A CAUSAL ANALYSIS OF FORMAL STRATEGIC PLANNING AND FIRM PERFORMANCE: EVIDENCE FROM AN EMERGING COUNTRY

by

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Abstract
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INTRODUCTION

The performance implication of strategic planning has been a central area of investigation for researchers over the past three decades. Although there is a plethora of research findings on the relationship between formal strategic planning (FSP) and organizational performance, much of these findings have 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).

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. The main purpose of this paper is to re-kindle this area of research and provide new empirical evidence on the relationship between strategic planning and performance using LISREL structural equation modeling. By using this sophisticated technique we analyze the mediating effects of formal strategic planning between a set of contingency variables and firm performance.

The empirical study reported in this paper draws on data from Turkish companies, which is novel in this stream of research. In fact, planning and performance literature focuses primarily on industrialized countries including the USA, UK, Canada, Australia and Japan, producing frameworks and models that are not necessarily applicable to developing or emerging countries (Koufopoulos et al. 2005; Haines, 1988). In a review of 29 relevant studies by Greenley (1994) revealed that the majority of the studies reported 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: 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.

This study therefore attempts to rectify this imbalance by examining the relationship between strategic planning and organizational performance in a different environmental context, that of the developing transitional economy of Turkey. The characteristics of the Turkish economy make it an interesting case to examine the nature and role of the strategic planning process on organizational performance. Since the early 1980s, Government policies in Turkey have focused on developing a free market economy and have encouraged an outward-oriented export-led development strategy. Significant progress has been made in the liberalization of trade and investment policies and the pursuit of macroeconomic stability and economic growth. The new stage triggered by the start of Turkey’s membership negotiations with the EU suggests a greater likelihood of more FDI entries through acquisitions, privatization or expansion of existing multinational enterprises’ operations thus leading to an increase in foreign competition. In response to the level of complexity and change in most industries, Turkish firms have been increasingly turning their attention to the strategic planning practices (Dincer and Tatoglu, 2002). Hence, Turkey is an ideal country case for examining the planning-performance relationships in country environments characterized by greater instability and turbulence. The relatively new trend toward strategic planning in Turkish firms is perceived as a move designed not only to help them manage their environment more effectively but also to improve their organizational performance. This will help to generalize the previous findings and will be instructive in comparing the planning-performance relationships in a developed market economy and those located in a transitional economy.

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

The central tenet of this study is that the formal strategic planning process intervenes between factors such as environmental turbulence, firm size, organizational structure, the extent of diversification, and firm performance. Equivocal findings in the previous literature might largely stem from the past studies’ lack of attention to the relationship among these variables and their potential impact on formal planning practices and performance. The examination of these factors is an important issue to better understand planning-performance relationships in an emerging country firms. The following subsections detail the rationale for linkages between these factors, formal planning practices, and firm performance, and set out the study’s hypotheses. The hypotheses underlying the causal linkages were tested using LISREL structural equation modeling of which its results will be reported in a later section of this study.

Formal Strategic Planning and Performance

Grant (2003: 492) notes that empirical research in strategic planning systems has focused on two areas: the impact of strategic planning on firm performance 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.

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). 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.

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. 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 Mitchel, 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’ (1982: 209). Pearce et al. (1987) examined 18 studies and concluded that empirical support for the effect of formal planning ‘has been inconsistent and contradictory’ (1987: 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’s (1991: 362) 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.

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, Ansoff et al. 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: 94) 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: 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). The most prominent ones are related to the definition of planning and the selection of performance measures. 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.

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 Ramajuman (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.

The majority of previous research on planning and performance relationship has been conducted in few industrialized countries including the USA, Japan and the UK, largely ignoring emerging countries, though it has been asserted that significant problems would occur when management practices were transferred to emerging countries due to relatively poor level of legal and institutional environment and numerous market failures (Kiggundu et al. 1983; Koufopoulos, 2002). So, it may not be unreasonable to expect that the majority of firms in emerging countries adopt formal strategic planning practices at a much slower pace than their counterparts in developed countries. Given the severe critiques on the prescriptive strategic planning process and equivocal empirical findings on its dimensions, roles and contributions to overall firm performance, the first hypothesis adopts a rather the emergent view of strategic planning and proposes that formal strategic planning may be dysfunctional if it introduces rigidity and excessive bureaucracy leading to have a negative impact on firm performance.

**H1:** There is a strong and negative direct relationship between the level of formal strategic planning and the degree of satisfaction of performance measured by subjective measures of performance.

**Organizational Factors**

The prior literature was criticized by little or no emphasis placed on examining organizational or contextual influences. This stream of research appears to consider strategic planning as an isolated set of activities without taking into account the other contextual variables. To the limited extent that the planning context was considered, researchers depicted only a simple and unfettered relationship between organizational factors and strategy and its financial performance. Elements of corporate context and their influence on
an FSP-performance relationship were ignored. The extent to which firms engage in the strategic planning process, whether the process is formal or informal, hinges on certain organizational factors. We posit that formal strategic planning practices and their impact on firm performance should be viewed in relation to organizational variables (Bracker and Pearson, 1986; Bahaee, 1992). Although there may be several organizational determinants of formal strategic planning, this study posits that firm size and organization structure are major determinants.

**Firm Size**

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 to integrate and control various parts of a firm. 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 (Mintzberg, 1979). Using meta-analytic data from 26 previously published studies, Miller and Cardinal (1994) noted that firm size was a not a significant predictor of planning-performance relationship. As contrary to the previous findings, drawing on data from 112 banks Hopkins and Hopkins (1997) found a negative direct relationship between bank size and strategic planning intensity which in turn
negatively affected banks’ financial performance. In line with these findings and given the highly uncertain emerging country context, it would be plausible to expect that firms growing in size should adopt relatively less formal strategic planning process in order to avoid the potential negative impacts of pursuing more formal strategic planning process. These considerations lead to the second hypothesis.

*H2: Large firms using more flexible strategic planning process will achieve relatively higher performance than those using more formal strategic planning process.*

**Organization Structure**

The organization structure is critical to the firm’s information processing capability and has a significant influence on the context and nature of human interactions (Miller, 1987). Previous research has investigated the relationships between structure and strategy and between structure and environmental uncertainty (Khandwalla, 1977; Covin and Slevin, 1989; Gibbons and O’Connor, 2005). Organization design choices essentially produce two different organization structures being reflected on a mechanistic to organic continuum (Burns and Stalker, 1961). Organizations relying on organic structures are characterized by high level of mutual adjustment and tend to encourage flexibility and decentralized decision making. In contrast, a mechanistic organization is characterized by higher level of standardization and formal rules to facilitate control and coordination, which in turn favorably influences the organization’s choice of formal strategic planning practices. Miller (1987) assessed organization structures along formalization, centralization and structural integration dimensions and noted that formalization had a significant and positive impact on the rationality of strategy-making approaches. Similarly, in a later study, Gibbons and O’Connor (2005) found that firms with organic structures tended to adopt a strategy formation process that is incremental and emergent, while firms with mechanistic structures were more likely to adopt a strategy formation process that is formal and comprehensive. There is substantial evidence suggesting that companies with organic structures are more effective in unpredictable environments, while the companies with mechanistic structures are more effective in stable or predictable environments where there is no need for rapid organizational
responses (Burns and Stalker, 1961; Lawrence and Lorsch, 1967). Based on the supporting evidence, the following hypothesis is proposed.

**H3:** Firms with organic structures that tend to adopt less formal strategic planning process will achieve relatively higher performance than those adopting more formal strategic planning process.

**Environmental Turbulence**

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, 2004b). 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; Miller and Friesen, 1983, Eisenhardt, 1989; Miller and Cardinal, 1994). 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 (Mintzberg, 1973; 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 latter arguments:
H4: In turbulent environments firms adopting more formal strategic planning process will have relatively lower performance than those adopting more flexible strategic planning process.

RESEARCH METHODS

Sample and Data Collection

The sample frame for the study was derived from the database of the Istanbul Chamber of Industry’s 500 largest Turkish manufacturing companies and the database of companies quoted on the Istanbul Stock Exchange. After eliminating those companies listed in both databases, the sampling frame included a total of 638 companies.

A modified version of the Dillman’s (1978) Total Design Method was used to organize and conduct the study. The first part of the method included the efforts made in identifying the sample, as described above, and designing and piloting the survey instrument. The questionnaire was mailed to the CEO of each company with a letter requesting that it be completed by the CEO, or his/her senior executive in charge of strategy development within the organization. After one reminder 135 usable questionnaires were returned, a response rate of 21.2%, which is acceptable given the seniority of the respondents, and the confidentiality and complexity of the questionnaire. Respondents were CEOs (39.3%), Vice President (14.8%), planning executives (11.1%), finance executives (10.4%) and other senior executives, for example, Marketing Director (24.4%).

No systematic differences were found between responding and non-responding companies across the main characteristics of the sample. The sample firms had mean sales of $131.96 million and mean number of employees of 1040. The sample is therefore composed of relatively large firms given the scale of the Turkish economy with 85% of the companies in manufacturing and 15% in the service sector. In terms of ownership type, the companies were classified as state-owned (22%), private-owned (59%) and foreign-owned (19%).

Measurement of Variables
Measures of firm size, organizational structure, environmental turbulence, formal strategic planning and firm performance were employed in this study. With the exception of firm size and performance, the remaining variables were described in the Appendix.

**Formal Strategic Planning**

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: 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 strategic planning (FSP) process are reproduced in the Appendix. After eliminating three items (Q4E, Q4F and Q4K) from the initial set of 12, the inter-item reliability coefficient (alpha) for FSP was computed to be 0.73, which is well above the threshold value of 0.70 as suggested by Nunnally (1978).

**Firm Performance**
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 3 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. After eliminating one item (growth in profits), the inter-item reliability for PERF scale was found to be 0.90.

**Organizational Factors and Environmental Turbulence**

*Size* (SIZE) was measured using the logarithm of the three-year average annual turnover. The logarithmic transformation is generally used to normalize the size variable, which might otherwise be badly skewed.

*Organization structure* (STRUCT) was operationalized by using a five-item scale, which measures ‘organicity’ or the extent to which companies are structured in mechanistic or organic forms. The scale was initially developed by Covin and Slevin (1988) based on Burns and Stalker (1961). With the exclusion of one item (Q5A), the inter-item reliability of STRUCT was found to be highly satisfactory with the Cronbach alpha value being 0.83.

*Environmental turbulence* (TURB) was gauged using Miller and Dröge’s (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. The Cronbach alpha value for TURB is 0.72, denoting a satisfactory level of construct reliability.
Unidimensionality and Convergent Validity of Scales

For unidimensionality and convergent validity analysis, confirmatory factor analysis (CFA) was used as opposed to exploratory factor analysis (EFA). Mulaik (1972) provides a strong argument in favor of performing confirmatory factor analysis by suggesting that the major disadvantage of pure EFA lies in the difficulty involved in interpreting the factors. Implementing CFA method within LISREL framework ‘allows the specification of measurement errors within a broader context of assessing measurement properties and describes a causal indicator model — where the operational indicators are reflective of the unobserved theoretical construct’ (Venkatraman, 1989).

In this study, the three contingency variables of firm size organizational structure and environmental turbulence were treated as exogenous variables, while formal strategic planning and firm performance were taken as endogenous variables.

With the exception of firm size (SIZE) which is composed of a single indicator, all four scales were subjected to CFA using LISREL software. Table 1 summarizes the test results for unidimensionality of each scale. As shown in Table 1, all four scales achieve unidimensionality and convergent validity at monomethod level based on the following model statistics: $\chi^2$ statistics, its associated degrees of freedom, $p$ value, GFI, AGFI, CFI, and Tucker-Lewis index.

Insert Table 1 over here

Model

LISREL analysis was used as a linear structural equation model for latent variables (Joreskog, 1970). The objective of LISREL is to show the complete set of paths as specified in the model is reasonable and the operationalization of the theory is corroborated and not disconfirmed by the sample data (Fornell and Bookstein, 1982). LISREL causal modeling deals with structural and measurement issues in survey-based research and is employed to test a hypothesized model. The two components of LISREL are measurement and structural. The measurement component identifies the latent variables, while the structural component
evaluates the hypothesized causal relationships among latent variables in the causal model and provides an overall hypothesis test of the model as a whole. The full LISREL model, used to test the hypothesized model is shown in Figure 1.

**Insert Figure 1 over here**

The $\eta$ latent endogenous variables in this model are formal strategic planning (FSP) and firm performance (PERF), while the $\xi$ latent exogenous variables are firm size (SIZE), organization structure (STRUCT) and environmental turbulence (TURB). As indicated in the LISREL model, PERF was measured by six performance variables: Q6B, Q6C, Q6D, Q6E, Q6F and Q6G. Based on the components of the formal strategic planning process, the nine measures of the FSP latent variable were: Q4A, Q4B, Q4C, Q4D, Q4G, Q4H, Q4I, Q4J and Q4L. The organization structure latent variable is measured by four variables: Q5B, Q5C, Q5D and Q5E. Finally, the five measures used for the environmental turbulence (TURB) latent variable were: Q2A, Q2B, Q2C, Q2D and Q2E. The size of organization (SIZE) is measured by a single indicator variable. As a general rule, a latent variable must be measured by at least two indicators. In such a case, to avoid from underidentification problem, one needs to fix the common (latent variable) factor loading and the standard deviation (Kelloway, 1998: 135-138). Hence, the relationship between the latent variable of size and performance was fixed for estimation. Table 2 displays the descriptive statistics and correlations among the measured variables.

**Insert Table 2 over here**

**RESULTS AND DISCUSSION**

The final step in the analysis was to test the path model as specified in Figure 1 using LISREL software package (Joreskog and Sorbom, 1996). The hypothesis testing capability of LISREL allowed us to determine the likelihood that the relationships among the latent variables actually fit the relationship defined in the model. LISREL first analyzes the data collected on the observed variables for evidence of model specification quality and then
conducts a chi-square likelihood ratio test of the null hypothesis that the sample covariance matrix $S$ is drawn from a population characterized by the hypothesized covariance matrix $\Sigma$. An overall goodness-of-fit ($\chi^2$) test with a $p$ value of exceeding 0.05 would indicate that the model is correctly specified. Table 3 presents the results of the LISREL analysis for our model.

**Insert Table 3 over here**

The method of maximum likelihood was employed to derive parameter estimates for the structural equation model, as shown in Figure 2. Most of the parameter estimates for the model are statistically significant ($p<0.05$). The model fit determines the degree to which the structural equation model fits the sample data. The model fit criteria commonly used are chi-square ($\chi^2$), goodness of fit index (GFI), adjusted goodness of fit index (AGFI), comparative fit index (CFI), Tucker-Lewis index and root mean square residual (RMS) (Schumacker and Lomax, 1996).

The chi square value of 284.27 (d.f. = 254) has a significance level of 0.093 that is above the minimum threshold value of 0.05. The Goodness of Fit Index (GFI) was found to be 0.86, which is close to 1 and accepted as a good indicator of an adequate model fit. The value of adjusted goodness of fit index (AGFI) was 0.82 that is more than the suggested cut off value of 0.80 and thus, it is considered as a good indicator of an adequate model fit (Hair et al., 1995).

In this model, the root mean square residual (RMR) value was found to be 0.09 indicating a perfect fit. The root mean square error of approximation (RMSEA) is also another indicator of model fit. RMSEA for the model was 0.041 which is less than suggested threshold level of 0.05. In terms of goodness of fit indices, there is a need to check further two more indices, CFI and TLI. The values of both indices were found to be 0.97, which is very close to 1. All of the model fit criteria for the path model were highly satisfactory that the model was accepted to fit the data.

**Insert Figure 2 over here**
Table 4 shows the direct and indirect effects of statistically significant relationships expressed in the model. Results shown in Table 4 indicate that the use of formal strategic planning (FSP) practices has a negative and direct effect (-0.62 at \( p<0.01 \)) on firm performance which provides a good deal of support for H1. This finding contradicts with the findings of previous research which concluded that planning generally benefits performance (Thune and House, 1970; Herold, 1972; Greenley, 1986; Capon et al., 1994; Hopkins and Hopkins, 1997). The emerging nature of the Turkish context might to some extent explain this negative causal link between formal strategic planning and firm performance. Similar to many other emerging countries, Turkey poses a highly uncertain business environment since the legal and institutional environment is relatively poorly developed, capital markets are thin and there are numerous market failures. Such market inefficiencies and weak resource bases may increase the riskiness of the business environment and thus affect the likelihood of indigenous firms’ decision to adopt FSP process, which will in fact negatively influence firm performance. It might therefore be argued that Turkish firms would tend to perceive strategic planning more of an emergent process rather than a deliberate and formal process, which they envisage would affect firm performance negatively.

Insert Table 4 over here

Table 4 also shows a strong causal link between size and performance. The results show that size has a positive and strong direct impact on firm performance (0.60 at \( p<0.01 \)). But with the intermediation of FSP, size has a negative and indirect effect (-0.32) on firm performance leading to a decline in total effect (0.28). This finding provides a good deal of support for H2, which tends to confirm the view that large firms using more flexible strategic planning process will achieve relatively higher performance than those using more formal strategic planning process. This finding is not particularly surprising in that larger firms in emerging countries appear to benefit more by relying on less formal strategic planning
processes to be able to respond more effectively to opportunities and threats. Although the heightened difficulty of ensuring integration and control for large firms increases the need for more formalized strategic planning practices and tools, relying heavily on FSP may be dysfunctional which can create administrative rigidity and excessive bureaucracy. This obviously encourages large size firms to find a balance between the need for integration and the potential benefits of growing size in terms of increasing efficiency.

Although the impact of organic structure has a significant positive direct effect (0.32 at $p<0.01$) on firm performance, with the intermediation of FSP practices it has a negative and weak indirect effect (-0.05) on firm performance, where the total effect becomes slightly lower (0.27). The finding that the firms with organic structures using less formalized strategic planning processes achieve relatively higher performance than those using more formalized strategic planning processes tends to support H3 for this sample of firms. The organically structured firms emphasize incremental and emergent approaches to strategy formulation reflecting higher level of mutual adjustment and decentralized decision-making. These might be considered precursors to the success of indigenous firms in Turkey where there is an urgent need for rapid organizational responses to cope with highly volatile environmental forces.

Table 4 shows that the direct effect of environmental turbulence on firm performance is negative and significant (-0.30 at $p<0.01$), while its indirect effect on firm performance is positive (0.17) resulting in a negative total effect (-0.17). This finding suggests that in highly turbulent environments firms relying heavily on formal strategic planning processes will have relatively lower performance than those relying on more flexible and incremental strategy process, which provides again a good deal of support for H4. While this finding corroborates the findings of some earlier research (Mintzberg, 1983; Fredrickson and Mitchell, 1984), it contradicts with those of the past research (Miller and Friesen, 1983; Eisenhardt, 1989; Miller and Cardinal, 1994).

CONCLUSIONS
This paper has attempted to provide further evidence to explain the nature of planning and performance relationships drawing on data from Turkish companies. Past studies that have analyzed this relationship have tended to focus on industrialized countries, while almost none explicitly modeled and empirically tested the relationship in emerging country context.

By using LISREL causal modeling we investigated the mediating effects of formal strategic planning between a set of contingency factors and firm performance. The findings show that there is a good deal of support for study’s hypotheses, indicating strong causal links between the latent variables. First, there is a strong and negative relationship between formal strategic planning and firm performance, which contradicts with the findings of some earlier research, suggesting that planning generally benefits performance. Another finding emerging from this study is that the firms with organic structures using less formalized strategic planning processes will have relatively superior performance compared to those using more formalized strategic planning processes. Moreover, a strong causal link between size and performance has been noted, which tends to confirm the view that large firms adopting more flexible strategic planning process will achieve relatively higher performance than those using more formal strategic planning process. Finally, it has been found that in highly turbulent environments firms relying heavily on formal strategic planning processes would have relatively lower performance than those relying on more flexible and incremental strategy process. While this finding appears to support some earlier research, it contradicts with the findings of previous research suggesting that the correlation between planning and performance may be stronger in a turbulent environment, and weaker in a stable environment.

While the findings of this study provide a contribution to our understanding of the relationship between formal strategic planning and firm 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. While strategy is often considered to be a universal practice, it is better thought of as many different crafts, varying according to its different contexts. So, the impact of various contexts on planning-performance relationship should be taken into account. For instance, different national and societal contexts such as developed versus emerging country context as well as ownership
and stakeholder contexts including family businesses or public organizations would prove valuable contextual factors to examine planning-performance relationship. Another 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. Third, 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.

REFERENCES


**APPENDIX**

**The Planning Formality Scale**

*To what extent does your company’s planning procedures conform to the statement on the left or right of the following list?*

<table>
<thead>
<tr>
<th>Q#</th>
<th>Flexible</th>
<th>Formal</th>
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</thead>
<tbody>
<tr>
<td>Q4A</td>
<td>Scheduled as needed</td>
<td>1 to 5 Regular scheduled reviews</td>
</tr>
<tr>
<td>Q4B</td>
<td>As much time as needed</td>
<td>1 to 5 Strict time limits on reviews</td>
</tr>
<tr>
<td>Q4C</td>
<td>Informal presentations</td>
<td>1 to 5 Formal presentations</td>
</tr>
<tr>
<td>Q4D</td>
<td>Decision makers only</td>
<td>1 to 5 Numerous observers</td>
</tr>
<tr>
<td>Q4E</td>
<td>Ten page plans, or less</td>
<td>1 to 5 Massive paperwork</td>
</tr>
<tr>
<td>Q4F</td>
<td>Open dialogue</td>
<td>1 to 5 Restricted discussion</td>
</tr>
<tr>
<td>Q4G</td>
<td>Decisions optional</td>
<td>1 to 5 Decisions compulsory</td>
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<td>Q4H</td>
<td>Results emphasized</td>
<td>1 to 5 Process emphasized</td>
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<td>Q4I</td>
<td>Random progress reviews</td>
<td>1 to 5 Regular progress reviews</td>
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<tr>
<td>Q4J</td>
<td>Limited accountability</td>
<td>1 to 5 Strict accountability</td>
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<tr>
<td>Q4K</td>
<td>Data, Numbers, Facts</td>
<td>1 to 5 Business intelligence</td>
</tr>
<tr>
<td>Q4L</td>
<td>Flexible planning procedures</td>
<td>1 to 5 Uniform planning procedures</td>
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**The Organization Structure Scale**
Indicate in each scale the number that best approximates the operating management philosophy of the top management of your company.

| Q5A | Tight formal control of most operations by means of sophisticated control and information systems | 1 to 5 | Loose, informal control; heavy dependence on informal relations and norm of cooperation for getting work done |
| Q5B | Strong emphasis on always getting personnel to follow the formally laid down procedures | 1 to 5 | Strong emphasis on getting things done if this means disregarding formal procedures |
| Q5C | A strong emphasis on holding fast to true and tried management principles despite any change in business conditions | 1 to 5 | A strong emphasis on adapting freely to changing circumstances without too much concern for past practice |
| Q5D | Strong emphasis on a uniform management style throughout the business unit | 1 to 5 | Managers’ operating styles allowed to range freely from the very formal to the very informal |
| Q5E | Strong emphasis on getting line and staff personnel to adhere closely to formal job descriptions | 1 to 5 | Strong tendency to let the requirements of the situation and the individual’s personality define proper on-job behavior |

The Environmental Turbulence Scale

For the industry that accounts for the largest percentage of your sales (i.e., your main industry) how rapid or intense is each of the following?

| Q2A | Our firm has to change its marketing practices to keep up with the market and competitors. | 1 to 5 | Our firm must change its marketing practices extremely frequently (e.g. semi-annually). |
| Q2B | The rate at which products or services are getting obsolete in the industry is very slow (e.g., basic metal like copper). | 1 to 5 | Threat of obsolescence is very high, as in some fashion goods. |
| Q2C | Actions of competitors are quite easy to predict. | 1 to 5 | Actions of competitors are unpredictable. |
| Q2D | Demand and consumer tastes are fairly easy to forecast. | 1 to 5 | Demand and taste are almost unpredictable. |
| Q2E | The production/service technology is not subject to very much change and is well established. | 1 to 5 | The modes of production/service change often and in a major way. |

Figure 1

The LISREL Model of Planning - Performance Relationships
Table 1
Initial Confirmatory Factor Analysis Results

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* Due to only one indicator, CFA can not be performed.
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<td>-0.01</td>
<td>-0.14</td>
<td>-0.18</td>
<td>-0.11</td>
<td>0.16</td>
<td>0.11</td>
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<tr>
<td>Q6D</td>
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<td>1.0</td>
<td>0.14</td>
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<td>0.25</td>
<td>0.13</td>
<td>-0.18</td>
<td>0.20</td>
<td>0.12</td>
<td>0.14</td>
<td>0.14</td>
<td>0.13</td>
<td>0.12</td>
<td>0.08</td>
<td>0.01</td>
<td>0.15</td>
<td>0.12</td>
<td>0.04</td>
<td>0.05</td>
</tr>
<tr>
<td>Q6E</td>
<td>3.1</td>
<td>1.1</td>
<td>0.15</td>
<td>0.08</td>
<td>0.33</td>
<td>0.10</td>
<td>-0.05</td>
<td>0.16</td>
<td>0.07</td>
<td>0.02</td>
<td>0.18</td>
<td>0.05</td>
<td>0.10</td>
<td>0.16</td>
<td>0.07</td>
<td>0.12</td>
<td>0.22</td>
<td>0.10</td>
<td>0.15</td>
</tr>
<tr>
<td>SIZE</td>
<td>6.0</td>
<td>1.4</td>
<td>-0.07</td>
<td>-0.26</td>
<td>-0.17</td>
<td>-0.21</td>
<td>0.07</td>
<td>-0.06</td>
<td>-0.10</td>
<td>-0.09</td>
<td>-0.04</td>
<td>0.04</td>
<td>0.06</td>
<td>-0.04</td>
<td>0.04</td>
<td>0.09</td>
<td>-0.07</td>
<td>-0.12</td>
<td>0.01</td>
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Table 3
Parameter Estimates for LISREL Model

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Standardized Estimates</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\lambda_{11}^x$</td>
<td>0.71</td>
</tr>
<tr>
<td>$\lambda_{21}^x$</td>
<td>0.69**</td>
</tr>
<tr>
<td>$\lambda_{31}^x$</td>
<td>0.85**</td>
</tr>
<tr>
<td>$\lambda_{41}^x$</td>
<td>0.72**</td>
</tr>
<tr>
<td>$\lambda_{52}^x$</td>
<td>0.43</td>
</tr>
<tr>
<td>$\lambda_{62}^x$</td>
<td>0.69**</td>
</tr>
<tr>
<td>$\lambda_{72}^x$</td>
<td>0.51**</td>
</tr>
<tr>
<td>$\lambda_{82}^x$</td>
<td>0.59**</td>
</tr>
<tr>
<td>$\lambda_{92}^x$</td>
<td>0.68**</td>
</tr>
<tr>
<td>$\lambda_{103}^x$</td>
<td>0.44</td>
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<tr>
<td>$\lambda_{11}^y$</td>
<td>0.94</td>
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<tr>
<td>$\lambda_{21}^y$</td>
<td>0.94**</td>
</tr>
<tr>
<td>$\lambda_{31}^y$</td>
<td>0.58**</td>
</tr>
<tr>
<td>$\lambda_{41}^y$</td>
<td>0.56**</td>
</tr>
<tr>
<td>$\lambda_{51}^y$</td>
<td>0.68**</td>
</tr>
<tr>
<td>$\lambda_{61}^y$</td>
<td>0.67**</td>
</tr>
<tr>
<td>$\gamma_{11} (\text{STRUCT} - \text{PERF})$</td>
<td>0.32**</td>
</tr>
<tr>
<td>$\gamma_{12} (\text{TURB} - \text{PERF})$</td>
<td>-0.30*</td>
</tr>
<tr>
<td>$\gamma_{13} (\text{SIZE} - \text{PERF})$</td>
<td>0.60**</td>
</tr>
<tr>
<td>$\gamma_{21} (\text{STRUCT} - \text{FSP})$</td>
<td>0.08</td>
</tr>
<tr>
<td>$\gamma_{22} (\text{TURB} - \text{FSP})$</td>
<td>-0.28*</td>
</tr>
<tr>
<td>$\gamma_{23} (\text{SIZE} - \text{FSP})$</td>
<td>0.52*</td>
</tr>
<tr>
<td>$\beta_{12} (\text{FSP} - \text{PERF})$</td>
<td>-0.62**</td>
</tr>
<tr>
<td>$\chi^2$</td>
<td>284.27</td>
</tr>
<tr>
<td>$P$</td>
<td>0.093</td>
</tr>
<tr>
<td>AGFI$^a$</td>
<td>0.82</td>
</tr>
<tr>
<td>RMSEA$^b$</td>
<td>0.021</td>
</tr>
</tbody>
</table>

Notes:
* AGFI = Adjusted goodness-of-fit index
$^b$ RMSEA = Root mean square error of approximation
$^* p < 0.05; ** p < 0.01$ (one-tailed test).
Figure 2
The Results of LISREL Model of Planning - Performance Relationships
### Table 4
Direct, Indirect and Total Effects in LISREL Model

<table>
<thead>
<tr>
<th>Paths</th>
<th>Descriptions</th>
<th>Direct Effects</th>
<th>Indirect Effects</th>
<th>Total Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\gamma_{11}$</td>
<td>(STRUCT – PERF)</td>
<td>0.32</td>
<td>-0.05</td>
<td>0.27</td>
</tr>
<tr>
<td>$\gamma_{12}$</td>
<td>(TURB – PERF)</td>
<td>-0.30</td>
<td>0.17</td>
<td>-0.13</td>
</tr>
<tr>
<td>$\gamma_{13}$</td>
<td>(SIZE – PERF)</td>
<td>0.60</td>
<td>-0.32</td>
<td>0.28</td>
</tr>
<tr>
<td>$\gamma_{21}$</td>
<td>(STRUCT – FSP)</td>
<td>0.08</td>
<td>0.00</td>
<td>0.08</td>
</tr>
<tr>
<td>$\gamma_{22}$</td>
<td>(TURB – FSP)</td>
<td>-0.28</td>
<td>0.00</td>
<td>-0.28</td>
</tr>
<tr>
<td>$\gamma_{23}$</td>
<td>(SIZE – FSP)</td>
<td>0.52</td>
<td>0.00</td>
<td>0.52</td>
</tr>
<tr>
<td>$\beta_{12}$</td>
<td>(FSP – PERF)</td>
<td>-0.62</td>
<td>0.00</td>
<td>-0.62</td>
</tr>
</tbody>
</table>