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# Linking the formal strategic planning process, planning flexibility, and innovativeness to firm performance

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## ABSTRACT

This study explores the link between financial performance and the formal strategic planning process, planning flexibility, and innovativeness of 448 firms in a multi-industry sample. The results suggest that firms' formal strategic planning processes and planning flexibility are positively associated, and each is positively related to innovativeness. In addition, innovativeness fully mediates the relationships between firm performance and the formal strategic planning process and planning flexibility.

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## 1. Introduction

Contemporary business leaders face remarkable challenges. Success is increasingly a function of a firm's ability to develop and to deploy unique and costly to imitate resources in an innovative way. Scholarly inquiry in strategy focuses on how firms can deliberately and proactively leverage their idiosyncratic combination of resources to create competitive advantages (Barney, 1991; Penrose, 1959). Scholars also question how formal strategic planning and planning flexibility may contribute to a firms' ability to innovate and profit (e.g., Titus, Covin, & Slevin, 2011; Wiltbank, Dew, Read, & Sarasvathy, 2006). Positioned at the nexus of these research streams, the current study examines the relationships among financial performance and formal strategic planning processes (i.e., the process of identifying and implementing the firm's strategic initiatives (Jarzabkowski & Balogun, 2009)), planning flexibility (i.e., the ability of a firm to deviate from its formal strategic plan in response to emerging opportunities or threats (Barringer & Bluedorn, 1999)), and innovativeness i.e., a firm's emphasis on innovation (e.g., Dibrell, Craig, & Hansen, 2011b).

We develop and test a set of hypotheses in which firm innovativeness fully mediates the path from formal strategic planning processes and planning flexibility to firm financial performance. Three research questions drive this study: (1) If firm success is predicated on its ability to build and to leverage valuable, idiosyncratic resources and capabilities, then what role may formal strategic planning processes

and planning flexibility play in that effort?, (2) Can firms simultaneously develop formal strategic plans, yet integrate adaptive responses based on a changing environment and still successfully innovate?, and (3) How does the combination of the formal strategic planning process, planning flexibility, and innovativeness influence a firm's performance? Many studies examine the relationships between formal strategic planning and innovation (e.g., Miller & Cardinal, 1994; Salomo, Talke, & Strecker, 2008), between planning flexibility and formal strategic planning (e.g., Brews & Hunt, 1999; Grant, 2003; Rudd, Greenley, Beatson, & Lings, 2008), and between planning flexibility and innovation (e.g., Barringer & Bluedorn, 1999; Zhou & Wu, 2010). Other studies, however, note the need for a greater understanding of the possible mediators of the relationship between the formal strategic planning process and firm performance (Rudd et al., 2008).

This research offers multiple contributions. First, it informs the strategic planning literature by examining how (1) the formal strategic planning process functions in the presence of firm innovativeness, (2) planning flexibility relates to firm innovativeness, and (3) firms employ formal strategic planning processes and flexible planning systems concurrently. Consistent with Barringer and Bluedorn (1999), we use planning flexibility and flexible planning systems synonymously. These aforementioned extensions are significant because, though a formal strategic planning process has merits, an overly structured formal planning process can impede a firm's ability to respond to external conditions (Grant, 2003; Kukalis, 1989). Second, this study explores how innovativeness facilitates the generation of positive financial returns. Specifically, innovativeness should play a critical role in the relationships among formal strategic planning processes, planning flexibility, and firm financial performance. Third, our study contributes to resource based view (RBV) theory by examining how a non-novel

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process (i.e., formal strategic planning) can produce economic value and be a firm-level source of competitive advantage (Powell, 1992). Finally, the results contribute to recent conversations in the consideration of adaptive approaches in strategy formulation (Read, Dew, Sarasvathy, Song, & Wiltbank, 2009; Titus et al., 2011; Wiltbank et al., 2006).

## 2. Literature review and hypotheses development

### 2.1. Resource-based view

According to the resource-based view (Penrose, 1959), firms develop advantages by *capitalizing on* or *leveraging* their assets (Barney, 1986, 1991, 2001). In this study, we offer formal strategic planning processes, planning flexibility, and innovativeness as three factors that serve as the foundation for competitive advantage and performance (Barney, 1991).

### 2.2. The formal strategic planning process

Prior research strives to understand formal strategic planning processes and decision making in organizations (Delmar & Shane, 2003; Eisenhardt & Zbaracki, 1992; Mintzberg, 1994; Schwenk & Shrader, 1993). The relationship between formal strategic planning and financial performance has been both positive (e.g., Delmar & Shane, 2003) and negative (e.g., Honig & Karlsson, 2004), with most studies demonstrating a positive relationship (e.g., Miller & Cardinal, 1994). The firm's formal strategic planning process is concerned with defining, determining, and implementing the strategic initiatives of the firm (Jarzabkowski & Balogun, 2009).

More recently, authors have focused more on the uses of both *ends* and *means* to emphasize distinctive, though related, concepts of the formal strategic planning process (Brews & Hunt, 1999; Titus et al., 2011). Whereas *ends* pertain to what an organization desires to achieve (i.e., objectives), *means* reflect the process of how a firm intends to achieve these objectives (Brews & Hunt, 1999). Formal strategic planning process objectives (i.e., ends) involve developing objectives and establishing the degree to which firms formalize and document these objectives. *Means* conversations define the broad resource allocation commitments related to the strategies. The current study's arguments build on the perspective that strategic *ends* are increasingly difficult to predict, due to the rapidity of external change, and that being responsive to these changes is a requisite *means* that must be considered (Read et al., 2009; Titus et al., 2011; Wiltbank et al., 2006).

### 2.3. Planning flexibility

Although a formal strategic planning process is considered to be positively related to firm performance (Brews & Hunt, 1999; Schwenk & Shrader, 1993), evidence suggests that the effectiveness of strategic planning declines when environmental uncertainty increases as the perceived value of strategic planning decreases in kind. As a consequence, considerable debate exists over the efficacy of formal strategic planning compared with more adaptive styles of strategic planning (Ansoff, 1991; Gibbons & O'Connor, 2005; Mintzberg, 1991, 1994; Quinn, 1978). By its very nature, a formal strategic planning process creates a degree of inflexibility and rigidity, making efforts to adapt to changes in the external environment difficult, especially when managers become strictly tied to their strategic plans (Mintzberg, 1994). Increasingly, business leaders are voicing the need for their firms to alter their strategic plans to match changing external environments (Grant, 2003; Wiltbank et al., 2006). Thus, planning flexibility, as well as the ability to effectively conduct formal strategic planning, can be a powerful, though somewhat paradoxical, means to create competitive advantages. Armed with analysis and insights gained from a formal planning process, firms can make more effective decisions about the types of resources to develop or acquire. Matched with a willingness to deviate from formal strategic plans when opportunities present themselves, firms can more

effectively leverage and deploy these valuable and difficult to imitate resources in pursuit of innovation.

Grant (2003) coins the term "planned emergence" to describe firms' ability to create a structured planning process while concurrently building decentralized decision making. The planned emergence strategic planning process integrates attributes of the design school approach (i.e., formal strategic planning) (Ansoff, 1991) and the process school approach (i.e., ad hoc, flexibility) (Mintzberg, 1994) to create effective strategies in turbulent environments. Environmental dynamism hinders firms' abilities to strategically plan their responses, let alone plan future strategies.

Extending Grant's (2003) work, Wiltbank et al. (2006) propose the inclusion of adaptive approaches to strategy. They argue that strategic planning with a strong emphasis on prediction of objectives constrains the firm in times of uncertainty. Conversely, an emphasis on control of its potential outcomes (e.g., affordable losses to limit the potential negative losses associated with launching a new product) helps the firm cope with the unpredictability (Wiltbank et al., 2006). Adaptive approaches to planning, therefore, can complement a firm's more formal strategic planning process.

Also, Kukalis (1989) and Barringer and Bluedorn (1999) introduce the concept of planning flexibility, which "refers to the capacity of a firm's strategic plan to change as environmental opportunities/threats emerge" (Barringer & Bluedorn, 1999, p. 424). Theorizing that performance is maximized when firms in complex environments adopt *flexible* planning systems, Kukalis' premise is that planning flexibility enables firms to pursue not-planned-for opportunities resulting from environmental change through quick adjustments of their strategic plans (Barringer & Bluedorn, 1999; Read et al., 2009; Titus et al., 2011).

Incorporating systemic planning flexibility allows the formal strategic planning process to maintain relevance in changing circumstances. Thus, when used in combination with the formal strategic planning process, planning flexibility can improve agility and help the firm leverage the potential of its key resources. This combination improves a firm's ability to overcome organizational inertia and break down institutional routines that block pursuit of explorative innovations (Zhou & Wu, 2010). Building on arguments that suggest that formal strategic planning is not the "one" best way to plan, we suggest:

**H1.** Formal strategic planning process and planning flexibility are positively associated.

### 2.4. Innovativeness

Reflecting an important means by which firms pursue new opportunities, innovativeness is a key to a firm's competitiveness (e.g., Covin & Slevin, 1989; Miller & Friesen, 1982). Innovativeness is defined as a firm's willingness to emphasize technological developments, new products, new services, and/or improved product lines in pursuit of competitive advantage (Lumpkin & Dess, 1996; Slevin & Covin, 1995). Innovativeness "is universally perceived as exploring something new that has not existed before" (Cho & Pucik, 2005, p. 556) and thus is a critical organizational competence providing advantages in any competitive market.

A critical aspect of any formal strategic planning process is a thorough scanning and analysis of the external environment. This involves the search and collection of data related to the external environment. This information can influence planning decisions by providing evidence of customer needs, exposing new technologies, or shedding light on future market or technological trends, which are important inputs into the innovation process (Dibrell, Craig, & Hansen, 2011a; Zahra, Neubaum, & El-Hagrassey, 2002). For this reason, a firm's formal strategic planning process should be positively associated with innovativeness (Salomo et al., 2008). Thus:

**H2.** The formal strategic planning process has a direct and positive effect on innovativeness.

Firms that complement their strategic planning processes with flexible planning systems possess a greater capacity to recognize and respond to changes identified in their external environment. In conjunction with formal strategic planning processes, planning flexibility is competence enabling and also creates the means for a firm to respond to the external environment. Similarly, from an RBV perspective, firms must constantly monitor, and adjust to, their competitive environments in the pursuit of dynamic capabilities essential for success and survival (Collis & Montgomery, 1995). Innovation, by nature, is unpredictable (Read et al., 2009; Wiltbank et al., 2006), and systems that enable the firm to effectively control and respond to the unpredictability associated with innovation should be in place. So, consistent with Barringer and Bluedorn (1999), who frame their conversation in the corporate entrepreneurship context, planning flexibility system should facilitate innovation, as follows:

**H3.** Planning flexibility has a direct and positive effect on innovativeness.

### 2.5. Innovativeness as a mediator

Prior studies argue that formal strategic planning processes and planning flexibility are associated with firm performance (Grant, 2003; Kukalis, 1989; Rudd et al., 2008; Wiltbank et al., 2006), but the empirical strength of these associations has been inconsistent, and sometimes non-existent (see, Powell, 1992). One potential cause for these inconsistent results is the failure of prior studies to include key intervening variables between formal strategic planning process and financial performance (Powell, 1992). In this study, we consider innovation as a critical proximate outcome of formal strategic planning and planning flexibility. That is, through innovativeness, environmental scanning, strategic planning, and reasoned firm responses to those efforts take shape, allowing the firm to alter its competitive posture, offer new products, and adapt effectively to changing customer demands. The real potential value of formal planning processes and flexible planning systems, and the real, sustainable value of a firm's resources and capabilities, therefore, manifest in the firm's innovativeness.

The previous sections provide the impetus to explore whether innovativeness mediates the relationship between formal strategic planning processes and firm performance, or the planning flexibility–firm performance relationship. Other studies have investigated the role of innovativeness as a mediator between strategy and performance. Hult and Ketchen (2001), for example, find that innovativeness plays a mediating role in the market orientation–performance relationship. Cho and Pucik (2005) establish that innovativeness mediates the relationship between quality and growth. Droge, Calantone, and Harmancioglu (2008) predicted that a firm's strategic orientation to new product success is positively mediated by innovativeness. Consequently, the current study suggests that innovativeness mediates the formal strategic planning process–firm performance relationship and the planning flexibility–firm performance relationship. Thus:

**H4.** Innovativeness fully and positively mediates (a) the formal strategic planning processes and firm performance relationship, and (b) the planning flexibility and firm performance relationship.

## 3. Methods

### 3.1. Sample

Data were collected through a mail questionnaire following Dillman, Smyth, and Christian (2009). We randomly chose 3351 potential respondents from a Dun & Bradstreet list of the population of United States firms in the natural resource, manufacturing, and financial services. Mailing errors or company policies against responding to surveys

eliminated 541 firms. We received 599 mostly completed questionnaires, for a response rate of 21.3%.

We tested for non-response bias, but no differences occurred between early and late respondents for any of the study's variables. Prior research criticizes the use of single-respondent surveys because of concerns associated with common method bias (Podsakoff & Organ, 1986). Two approaches helped diminish these concerns. First, all the items in the study were subjected to a principal components factor analysis (Gibbons & O'Connor, 2005; Podsakoff & Organ, 1986). The unrotated solution produced five factors, with the first accounting for only 23% of the 62% explained variance, which suggests that common method bias should not seriously influence the results.

The second approach took a random sub-sample of 56 firms located in one state which was well represented in the broader national sample. Each respondent reported the number of full-time employees which were then compared to data provided by a state government agency. A positive and significant correlation ( $r = .35$ ;  $p < .01$ , two-tailed test) occurred between the data from these two sources, suggesting that the obfuscating effects associated with common method bias may not be present.

Vorhies, Morgan, and Autry (2009) suggest that an owner of the business or a chief executive officer has a comprehensive knowledge of the firm's strategic processes. Thus, only respondents who were either the owner or the CEO of the firm were retained in the sample, which resulted in a final sample of 448 firms (owner:  $n = 65$ ; chief executive officer:  $n = 383$ ). Firms of different sizes were well represented in the final sample, with the majority of the responding firms having 1 to 49 employees ( $n = 278$ ), followed by 100 to 499 employees ( $n = 73$ ) and then 500 employees ( $n = 26$ ). Lastly, respondents were asked to classify their industry where their firm primarily competed. A broad range of industries are included: agriculture, forestry, hunting, and fishing ( $n = 248$ ); manufacturing ( $n = 82$ ); finance, insurance, and real estate industries ( $n = 11$ ); health, education, social services ( $n = 19$ ); mining and construction ( $n = 56$ ); transportation, communication, utilities ( $n = 21$ ); retail, hotel, restaurant ( $n = 37$ ); business services ( $n = 46$ ); and, consumer services ( $n = 14$ ).

With multiple industries in the sample, industry membership and environmental effects (e.g., environmental munificence) can exert strong effects on firm performance. Consistent with Powell (1996), a test for statistical differences in firm financial performance across the nine industry sectors was conducted. No statistically significant differences were found.

### 3.2. Measures

#### 3.2.1. The formal strategic planning process

Formal strategic planning process refers to a formal process which focuses on the implementation of specific objectives over time (Armstrong, 1982; Song, Im, Bij, & Song, 2011). We drew upon an established scale from Brews and Hunt (1999). These authors describe strategic ends (i.e., objectives set forth in a formal strategic plan) and means (i.e., implementation plans set forth in a formal strategic plan) as providing a better understanding of the formalized strategic planning process. These authors state “organizations with very specific ends would possess many, precisely quantified, formally documented, time-limited ends, ranging from a statement of firm mission to statements of specific market share/sales growth targets and other key result areas. Very specific means would be reflected in plans that set out exact plans and/or programs for implementation, describing in detail the actions and steps required for implementation. They would also be formally documented and distributed among firm members. Conversely, few broad ends that change and evolve as conditions dictate would characterize less specific ends, while unspecific means would be broad and unstructured, evolving as circumstances warrant and acting as loose guides only” (Brews & Hunt, 1999: 893).

To modify the scale for the broader context of the sample, a four-item Likert-type scale was employed to capture the extent to which objectives and implementation plans were emphasized in the firms' formal strategic planning process. As we were interested in the formal strategic planning process, we focused on the extent that firms engaged in processes which resulted in formulating specific objectives and specific implementation plans. The first item ("When formulating strategy, how many objectives are usually specified?") was anchored from 1 (none) to 5 (a large number). For the remaining three items, respondents indicated the extent to which their business emphasized the different items as part of their planning process; these items were anchored from 1 (not at all) to 5 (to an extreme extent). The items were, "To what degree are the objectives that result from the strategy formation process formalized and documented?", "To what degree are strategy implementation plans developed as a result of the strategy formation process?", and "How closely are your company's strategy implementation plans followed as your company attempts to implement the strategy objectives?"

### 3.2.2. Planning flexibility

A scale drawing from Barringer and Bluedorn (1999) and Zahra, Hayton, Neubaum, Dibrell, and Craig (2008) assessed the firm's ability to alter the formal strategic plan when opportunities or threats in its competitive environment change. The measurement is based on the firm's competitive response to "surprises" that arise in the environment and whether these surprises often cause a change to the firm's formal strategic plan. The scale additionally assessed the firm's difficulty in changing its strategic plan for the different environmental contingencies.

Similar to the formal strategic planning process measure, the wording for the different items was slightly modified to reflect the multiplicity of the firms in the sampling frame, resulting in a six-item Likert-type scale. Directions for this construct asked respondents to consider how flexible their formal strategic planning process was and what type of event could initiate a change in strategic action to their formal strategic plan. The anchors for this scale ranged from 1 (not at all flexible or a trigger) to 5 (very flexible or a definite trigger). Items for this scale included (1) opportunistic shifts in economic conditions, (2) the emergence of a specific opportunity for the business, (3) the market entry of new competition, (4) opportunistic shifts in customer needs and preferences, (5) the emergence of a new technology that adversely affects existing business, and (6) adverse changes in government regulations.

### 3.2.3. Innovativeness

A six-item Likert-type scale of innovativeness measured a firm's emphasis on innovation (Davis, Dibrell, & Janz, 2002; Dibrell et al., 2011b). In line with the emphasis on the breadth of firm-wide innovativeness activities (i.e., product, process, service, radical, and incremental innovations), this scale focuses on a firm's strategic emphasis on innovation through a variety of different forms and therefore is more inclusive of all firm innovation activities, as compared to other scales which emphasize a firm's acceptance of new ideas (e.g., Hurley & Hult, 1998). On a scale ranging from 1 (not at all) to 5 (to an extreme extent), study participants indicated the extent to which their firms engaged in the following activities: (1) producing specialty products, (2) developing new products, (3) upgrading existing products' appearance and performance, (4) innovating in production processes, (5) investing in new research-and-development facilities to gain a competitive advantage, and (6) innovating in production processes.

### 3.2.4. Firm performance

Previous research suggests that performance should consider both growth and financial performance (Wiklund, 1999). Because innovativeness can result in different organizational outcomes (e.g., new products or services, a new manufacturing or service delivery process), its absolute impact on subsequent firm performance can vary (e.g., new revenue streams, increased margins, lower costs) (Terziovski,

2010). Because pure financial performance metrics may not always be applicable in the study of innovation (Salter & Torbett, 2003), a composite measure of firm performance was developed using several key indicators, as described below.

Because the majority of the sample firms were not publicly traded, secondary financial data were not available to create an objective measure of firm performance. Therefore, the study used a subjective measure of firm performance. In line with the work of multiple scholars (e.g., Rudd et al., 2008; Titus et al., 2011), managers used a four-item Likert-type scale to categorize their firms' financial performance (return on assets, return on sales, market share growth, and sales growth) relative to that of their nearest competitors anchored from 1 = "bottom 20%" to 5 = "Top 20%". This form of performance information helped further eliminate concerns about how industry membership might affect the results.

### 3.2.5. Control variables

A one-item Likert-type scale was included to partial out the potentially confounding effects associated with firm size. On a five-point Likert-type item with the anchors ranging from the bottom 20% to the top 20%, respondents provided the number of employees their firms employed relative to their competitors. This scale was a single-item indicator in the latent model; thus, the error term for this item was fixed to .10. To further control for the effects of industry, the different items were mean-centered on the basis of the industry group mean, which partialled out the industry environment effects from the latent constructs.

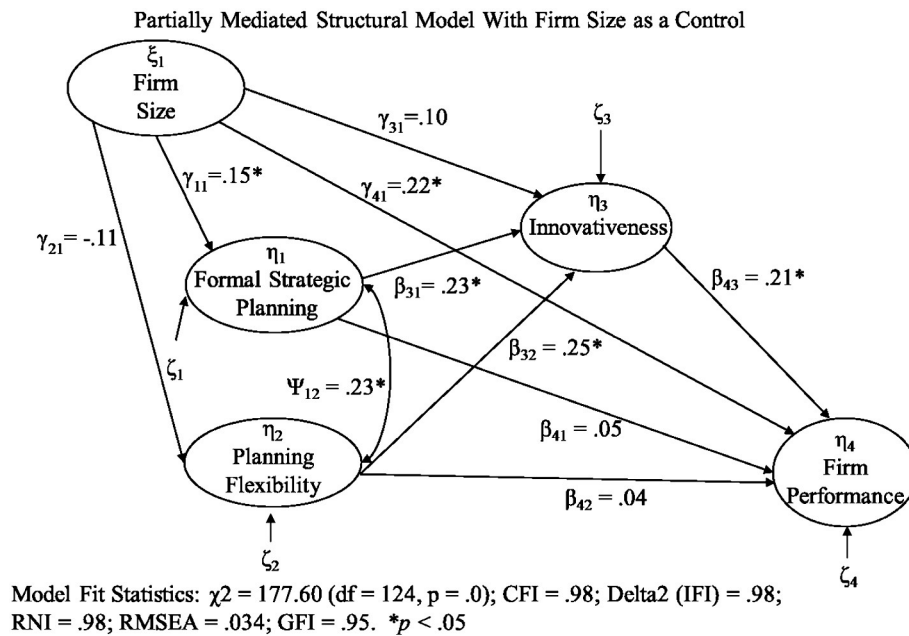
### 3.3. Data analyses

To validate the scales and test the hypothesized relationships, structural equation modeling using LISREL 8.52 was employed. Although the primary statistical approach to test for mediation is hierarchical regression modeling (Baron & Kenny, 1986), we follow the logic and recommendations of other scholars (James, Mulaik, & Brett, 2006; Schneider, Ehrhart, Mayer, Saltz, & Niles-Jolly, 2005) and use structural equation modeling to test for mediation, as H4 predicts. When applying structural equation modeling to mediation, two models (i.e., a partially mediated model and a fully mediated model) must be individually tested and the resulting chi-square values are compared to indicate whether full mediation occurs. If no statistical difference exists between the chi-square values, the more parsimonious, fully mediated model is selected, as Fig. 1 reveals (Schneider et al., 2005).

## 4. Results

Table 1 presents the descriptive statistics, coefficient alphas, and correlation matrix of the studied variables. The coefficient alphas were all within an acceptable range, and the correlation matrix suggests interdependence of the relationships.

A two-phase confirmatory factor analysis approach was employed on the primary scales, comparing a constrained model (i.e., baseline model) with an unconstrained model (i.e., the studied latent constructs allowed to covary) (Anderson & Gerbing, 1998). The item factor loadings from the unconstrained model ( $n = 371$ ; listwise deletion) for the four constructs of formal strategic planning process, planning flexibility, innovativeness, and firm performance ranged from .48 to .95 and were all statistically significant ( $p < .05$ ), with the exception of one item. The "innovation in production processes" item from the innovativeness measure, which had a completely standardized factor loading below .40, was removed. The comparative fit index (CFI), Delta2, and relative non-centrality index (RNI) model fit indices were selected for reporting purposes (Gerbing & Anderson, 1992). For the second part of the confirmatory process, the unconstrained four-factor model was compared with the four-factor constrained model, in which the  $\Phi$  matrix was set to one. The unconstrained model ( $\chi^2 = 436.20$ ,  $df = 146$ ;



**Fig. 1.** Partially mediated structural model with firm size as a control. Model fit statistics:  $\chi^2 = 177.60$  (df = 124,  $p = .0$ ); CFI = .98; Delta2 (IFI) = .98; RNI = .98; RMSEA = .034; GFI = .95. \* $p < .05$ .

CFI = .92; Delta2 = .92; RNI = .92) demonstrated a statistically significant better fit than the constrained four-factor model ( $\chi^2 = 2341.65$ , df = 152; CFI = .51; Delta2 = .51; RNI = .41) based on the chi-square difference test ( $\Delta\chi^2 = 1905.45$ , df = 6;  $p < .05$ ).

In addition, the loading for each item was significant ( $p < .05$ ) for the respective factor. As previously mentioned, the loadings ranged from a low of .48 to a high of .95 and were all statistically significant ( $p < .05$ ), indicating convergent validity (Bagozzi & Yi, 1998; Gerbing & Anderson, 1992). Discriminant validity would reveal evidence of the average variance extracted (AVE) for each construct being greater than the squared inter-correlations between constructs (Fornell & Larcker, 1981), which occurred in the study. Although the AVEs for planning flexibility (AVE = .40) and innovativeness (AVE = .43) were below the recommended .50 (Fornell & Larcker, 1981), the AVEs for formal strategic planning process (AVE = .56) and for firm performance (AVE = .59) were above the recommended threshold. With the measurement model validated, the structural model was tested.

As Fig. 1 illustrates, the overall model fit statistics for the partially mediated model were within the three recommended fit indices above the .90 threshold (CFI = .98, Delta2 = .98, and RNI = .98), while the root mean square error of approximation (RMSEA) was .034. As Hu and Bentler (1999) recommend, other model fit indices (chi-square and goodness-of-fit index [GFI]) were included for comparison. The fit indices indicate that the model fits the data relatively well, enabling hypothesis testing. The control variable of size affected formal strategic planning processes (referred to as “Formal Strategic Planning” in Figs. 1 and 2 for the sake of brevity) ( $\gamma = .15$ ;  $p < .05$ ) and firm performance ( $\gamma = .22$ ;  $p < .05$ ) but did not influence planning flexibility ( $\gamma = -.11$ ;

$p > .05$ ) or innovativeness ( $\gamma = .10$ ;  $p > .05$ ). In the theta ( $\theta$ )-epsilon ( $\epsilon$ ) matrix, two items in firm performance (ROA and ROS) ( $\theta\epsilon = .50$ ;  $p < .05$ ) and two items in planning flexibility (market entry of new competition and adverse changes in government regulations) ( $\theta\epsilon = .28$ ;  $p < .05$ ) were allowed to covary in order to improve overall model fit.

For mediation to be present, the formal strategic planning processes–innovativeness relationship should be direct, with innovativeness having a direct linkage to firm performance. However, formal strategic planning processes should not have a statistically significant direct relationship to firm performance, only an indirect relationship through innovativeness. The same should hold true for innovativeness, mediating the planning flexibility–firm performance relationship. To test this approach, a partially mediated model was first employed, and then the results were compared with a fully mediated model through a chi-square difference test (Baron & Kenny, 1986; Brown, 1997). In the partially mediated model, the studied relationships are supported, and the direct paths from strategic planning to firm performance ( $\beta = .05$ ;  $p > .05$ ) and from planning flexibility to firm performance ( $\beta = .04$ ;  $p > .05$ ) are both non-significant, inferring that innovativeness acts as full mediator. These results enable testing of the fully mediated model. Fig. 2 provides the findings for the fully mediated model.

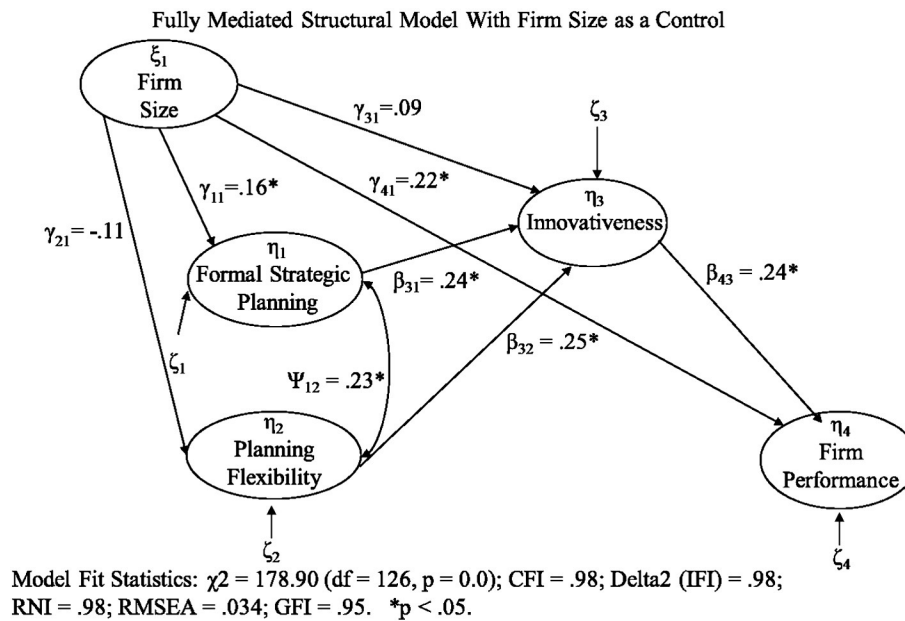
H1 posits that formal strategic planning processes and planning flexibility are positively associated; the results support this hypothesis ( $\psi = .23$ ;  $p < .05$ ). Similarly, H2 predicts that formal strategic planning process is positively associated with firm innovativeness; the results also support this hypothesis ( $\beta = .24$ ;  $p < .05$ ). Finally, the results support H3; planning flexibility ( $\beta = .25$ ;  $p < .05$ ) is positively associated with innovativeness.

For H4, which suggests that innovativeness mediates (a) the relationship between formal strategic planning processes and firm performance, and (b) the relationship between planning flexibility and firm performance, mediation was tested in line with established guidelines (Baron & Kenny, 1986; Brown, 1997). In the trimmed, fully mediated model, the direct paths from formal strategic planning process and planning flexibility to firm performance, respectively, were both dropped. The partially mediated model ( $\chi^2 = 177.60$ , df = 124) did not statistically differ ( $\Delta\chi^2 = 1.30$ , df = 2;  $p > .05$ ) from the fully mediated model ( $\chi^2 = 178.90$ , df = 126), indicating that the fully mediated model

**Table 1**  
Descriptive statistics, coefficient alphas, and correlations of studied variables (n = 448).

Variable name	Mean	SD	Alpha	1	2	3	4
1. Formal strategic planning process	3.08	.80	.81				
2. Planning flexibility	3.40	.78	.80	.22**			
3. Innovativeness	2.82	.87	.78	.26**	.28**		
4. Firm performance	3.31	.95	.86	.10*	.04	.17**	
5. Size	1.65	.95	-	.18**	.19**	.25**	.06

\*  $p < .05$  (two-tailed test; pairwise deletion).  
\*\*  $p < .01$  (two-tailed test; pairwise deletion).



**Fig. 2.** Fully mediated structural model with firm size as a control. Model fit statistics:  $\chi^2 = 178.90$  (df = 126,  $p = 0.0$ ); CFI = .98; Delta2 (IFI) = .98; RNI = .98; RMSEA = .034; GFI = .95. \* $p < .05$ .

is more parsimonious (Schneider et al., 2005) and suggests mediation. The mediation relationship was further explored by testing for indirect effects of formal strategic planning process and planning flexibility on firm performance through the mediating relationship of innovativeness. The findings indicate that formal strategic planning process ( $\beta = .06$ ;  $t$ -value = 2.59;  $p < .05$ ) and planning flexibility ( $\beta = .06$ ;  $t$ -value = 2.58;  $p < .05$ ) have significant indirect relationships to firm performance through innovativeness. Thus, the results support H4.

## 5. Discussion

Previously unexplored linkages among formal strategic planning processes, planning flexibility, innovativeness, and firm performance are investigated in this research. Extensions to Grant's (2003) qualitative research related to planned emergence, as well as the works of Wiltbank et al. (2006), Titus et al. (2011), and Kukalis (1989), are claimed. We confirm that firms should build planning flexibility in association with their formal strategic planning processes to optimize the benefits of innovativeness. Concurrently, innovativeness should be present to realize the value associated with the use of formal strategic planning processes and the flexibility of those plans.

The results indicate two somewhat opposing forces drive innovativeness. Innovativeness is an action resulting from a firm's stated objectives derived from the strategic planning process, and, conversely, a reaction to the external environment through planning flexibility. Thus, the results demonstrate that firms capable of concurrently acting and reacting are in a better competitive position than those that are unable to effectively change the objectives of their strategic plan to changes in the external environment. This capability becomes a vital and difficult-to-replicate resource advantage. A firm that only "acts" or "reacts" cannot fully enhance its innovativeness competitive behaviors and may lack the vision and direction derived from a formal strategic planning process or the complementary capacity to respond, which comes from planning flexibility.

An implication of this finding is that managers should attempt to integrate their firms' formal strategic planning processes with reasoned, flexible responses to those plans to effectively manage increasingly changing environments. A challenge for managers is to combine the benefits of formal strategic planning processes and planning flexibility

to deal with the adaptive nature of strategic initiatives. However, there is a potential for managers to either over formalize the strategic planning process, or possibly, and more likely, to place too strong an emphasis on flexibility to the detriment of the implementation of the firm's formal strategic plan. Managers who are accustomed to working with the uncertainty associated with innovation, as well as managers who deal with dynamic external environments, may be better equipped to handle the delicate balancing act of formal and flexible approaches. Conversely, managers who are not as well versed with adaptive or flexible strategies and the resulting outcomes may wish to emphasize a more formalized strategic planning process, as it enables more perceived control of the strategy formulating and implementation processes. These findings further imply that firms able to find the optimal mix of strategic planning and planning flexibility will have an advantage over firms who are unable to manage these diverse and often antithetical relationships. Perhaps it is the managerial skill of integration, or the resources and capabilities that ensue as a result from the integration of the two approaches, which produces the idiosyncratic, value-creating advantages that firms seek.

Empirically, our results show the importance of planning flexibility in the innovation process. Rather than moderating the formal strategic planning process–innovativeness relationship, planning flexibility is strongly positively associated with innovativeness. Thus, in our minds, planning flexibility, represented by the extent to which a firm may respond to shifts in customer preferences or economic conditions, the emergence of a new opportunities, the entry of new competition, the emergence of a new technologies, or changes in government regulations, is an important precursor to innovation. Further examination of our results in Figs. 1 and 2 reveals that the relative strengths of the relationships between formal strategic planning processes and planning flexibility with innovativeness are both significant and nearly identical ( $\beta = 0.23$  versus  $\beta = 0.25$  in Fig. 1 and  $\beta = 0.24$  versus  $\beta = 0.25$  in Fig. 2). Thus, formal strategic planning processes and planning flexibility are nearly equally positively associated with innovativeness.

This study complements prior research that has examined the performance benefits of formal strategic planning by including innovativeness as a proximate outcome of planning. Competitive environments have been shown to significantly influence a firm's financial performance. As such, direct linkages between strategic

planning and financial performance are distant, which might explain the inconsistent findings of prior studies in this research stream (Powell, 1992). Our study suggests that firms rely on innovativeness as a key value-enhancing activity, which transforms the benefits of formal strategic planning processes into increased financial performance. Formal strategic planning processes enable firms to conduct frequent internal and external analyses, scan for emerging trends, and evaluate a number of potential alternatives (Wiltbank et al., 2006). Armed with this knowledge, executives can, with increased confidence, invest in and improve their firms' resources and capabilities. Identification of opportunities, combined with value-creating resources, can seed firms' innovative processes, which may lead to new and improved products and services, and subsequently, increased financial performance.

Further, there is congruence with this work and that of Powell (1992), which pointed to strategic planning processes as a potentially valuable firm-specific resource for competitive advantage. To the extent that strategic planning system techniques are widely disseminated, their ability to confer competitive advantage is limited. However, as is demonstrated, strategic planning processes within firms are idiosyncratic, as some firm's processes are more formal, and some firms are more willing to adjust or alter their strategic plans based on their assessment of changing environmental conditions. These unique characteristics, as well as the idiosyncratic information and conclusions drawn from the process, may directly contribute to the creation of scarce, difficult to imitate, and nonsubstitutable resources.

As stated earlier, strategic planning can be a source of competitive advantage (Kukalis, 1989; Miller & Cardinal, 1994; Powell, 1992); however, a source of sustainable competitive advantage may be found through the interaction of strategic planning and planning flexibility (Grant, 2003). When in the presence of innovativeness, our study has shown that formal strategic planning adds value to the firm when matched with a willingness on the part of managers to revise their strategic plans, as the integration of these two lead to the development and delivery of innovative products and services. RBV theorists (e.g., Barney, 1991) have strongly argued that the competitive benefits which accrue to innovative firms are generated through unique capabilities which are difficult for competitors to imitate, are rare, and provide value. We argue that the roots of a firm's innovative capability may be derived not only from its willingness to adapt itself to take advantage of environmental opportunities, but also in the knowledge and insights gained by managers from conducting disciplined strategic analysis as part of a formal planning process and then possessing the capacity to change the plan, if needed.

From a methodological perspective, attempts were made to minimize the study's limitations. A potential limitation is studying firms across industries, which may have weakened the direct effects of the studied variables. However, a statistical check of industry effects related to industry financial munificence found no statistical difference among the industries. In addition, the effects of industry were partialled out by mean group centering the sampled firms on the basis of their industry classification. Given these points, the use of a multi-industry sample enables the findings to be generalizable to the studied industries and industries which share similar attributes. An additional limitation is the concerns associated with one key informant per firm. With many of the respondent firms in our sample being relatively small, the formalized strategic planning process may not be as embedded in the planning process, as is often found in larger firms. The replication of these findings with larger firms would alleviate these concerns.

Future research should examine firms' formal strategic planning processes and search for new mediators (e.g., risk taking). The inclusion of different performance metrics (e.g., new product sales) would provide additional insights, and the incorporation of multiple respondents from individual firms. In addition, research should investigate the interplay of strategic planning and planning flexibility in relationships to other concepts (e.g., learning orientations, corporate governance). Scholars should consider other mediators (e.g., differing ownership forms,

organizational climate, or organizational structures). For instance, would a stewardship climate mediate the strategic planning and planning flexibility relationship to firm performance? Finally, scholars may wish to conduct field studies within firms who are attempting to implement adaptive strategies in response to a changing external environment. It would be beneficial for both scholars and managers to have a more refined understanding in how managers integrate flexibility into their formalized strategic planning processes to realize the benefits of innovativeness.

In conclusion, regardless of firm size and industrial contexts, firms capable of achieving a point of optimality among the studied components experience superior performance. We also provide evidence regarding the strength in which innovativeness acts as a mediator in the relationship between the formal strategic planning process and firm financial performance, as well as between planning flexibility and firm financial performance.

## Appendix A

### Formal strategic planning process

1. When formulating strategy, how many objectives are usually specified? (anchored from 1 (none) to 5 (a large number)).
2. To what degree are strategy implementation plans developed as a result of the strategy formation process? (anchored from 1 (not at all) to 5 (to an extreme extent)).
3. To what degree are strategy implementation plans developed as a result of the strategy formation process? (anchored from 1 (not at all) to 5 (to an extreme extent)).
4. To what degree are the objectives that result from the strategy formation process formalized and documented? (anchored from 1 (not at all) to 5 (to an extreme extent)).

### Planning flexibility

Anchors for this scale ranged from 1 (not at all flexible or a trigger) to 5 (very flexible or a definite trigger).

1. Opportunistic shifts in economic conditions.
2. The emergence of a specific opportunity for the business.
3. The market entry of new competition.
4. Opportunistic shifts in customer needs and preferences.
5. The emergence of a new technology that adversely affects existing business.
6. Adverse changes in government regulations.

### Innovativeness

Anchors for this scale ranged from 1 (not at all) to 5 (to an extreme extent).

1. Producing specialty products.
2. Developing new products.
3. Upgrading existing products' appearance and performance.
4. Innovating in production processes.
5. Investing in new research-and-development facilities to gain a competitive advantage.
6. Innovating in production processes.

### Firm performance

for this scale ranged from 1 = "bottom 20%" to 5 = "top 20%."

1. Return on assets
2. Return on sales
3. Market share growth
4. Sales growth

## References

- Anderson, J. C., & Gerbing, D. W. (1998). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103, 411–423.
- Ansoff, H. I. (1991). Critique of Henry Mintzberg's 'The Design School': Reconsidering the basic premises of strategic planning. *Strategic Management Journal*, 12(6), 449–461.
- Armstrong, J. S. (1982). The value of formal planning for strategic decisions: Review of empirical research. *Strategic Management Journal*, 3(3), 197–211.
- Bagozzi, R. P., & Yi, Y. (1998). On the evaluation of structural equation models. *Journal of Academy Marketing Science*, 16, 74–94.
- Barney, J. B. (1986). Strategic factor markets: Expectations, luck, and business strategy. *Management Science*, 32, 1231–1241.
- Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120.
- Barney, J. B. (2001). Resource-based theories of competitive advantage: A ten-year retrospective on the resource-based view. *Journal of Management*, 27(6), 643–650.
- Baron, R. M., & Kenny, D. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173–1182.
- Barringer, B. R., & Bluedorn, A. C. (1999). The relationship between corporate entrepreneurship and strategic management. *Strategic Management Journal*, 20, 421–444.
- Brews, P. J., & Hunt, M. R. (1999). Learning to plan and planning to learn: Resolving the planning school/learning school debate. *Strategic Management Journal*, 20, 889–913.
- Brown, R. L. (1997). Assessing specific mediational effects in complex theoretical models. *Structural Equation Modeling*, 4(2), 142–156.
- Cho, H. J., & Pucik, V. (2005). Relationship between innovativeness, quality, growth, profitability, and market value. *Strategic Management Journal*, 26(6), 555–575.
- Collis, D. J., & Montgomery, C. A. (1995). Competing on resources: Strategy in the 1990s. *Harvard Business Review*, 73(4), 118–128.
- Covin, J. G., & Slevin, D. P. (1989). Strategic management of small firms in hostile and benign environments. *Strategic Management Journal*, 10, 75–87.
- Davis, P. S., Dibrell, C. C., & Janz, B. (2002). The impact of time on the strategy–performance relationship: Implications for managers. *Industrial Marketing Management*, 31(4), 339–347.
- Delmar, F., & Shane, S. (2003). Does business planning facilitate the development of new ventures? *Strategic Management Journal*, 24, 1165–1185.
- Dibrell, C., Craig, J., & Hansen, E. (2011a). How managerial attitudes toward the natural environment affect market orientation and innovation. *Journal of Business Research*, 64(4), 401–407.
- Dibrell, C., Craig, J., & Hansen, E. (2011b). The impact of managerial attitudes toward the natural environment in growing versus mature firms. *Journal of Small Business Management*, 49, 467–489.
- Dillman, D. A., Smyth, J. D., & Christian, L. M. (2009). *Internet, mail, and mixed-mode surveys: The tailored design method*. Englewood Cliffs, NJ: Wiley.
- Droge, C., Calantone, R., & Harmancioglu, N. (2008). New product success: Is it really controllable by managers in highly turbulent environments? *Journal of Product Innovation Management*, 25, 272–286.
- Eisenhardt, K. M., & Zbaracki, M. J. (1992). Strategic decision making. *Strategic Management Journal*, 13, 17–37.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18, 39–50.
- Gerbing, D. W., & Anderson, J. C. (1992). Monte Carlo evaluations of goodness of fit indices for structural equation models. *Sociological Methods and Research*, 21(2), 132–160.
- Gibbons, P. T., & O'Connor, T. (2005). Influences on strategic planning processes among Irish SMEs. *Journal of Small Business Management*, 43(2), 170–186.
- Grant, R. M. (2003). Strategic planning in a turbulent environment: Evidence from the oil majors. *Strategic Management Journal*, 24(6), 491–518.
- Honig, B., & Karlsson, T. (2004). Institutional forces and the written business plan. *Journal of Management*, 30, 29–48.
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: conventional criteria versus new alternatives. *Structural Equation Modeling*, 6(1), 1–55.
- Hult, G. T. M., & Ketchen, D. J., Jr. (2001). Does market orientation matter? A test of the relationship between positional advantage and performance. *Strategic Management Journal*, 22(9), 899–906.
- Hurley, R. F., & Hult, G. T. M. (1998). Innovation, market orientation, and organisational learning: An integration and empirical examination. *Journal of Marketing*, 62(7), 42–54.
- James, L. R., Mulaik, S. A., & Brett, J. M. (2006). A tale of two methods. *Organizational Research Methods*, 9(2), 233–244.
- Jarzabkowski, P., & Balogun, J. (2009). The practice and process of delivering integration through strategic planning. *Journal of Management Studies*, 46, 1255–1288.
- Kukalis, S. (1989). The relationship among firm characteristics and design of strategic planning systems in large organizations. *Journal of Management*, 15, 565–579.
- Lumpkin, G. T., & Dess, G. G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management Review*, 21(1), 135–172.
- Miller, C. C., & Cardinal, L. B. (1994). Strategic planning and firm performance: A synthesis of more than two decades of research. *Academy of Management Journal*, 37, 1649–1665.
- Miller, D., & Friesen, P. H. (1982). Innovation in conservative and entrepreneurial firms: Two models of strategic momentum. *Strategic Management Journal*, 3(1), 1–25.
- Mintzberg, H. (1991). Learning 1, planning 0 (reply to Igor Ansoff). *Strategic Management Journal*, 12, 463–466.
- Mintzberg, H. (1994). *The rise and fall of strategic planning*. New York: Free Press.
- Penrose, E. T. (1959). *The theory of the growth of the firm*. New York: Wiley.
- Podsakoff, P. M., & Organ, D. L. (1986). Self-reports in organizational research: Problems and prospects. *Journal of Management*, 12(4), 531–544.
- Powell, T. C. (1992). Strategic planning as competitive advantage. *Strategic Management Journal*, 13, 551–558.
- Powell, T. C. (1996). How much does industry matter? An alternative empirical test. *Strategic Management Journal*, 17, 323–334.
- Quinn, J. (Fall). Strategic change; logical incrementalism. *Sloan Management Review*, 20, 7–22.
- Read, S., Dew, N., Sarasvathy, S. D., Song, M., & Wiltbank, R. (2009). Marketing under uncertainty: The logic of an effectual approach. *Journal of Marketing*, 73, 1–18.
- Rudd, J. M., Greenley, G. E., Beatson, A. T., & Lings, I. N. (2008). Strategic planning and performance: Extending the debate. *Journal of Business Research*, 61, 99–108.
- Salomo, S., Talke, K., & Strecker, N. (2008). Innovation field orientation and its effect on innovativeness and firm performance. *Journal of Product Innovation Management*, 25, 560–576.
- Salter, A., & Torbett, R. (2003). Innovation and performance in engineering design. *Construction Management & Economics*, 21(6), 573–581.
- Schneider, B., Ehrhart, M. G., Mayer, D. M., Saltz, J. L., & Niles-Jolly, K. (2005). Understanding organization–customer links in service settings. *Academy of Management Journal*, 48(6), 1017–1032.
- Schwenk, C. B., & Shrader, C. B. (1993). Effects of formal strategic planning on financial performance in small firms: A meta-analysis. *Entrepreneurship Theory & Practice*, 17(3), 53–64.
- Slevin, D. P., & Covin, J. G. (1995). Entrepreneurship as firm behavior: A research model. In J. E. Katz, & R. H. Brockhaus (Eds.), *Advances in firm emergence, growth and entrepreneurship* (pp. 175–224). Greenwich, CT: JAI Press.
- Song, M., Im, S., Bij, H. V. D., & Song, L. Z. (2011). Does strategic planning enhance or impede innovation and firm performance? *Journal of Product Innovation Management*, 28(4), 503–520.
- Terziowski, M. (2010). Innovation practice and its performance implications in small and medium enterprises (SMEs) in the manufacturing sector: A resource-based view. *Strategic Management Journal*, 31, 892–902.
- Titus, V. K., Covin, J. G., & Slevin, D. P. (2011). Aligning strategic processes in pursuit of firm growth. *Journal of Business Research*, 64, 446–453.
- Vorhies, D. W., Morgan, N. A., & Autry, C. W. (2009). Product–market strategy and the marketing capabilities of the firm: Impact on market effectiveness and cash flow performance. *Strategic Management Journal*, 30, 1310–1334.
- Wiklund, J. (Fall). The sustainability of the entrepreneurial orientation–performance relationship. *Entrepreneurship: Theory and Practice*, 23, 37–48.
- Wiltbank, R., Dew, N., Read, S., & Sarasvathy, S. D. (2006). What to do next? The case for non-predictive strategy. *Strategic Management Journal*, 27, 981–998.
- Zahra, S. A., Hayton, J., Neubaum, D. O., Dibrell, C. C., & Craig, J. (2008). Culture of family commitment and strategic flexibility: The moderating effect of stewardship. *Entrepreneurship Theory & Practice*, 32, 1035–1054.
- Zahra, S. A., Neubaum, D. O., & El-Hagrassey, G. M. (2002). Competitive analysis and new venture performance: Understanding the impact of strategic uncertainty and venture origin. *Entrepreneurship Theory & Practice*, 27(1), 1–28.
- Zhou, K. S., & Wu, F. (2010). Technological capability, strategic flexibility, and product innovation. *Strategic Management Journal*, 31, 547–561.