not reflect the return to investors. Moreover, the accounting measures of performance used captured only a portion of the firm's effectiveness.

Greenley and Foxall (1997) note that previous studies have taken either a subjective or an objective approach to measuring performance. The subjective approach has been used extensively in empirical studies, based on executives' perceptions of performance, having been justified by several writers. Studies by Covin *et al.* (1994), Dess (1987), Dess and Robinson (1984), Golden (1992), Hart and Banbury (1994), Powell (1992), Venkatraman (1990), Venkatraman and Ramanujam (1986), and Verhage and Waarts (1988) have all found consistency between executives' perceptions of performance and objective measures. Additionally, Fisher and McGowan (1983) argue that objective measures in company accounts are flawed and are not suitable for research purposes, while Day and Wensley (1988) suggest an absence of suitable objective measures. Hence the subjective approach has been widely adopted.

Although the empirical evidence is equivocal, and notwithstanding concerns regarding causality, the first hypothesis adopts the prescriptive view of strategic planning and performance, and in light of the controversy surrounding measures of organizational performance adopts a subjective measure.

H1. There will be a strong and positive correlation between the level of formal strategic planning and the degree of satisfaction of performance measured by subjective measures of performance.

The principal methodological concern noted by Pearce *et al.* (1987) in a critique of the prior literature was the lack of attention to contextual influences. To the limited extent that the planning context was considered, researchers depicted only a simple and unfettered relationship between a business's context and strategy and its financial performance. Elements of corporate context and their influence on an FSP-performance relationship were ignored.

Pearce *et al.* (1987) identify as a major methodological concern the influence that a firm's size may have on the planning-performance relationship. They call for explicit research attention to firm size, particularly regarding how this variable may interact with the formality dimension. Size has been argued to be a significant contingency variable to be considered when designing effective strategic planning systems (Lindsay and Rue, 1980; Hofer, 1975; Lenz, 1981). Robinson and Pearce (1983) argue that the organization's size is a critical contingency variable in the planning-performance relationship, and found evidence to support this position when they examined the planning-performance relationship among small banks. This finding was also confirmed by Powell (1994) who found that the correlation between strategic planning and performance was greater among large firms than among small firms. It may be further argued that in large organizations the strategic planning system functions as a co-ordination mechanism. Small firms, however, tend to

relinquish formal strategic planning since they operate in relatively less complex industry environments and their internal operations are highly manageable by a single manager or small group of managers, without the need for being engaged in comprehensive planning (Minzberg, 1979). These considerations lead to the second hypothesis.

H2. The larger the size of the organization the more formal the strategic planning system.

Another methodological concern with the prior literature noted by Pearce *et al.* (1987) was that elements of the industry context were often overlooked. For example, several studies were restricted to samples drawn from single industries to control for industry effects, but not one of these studies attempted to portray the role that the selected industry's context played (e.g. dynamism, forces, concentration and life cycle) in the planning-performance relationship. Perhaps inadvertently, the reviewed studies treated elements of the industry context as uniformly operative and influential across diverse industries, despite an absence of comparative industry grouping analysis to substantiate their claims. The previous research considering the impact of inter-industry differences on the planning-performance relationship has produced conflicting results. Fredrickson and Mitchell (1984) and Powell (1994) reported a higher planning-performance correlation in stable industries, while Miller and Friesen (1983), Miller and Cardinal (1994) and Priem *et al.* (1995) reported a higher planning-performance correlation in unstable industries. Despite previous research indicating that "industry" is a primary determinant of a firm's profitability (Beard and Dess, 1981) and that competitive conditions mitigate the relationship between FSP and firm effectiveness (Reimann and Neghandi, 1976), inter-industry studies frequently have failed to control for these differences. One exception to this is a recent study by Andersen (2000) who noted that strategic planning is associated with higher performance in all the industrial settings studied and where the performance effect of strategic planning does not vary significantly across different industry groups. This paper, further, attempts to incorporate elements of the industry level contexts into the analysis of planning and performance by distinguishing between manufacturing and service sector firms.

While the degree of FSP may be expected to vary between industries the direction of variation is unclear and has not been adequately addressed in the literature. To serve as an exploratory hypothesis, therefore, the study's third hypothesis is as follows:

H3. The degree of formal strategic planning will vary between industrial sectors.

Another potential contextual variable that has a high intuitive appeal as a factor that may influence the planning-performance relationship is the environment of the firm (Pearce *et al.*, 1987; Shrader *et al.*, 1984; Priem *et al.*, 1995; Slevin and Covin, 1997; Andersen, 2004a, b). Environment is normally taken to mean those forces acting on the firm beyond the control of management (Shrader *et al.*, 1984). Greenley and Foxall (1997) note that although studies have found that certain aspects of strategic planning are associated with performance, theory also predicts that these associations will be influenced by external environmental influences (Boyd *et al.*, 1993; Drazin and Ven de Ven, 1985; Ginsberg and Venkatraman, 1985; Hansen and Wernerfelt, 1989). Shrader *et al.* (1984) note that if one of the purposes of strategic planning is to guide the

organization in its relationships with the environment (Hambrick, 1980), then organizations that accurately project and anticipate environmental changes should exhibit an uncommon or distinctive level of performance. In this sense strategic planning may be more useful in a turbulent environment than a placid one (Armstrong, 1982; Eisenhardt, 1989). Consequently, the correlation between planning and performance may be stronger in a turbulent environment, and weaker in a placid environment (Boyd, 1991). There exist, however, some counter arguments that strategic planning is more likely to have a positive impact on firm performance in relatively less turbulent environments where future conditions are easier to anticipate (Minzberg, 1983; Fredrickson and Mitchell, 1984; Daft, 1992). Comparison of these conflicting arguments with their respective empirical evidence was well documented by Priem *et al.* (1995). In this paper, for the purpose of constructing a formal hypothesis, we adopt the former arguments:

- H4.* The more turbulent the environment the more formal the strategic planning process.

Research methods

Sample

The primary consideration of the sample selection strategy for the study was to ensure sufficient variability of the main explanatory variables, size and industry, where industry type was also used as a surrogate for environmental uncertainty (turbulence). To this end, a sample frame was required which provided data on company size (based on company turnover) covered a wide range of industries, as well as providing company contact details. For this reason the EXTEL database was selected as the sample frame because it contains details on a large number of UK listed companies covering a wide range of industries. As only listed companies are contained within this sample frame it excludes many very small companies of fewer than 100 employees. This was not viewed as a serious threat to the study as many such companies are likely to be managed entrepreneurially and so have no recognizable strategic planning system. It does however imply some censoring of the data but, as the sample statistics reported below demonstrate, any such censoring of the data was not significant.

Inspection of the sample frame revealed a relatively small number of companies listed in the primary industry sectors. As this would result in this sector been statistically poorly represented it was decided to exclude these industries from the sample frame. A sample of 500 companies was selected from the sample frame. A stratified random sampling plan was adopted to select companies from across a wide range of industries and turnovers. The number of companies to contact was estimated based on the need to obtain usable responses from over 100 companies with a probable response rate of between 20 percent and 25percent. This response rate estimate was based on the authors' previous experience with postal questionnaires. The usable sample size was estimated from the need of the statistical techniques employed to test the hypotheses to produce a well-specified model.

A postal questionnaire and its covering letter were sent to 500 companies. After one reminder the usable sample size was deemed adequate for the study. The usable response rate to the questionnaire was 23 percent. Systematic size or industry differences could not be detected between sample members and non-respondents.

The sample consists of 111 public limited companies with mean sales of £712 million (SD = £2,095 million, median = £100 million, range = £1.6 to £1,400 million) and a mean number of employees of 7,270 (SD = 21,351, median = 1,010, range = 30 to 130,500). The sample is therefore composed of relatively large firms. Six percent of the sample was divisions or subsidiaries of larger organizations; 20 percent were organizations without divisions or subsidiaries; and 74 percent of the sample was corporate head offices of parent organizations. The bulk of the sample companies were diversified (43 percent related, 45 percent unrelated) with 12 percent not diversified. A large cross section of industry sub-sectors were represented, including building and construction, chemicals, distributors, electricity, engineering, textiles, health care, insurance, media leisure and hotels. No industry accounted for more than 11 percent of the total sample. In total 54 percent of the sample companies were classified as operating in secondary industries, and 46 percent in tertiary industries. Companies in primary industries were excluded from the survey.

Questionnaire/respondents

Initial developments of the questionnaire were piloted on experienced managers. Following refinement and retesting the final questionnaire was posted to the named CEO of each company taken from the sample frame. As the focus of the study was the corporate strategic planning system and procedures, the covering letter requested the questionnaire be completed by the senior executive most directly responsible for the administration of the system. Senior executives were poled because they have the best vantage point for viewing the entire organization. Also senior managers are responsible for monitoring the environment and formulating appropriate responses. Respondents were 56 percent CEOs (e.g. Chairman, Managing Director) 18 percent finance executives (e.g. Finance Director, Company Secretary) 18 percent planning executives (e.g. Planning manager, Development director) and 8 percent other senior executives (e.g. Marketing director, Land director).

Variables

As previously noted, early studies of the effect of strategic planning systems have been criticized for adopting overly simple measures of process or formality. Typically the measure of formality was nominal on a has/has not a strategic planning systems scale. This study sought to assess the planning process using multiple indicators. From the earliest development of the corporate planning literature commentators have identified problems or features of good and bad planning practice (e.g. Pennington, 1972; Steiner and Schöllhammer, 1975; Porter, 1987; Marx, 1991). As noted in the introduction, several commentators have observed that the deciding characteristic of a "formal" strategic planning process is "that the process is not just cerebral but formal, decomposable into distinct steps, delineated by checklists, and supported by techniques" (Mintzberg and Lampel, 1999, p. 22). This study's focus is therefore on the formality versus flexibility of the organizational planning process. The intention was to develop a measure of planning process formality, not to debate whether this process should be formal or flexible. To this end, a multi-item measure of the planning process based on this formal-flexibility dimension was developed based upon studies by Gluck *et al.* (1982) and Marx (1991). The multi-item scale was adopted to counter the critique made above of early studies that used a simple dichotomous scale and therefore to

better reflect the multi-faceted nature of formal planning within organizations. The items used to measure formal planning process (FPP) are reproduced in the Appendix (Table AI).

Measures of the remaining contextual variables were taken from the literature:

- *Size* was measured using the logarithm of the three-year average annual turnover (LNTO). The logarithmic transformation is generally used to normalize the size variable, which might otherwise be badly skewed.
- *Turbulence* (TURB) was gauged using Miller and Dröge (1986) measure for environmental uncertainty based on Khandwalla's (1974, 1977) measures. These reflect the degree of change and unpredictability on market-related and technology dimensions.
- *Industry* (INDS) was taken as a two-valued nominal variable, scored for secondary and tertiary industries only. As previously noted, primary industries were excluded because of the low number of such firms within the sample frame.
- Measures of *subjective relative performance* (PERF) were based on items derived from a number of previous studies using this variable (Pearce *et al.*, 1987; Boyd, 1991; Dess and Robinson, 1984). Respondents were asked to indicate on a 5-point Likert-type scale, ranging from "definitely better" through "about the same" to "definitely worse" or "don't know", how their business had performed over the last three years relative to their major competitors on each of the following financial performance criteria: growth in profits, growth in sales volume, growth in market share, after tax returns on total sales, ratio of total sales to total assets and overall performance/success. These items are typically employed to measure performance as they are of interest to, and accessible to, powerful external stakeholders of an organization, such as its shareholders. Subjective relative performance was then calculated as the average response for all estimated performance criteria. Dess and Robinson (1984) found subjective measures of performance, assessed relative to a company's main competitors, were well correlated with objective performance measures.

Results and discussion

Variables

Reliability coefficients (Cronbach, 1970) are reported in Table I for all multi-item scales used in the study. This coefficient alpha indicates the degree to which error variance is present in a scale. All coefficients meet Nunnally and Bernstein (1994) criteria for reliability in an exploratory study of this type. The measure of planning process used

	PERF	FPP	LNTO	Alpha
PERF	1			0.91
FPP	0.0842	1		0.74
LNTO	-0.1026	0.3210 **	1	-
TURB	-0.0188	0.1551	-0.0091	0.66
Note: ** $p < 0.01$				

Table I.
Correlation matrix (lower semi-matrix) and reliability scores

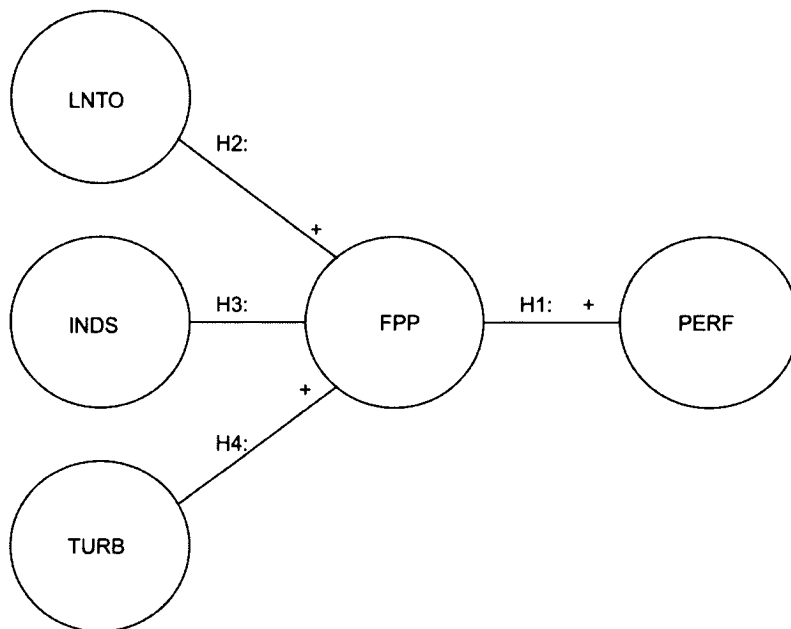
in the questionnaire consisted of 12 items. Reliability analysis of these items leads to two items being discarded. The sum of the remaining ten items constitutes the measure of planning process used in the study. Scale items are reproduced in the Appendix.

Analysis

The system of hypotheses previously presented postulates relationships between organizational performance and the planning process, and between the planning process and contextual variables including organizational size, environmental turbulence and industry. This system can be represented by the path diagram shown in Figure 1 and the hypotheses tested using linear regression with a dummy variable (Balestra, 1990). The acceptance or rejection of each hypothesis is then determined by the significance of the regression coefficients.

Results of the regression analysis are reproduced in Table II. The Kolmogorov-Smirnov one sample test for normality of the regression residuals showed the residuals did not significantly differ from a normal distribution ($p = 0.49$). Tolerance statistics for the predictor variables were all in excess of 0.91 indicating no significant collinearity between predictors. In conclusion, none of the main assumptions of the regression model were violated.

The results of this study indicate acceptance of the null hypothesis for *H1*, and rejection of the null hypothesis for *H2*, *H3*, and *H4* at the 5 percent level. Specifically



Note: PERF: Subjective relative performance; FPP: Formal planning process; LNTO: Logarithm of the three year average annual turnover; TURB: turbulence; INDS: Industry

Figure 1. Path diagram of hypotheses



Dependent variable	Independent variables	Regression coefficient	R-squared (F-ratio; df)	t-statistic
FPP			0.166	
	LNT0	0.267	(6.96*** > ; 3,105)	3.93***
	TURB	0.218		2.44**
	INDS	-0.221		-1.98*
	Constant	2.178		7.39***
PERF				0.007
	FPP	0.151	(0.77; 1,108)	0.879
	Constant	3.144		5.530***

Table II.
Regression analysis
results

Notes: * $p < 0.01$; ** $p < 0.02$; *** $p < 0.001$

we can state, on the basis of these findings, that there is no relationship between the formality of organizational planning processes and subjective performance. However, organizational size (turnover) and environmental turbulence both lead to more formalized planning systems. The organization's industry also has an effect on the formality of its planning process. The nature of the industry effect is for secondary industry companies to adopt more formalized planning systems than tertiary industry companies.

Discussion

A long series of empirical studies has provided only mixed support for the value of formal planning. Consequently, the question of whether the classic strategic management model does actually result in superior performance remains unanswered. This study sought to specifically address the standard strategic management assumption of a positive relationship between FSP and company performance. Prior research into this relationship had produced contradictory results. Shrader *et al.* (1984) note that the complexity of the planning-performance relationship makes research focusing on specific contingencies necessary before concrete conclusions and statements about planning and performance can be made. In line with this view, this study considered three contingent variables identified in the literature as potentially important in this relationship. Specifically the size of the firm and its industry, characterized by each firm's industrial sector classification and environmental turbulence, were included as contingent variables.

While this study found these contingent variables have significant effects on the style of formal planning process adopted by responding organizations, on a flexible to formal scale, it did not find evidence for a relationship between the planning process and financial performance. This finding is at odds with that of Grinyer and Norburn (1975), which identified a positive association between planning and performance, and is one of the earliest studies of planning within UK companies. On the other hand, this finding is similar to a number of studies conducted on North American organizations, which also found little statistical evidence to support the planning-performance relationship. Greenley (1994) cautioned against the application of research findings obtained from a single national context to other national contexts on the grounds that such research results may reflect a single business culture and national trading

conditions. This study would appear to support the view that North American studies and findings translate reasonably directly to the UK national context; at least as far as the planning-performance relationship is concerned.

In terms of understanding the relationship between planning and performance this study sought to address some of the criticisms levelled at prior research by incorporating contextual variables and using a multiple indicator measure of planning process itself based on arguments over the design of effective planning systems. The absence of a significant relationship between planning and financial performance could mean the true relationship between the contextual variables is different to that assumed here. It could also mean the dimensions of planning systems captured by the formal planning process measure used are not important for explaining performance. In fact the strong relationship observed between organizational size and planning process would suggest formal planning is actually functioning as an internal control mechanism and may therefore not have captured the strategy-making process within the organizations.

Pearce *et al.* (1987) have noted that the mere existence of formality or perceived importance, either alone or in combination, neither indicates intuitively the effectiveness of the planning process nor the effectiveness of the plans derived via FSP. They point out that since managers of most medium and large firms now conduct formal strategic planning to some degree, any differential advantage that might once have existed for those who simply went through a formal process surely has been lost to those whose FSP results in the production and implementation of effective plans. "It may be that FSP has become a necessary but not sufficient condition for long-term corporate performance" (Pearce *et al.*, 1987, p. 672). Future research should evaluate the effectiveness of the strategic plans of the companies studied.

Implementing FSP plans is another critical but ignored link. Pearce *et al.* (1987) note that, regardless of the extent of formality of planning, an inappropriately structured and implemented FSP system may lead to decreased organization efficiency, thereby hampering financial performance of the firm. Alternatively, the extent to which a firm's intended strategies become altered through internal politics and the competitive marketplace (Mintzberg and McHugh, 1985; Mintzberg and Waters, 1982) has been ignored.

Finally, we note the findings reported here suggest the formality of an organization's planning system increases with increasing size and increases with increasing environmental turbulence. The effect of size accords with suggestions from a number of authors (Robinson and Pearce, 1983; Lindsay and Rue, 1980; Hofer, 1975) and, as noted above, this might be due as much to its role as a control mechanism as a planning and directing one. The observed effect of environmental turbulence also accords with suggestions of Boyd (1991), Eisenhardt (1989) Shrader *et al.* (1984) and Armstrong (1982). It could be suggested the opposite relationship may hold (Mintzberg, 1983; Fredrickson and Mitchell, 1984; Daft, 1992; Johnson and Scholes, 1997). That is, increasing turbulence could lead to reduced reliance on formal planning systems and greater reliance on experience or other informal systems. It may also be the case that with increasing turbulence the type of formal system adopted changes from say, forecasting to developing scenarios. The measure of planning formality used in this study was not designed to detect differences between formal planning systems, only the extent of formality in the planning system. The idea that the type of formal

planning system will change with environmental turbulence is therefore not tested. The findings do, however, contradict a view that planning systems become less formal with increasing turbulence. This could be that in highly turbulent environments managers feel the process of undertaking a formal review of their strategies and direction is of substantial benefit, even if they have little confidence in the outcome of such a review process. This finding therefore supports the view expressed by authors such as Sinha (1990) and Ramanujam and Venkatraman (1987) that it is the process, or act, of planning that is of benefit in this situation. Again, this is an area that requires further investigation.

Conclusions

Results presented in this paper help to explain the nature of the planning-performance relationship in a non-US context while considering the important contingency variables identified by previous researchers of organizational size, environmental turbulence and industry. While hypotheses explaining the formality of a company's planning process were well accounted for, no relationship between formal planning process and subjective company performance was observed.

It should be noted that the findings of this study are subject to a number of methodological caveats, which are common to many other empirical studies in this area. Measurement validity may be a problem. The data are cross-sectional, therefore causal linkages among the variables cannot be firmly established. Related to this point is the fact that firm performance is a function of prior, not current, planning and other management practices. Longitudinal data would be needed in order to prove that causal relationships exist and to control for time lag effects.

While the findings of this study provide a contribution to our understanding of the relationship between formal strategic planning and company performance, clearly, much more needs to be done in future research. After almost a decade of relative neglect perhaps this research issue will again begin to attract the kind of attention that it deserves. One way forward may be to recognize that strategic planning and its key dimensions represent a subtle and complex activity, and that to obtain rich data on such phenomena may be best accomplished through research methods that employ qualitative data gathering techniques. Second, this study, like previous planning-performance studies, is concerned with financial measures of company performance. Incorporation of other performance measures, such as quality and employee satisfaction, in addition to financial measures would enrich our understanding of the planning-performance relationship. Finally, this study points to the desirability of incorporating additional theoretically relevant moderators into future studies of the planning-performance relationship. We suggest these could include the content of a firm's strategy, the market power of the firm and the firm's resources, capabilities and systems.

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Appendix. Planning formality scale items

Formal						Flexible
Uniform planning procedures	1	2	3	4	5	Flexible planning procedures
Regular scheduled reviews	1	2	3	4	5	Scheduled as needed
Strict time limits on reviews	1	2	3	4	5	As much time as needed
Formal presentations	1	2	3	4	5	Informal presentations
Numerous observers	1	2	3	4	5	Decision makers only
Massive paperwork	1	2	3	4	5	Ten page plans, or less
Open dialogue	1	2	3	4	5	Restricted discussion
Decisions compulsory	1	2	3	4	5	Decisions optional
Regular progress reviews	1	2	3	4	5	Random progress reviews
Strict accountability	1	2	3	4	5	Limited accountability

Table AI.
Planning formality scale

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