DO TOO MANY COOKS SPOIL THE STEW? EXAMINING THE ROLES OF BUSINESS PLAN FORMALITY AND TEAM SIZE ON NASCENT REVENUE EXPECTATIONS AND GESTATION ACTIVITY

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ABSTRACT

We examine the relationship between business planning formality and team size on nascent revenue expectations and gestation activities in a longitudinal panel study of 514 nascent ventures. Results reinforce previous findings suggesting that formal business planning and team size increase both revenue expectations and gestation activity. Investigating the interaction effect of planning and team size on revenue expectations reveals an inflationary influence on initial revenue expectations. Further, the interaction is responsible for a statistically significant downward revision of revenue expectations in the subsequent period. Taking together, these two results suggest that increasing business plan formality in large teams may lead to positive long-term revenue forecasts but also increases the likelihood of optimistically-biased long-term revenue expectations.

INTRODUCTION

Interest in the nature of the relationship between planning and performance is long and enduring (MacMillan & Narasima, 1987; Miller & Cardinal, 1994; Perry, 2001; Rudd et al., 2008). It derives from the idea that planning reduces inefficiencies in production processes, facilitates operational efficiency (Fayol, 1914; Drucker, 1965) and helps decision makers to cope strategically with environmental change and turbulence (Ansoff, 1965). Yet the merits of this idea remain the subject of intense debate, in general management (Mintzberg, 1994; Ansoff, 1994) as well as in entrepreneurship (Brinckmann, Grichnik, & Kaspa, 2009). Counter arguments suggest that it is a largely symbolic practice (Karlsson and Honig, 2009), that the logic is flawed under high degrees of uncertainty (Sarasvathy, 2001), and that it is conducive to overoptimistic financial projections (Cassar, 2010).

In recent years, scholars have sought to extend this debate by addressing criticisms focusing on the inconclusive nature of previous bi-variate empirical findings. Some, for instance, have investigated the mediating effects such as strategic flexibility (e.g., Rudd et al., 2008). Others have focused instead on the role contextual differences play in entrepreneurial action, instead focusing on understanding moderating effect other factors like the size (e.g., Chowdhury, 2005). The focus on contextual differences spotlights the role social interaction plays, particularly among start-up team members (e.g., Lechler, 2001), toward amplifying or tempering planning-performance outcome relationships. These studies reflect the idea that teams maintain social capital that influences resource inputs, including planning, each of which may play a critical role in triggering performance outcomes (Crawford et al., 2015).

This study seeks to contribute to the business planning and performance relationship debate by focusing on planning effectiveness specific to the nascent stages. Specifically, we examine how business plan formality and entrepreneurial team size influence revenue expectations, gestation activities, and expectation revisions in nascent ventures. We investigate long-range (i.e., 5 year) revenue expectations concurrent with the business plan writing, as well the revision of long-range revenue expectations a year after nascent entrepreneurs begin the start-up process. We also investigate progress through the start-up process in the form of nascent gestation activities completed. We study both the direct effects, as well as moderating effects, of the formality of business planning efforts and team size on these outcomes. Our central hypothesis is that whereas formality and team size add information, coordination, and knowledge benefits that enhance progress through the nascent stages of venture creation, revenue expectations may be adversely influenced by concurrent groupthink dynamics.

HYPOTHESIS DEVELOPMENT

Research over the past decade has recognized the potentially important role that nascent entrepreneurs' formal business planning activities may play in the successful emergence of new ventures, but its role in advancing the process itself has not yet been widely investigated. One reason for this is that like much of research on the strategic planning-performance relationship (e.g., Miller et al., 1994), the emphasis has been on broader venture-level performance measures like whether or not planning is related to the likelihood of disbanding (e.g., Delmar & Shane, 2003) or the achievement of start-up (e.g., Townsend, Busenitz, & Arthurs, 2010). This leaves questions related to intermediate outcomes in the planning-performance relationship like planning impacts on expectations and activities involved in venture emergence (e.g., Cassar, 2010) less well understood. In addition, although the common presence of new venture teams suggests another important influence, it is observed to be under-investigated and underdeveloped, tending to focus disproportionately on team-level characteristics and outcomes (Klotz, Hmieleski, Bradly, & Busenitz, 2014). Further, the context for such study is often post-emergence in established though young ventures (e.g., Chowdhury, 2005), rather than in the nascent venture emergence stages. The result is that more precise questions of how team influences impact the effectiveness of new venture emergence activities through planning remain unanswered (Klotz et al., 2014). We turn attention to each of these issues to develop the hypotheses guiding this investigation.

Business Planning Formality: Direct Effects

New venture performance tends to be somewhat narrowly defined in the literature in terms of venture level outcomes like the first sale, profitability, or growth in the planning-performance literature (Schwenk & Shrader, 1993; Rudd et al., 2008). Yet before any of these happen firms must emerge (Liao & Gartner, 2006). And in order for a firm to emerge, someone must identify goals and engage in many related activities to achieve the successful launch of a venture (Delmar & Shane, 2003). This implies that intentionality is an integral part of the entrepreneurial process (Krueger & Brazeal, 1994), underlying the creation of business plans (Boyd & Vozikis, 1994). That is, intentionality involves setting objectives, identifying and evaluating strategies, in addition to monitoring progress toward objectives, and committing to the process (Armstrong, 1982). It also means individuals are likely to develop expectations between goals and outcomes (Fishbein & Ajzen, 1975) and that these are reflected in planning efforts.

One key type of expectation for any entrepreneur early on in the venture creation process relates to revenue goals (Schwenk & Shrader, 1993). Revenue expectations reflect not only the lifeblood of a venture in terms of whether or not an idea has the potential to create a viable income stream. They also reflect the perceived “upside” to market opportunity, or its wealth creating potential. As such, revenue expectations allow for a meaningful comparison of actions and anticipated outcomes to income and wealth goals, key elements in any individual’s decision to understand if their venture idea is determined to be worth continuing to pursue (Townsend, Busenitz, & Arthur, 2010). Another key goal is to progress through the start-up stages, a goal which reflects founders’ beliefs and expectations that persistence will lead to the prospect for successful emergence (Liao & Gartner, 2006).

Scholars interested in the planning-performance relationship have noted that important contextual differences exist between new and established ventures (e.g., Delmar & Shane, 2003). Brinkman et al. (2010), for instance, point out that a new venture founder encounters a very different planning context in comparison to someone leading an established small venture. New ventures have no existing operational structure or established links to the marketplace. Therefore, they have no information based on past operations. Moreover, they tend to face higher degrees of uncertainty with respect to changing environmental conditions and their impact on the new venture, the availability, and adequacy of response options. This means greater uncertainty and complexity are encountered in the emergent stages of venture creation (Sarasvathy, 2001).

One resulting tendency is to look at formal planning as a choice of “either, or” instead of as an “and.” That is, a prospective founder either chooses to engage in formal planning or instead to “storm the castle” (Brinkman et al., 2010). Such a dichotomy ignores the idea of iteration between the deliberate and emergent facets of planning. We extend the idea of iteration by focusing on the relationship between formal planning with early expectations and behaviors in the venture development process. We begin by reasoning that at the heart of any form of planning is the idea that doing so improves predictive ability (Wiltbank et al., 2006). As such, formally writing a business plan intensifies efforts to define goals, identify alternative actions for reaching goals, and to gather and integrate information in an effort to specify effective steps for goal achievement (Armstrong, 1982; Brinckmann et al., 2010). Gruber (2007) argues that timely information about the marketplace and customers is of particular interest in the emerging context because internal historical data as a reference point are lacking. The act of planning enhances clarity of thought in a practical sense under such conditions. It provides an integrative framework for information processing, allowing for actionable start-up process decisions to be made both earlier and quicker (Delmar & Shane, 2003). Therefore, we expect:

H1: Planning formality will be positively associated with gestation activities.
H2: Planning formality will be positively associated with revenue expectations.

Team Size: Direct Effects

The notion of “team” in emerging ventures can be conceptualized as a group of individuals having primary responsibility for both strategic decision making and early ongoing operations (Klotz, Hmieleski, Bradly, & Busenitz, 2014). Klotz et al. characterize the new venture team context as a particularly unique because it represents a weak social situation in which few social norms are established. At the same time, the context is characterized by significant managerial discretion, wide latitude for action, and one in which founding team behavior can have important imprinting effects on the way the organization develops and grows.

Team size is likely to be associated with an increase in the presence and diversity of characteristics, knowledge, and skills (Timmons, 1990). Each of these, in turn, offers the potential of breadth in information, cognitive resources, and marketplace perspective, the raw material that leads to greater problem-solving capacity. Building on the seminal notion of "the strength of weak ties" (Granovetter, 1973), Baron (2006) finds that breadth in the range of business-related connections plays a particularly important role in the identification of new opportunity, and hence potential for revenue, because such relationships offer a range of information, which in turn constitutes the raw material for creatively developing venture ideas. In other words, it allows for prospective sensemaking, or "sensemaking with an imagination toward a promising future" (Soh & Maine, 2013: 9), whereby unexpected contingencies are embraced through a spirit of enactment with the founders aspirations and convictions for the future in mind. Consistent with such findings, Chowdhury (2005) observes that cognitive comprehensiveness has been associated with positive increases in sales growth and profit growth (e.g., Simons, Pelled, & Smith, 1999). Team size also creates an increased practical capability to distribute start-up workload activities (Vesper, 1990), as well as greater capacity to experiment with more ideas (Sarasvathy, 2001). Formally stated, we expect:

H3: Team size will be positively associated with gestation activities.
H4: Team size will be positively associated with revenue expectations.

Business Planning Formality and Team Size: Moderation Effects

As previously noted, a formal business planning approach represents an intentional effort to acquire, integrate, and evaluate information about the potential creating a new venture embodies. Francis and Sandberg (2000) suggest that the formation of entrepreneurial teams is based on the task-oriented purpose of establishing and managing ventures. Because the team's role is to achieve such an instrumental purpose, the social relationships tend to be rationally conceived (Tonnies, 1971).

A conceptualization of this nature based on rationality does not necessarily eliminate the prospective emergence or substantive role of unexpected contingencies. To the contrary, it simply remains open to unexpected contingencies that align with founders' aspirations and convictions (Soh & Maine, 2013). From this perspective, team size is likely to complement business planning efforts by providing the timely addition of marketplace and customer information (Gruber, 2007), as well as a broadened range of business connections through which creative combinations can be used to identify and develop opportunities (Baron, 2006). Indeed, Brinckmann and Hoegl (2011) find that initial social capital influence on performance outweighs the influence of teamwork capabilities. Thus, early on, we expect team size will complement business planning formality's influence on the optimism of revenue expectations.

Team size in a new venture context has been shown to lead to the expansion of team membership (Chandler, Hanks, & Wiklund, 2005). On the one hand, this is a positive. Team member additions enable workload distribution. Hence, we expect that team size will amplify the influence of business planning formality on gestation activity. Similarly, some team members might be likely to retain some sense of objectivity because they are outside of and detached from the founder's (Parker, 2006). Accordingly, such views contain the knowledge to counteract unrealistic optimism (Verheul & Carree, 2007). However, many new venture teams are established by a team of founders. Chowdhury (2005) notes an array of team processes that could scuttle the value of resources that would otherwise offer the potential to enhance the ability of business planning to serve as a unifying mechanism. Moreover, the lack of established routines (Delmar & Shane, 2006) and affective bonds (Francis & Sandberg, 2000) characterized in the early NVC stages is likely to lead to relational conflict over time. Hence, we anticipate early revenue expectations likely reflect a sense of overconfidence (Geroski, 1995), perhaps the result of an early form of groupthink (Gruber, 2007).

Geroski (1995) suggests that perhaps one of the most striking things we know about new venture creation efforts is that while common, the life expectancy is often rather short. This finding suggests that entrepreneurs may enter the venture creation process not only optimistic but more likely overly optimistic. Kahneman and Lovallo (1993) suggest by taking an "inside view," or focusing on their situation as a unique and unrepeatable event, a tendency exists to overlook or to neglect available statistics associated with similar situations that could otherwise help to formulate more accurate forecasts (Koellinger, Minniti, & Shade, 2007). This cognitive bias produces a sense of overoptimism that is observed to be greatest for complex, uncertain, (Griffin &Tversky, 1992) and ambiguous tasks (Camerer & Lovallo, 1999). Hayward, Shepherd, and Griffin (2006) suggest business planning may compound this influence by increasing confidence through more extensive scenario and contingency planning. Cassar (2010) suggests that planning and financial forecasts lead to greater ex-ante bias in nascent entrepreneurs sales forecast. As a result, we expect:

> H5: Team size will moderate the relationship between planning formality and revenue expectations such that downward revisions of revenue expectations will be more likely.

A basic assumption of planning literature is that plans improve coordination between different members of the organization. In an entrepreneurial management team, plans should be able to improve division of labor between team members, making it possible to achieve a greater number of important tasks for the nascent organization. Therefore, we hypothesize:

> H6: Team size will moderate the relationship between planning formality and gestation activities such that gestation activity will increase.

METHODS

Data: Panel Study of Entrepreneurial Dynamics (PSED II)
Sample: 514 individuals engaged in the process of launching a new venture
Dependent variable = Revenue expectations at Year 5
Dependent variable = Forecasting accuracy (stability of 5-year revenue expectations exp5B-Exp5A)
Dependent variable = Change in gestation activities (Wave B-Wave A)
Independent variable = Business planning formality (AD1&2: 0=Not relevant, 1=No but will, 2=Unwritten, 3=Informally written, 4=Formally written)
Independent variable = Team size
Control variables = Age, sex, marital status, race/ethnicity, formal education
Statistical analysis = Hierarchical regression

RESULTS

Preliminary empirical results provide support for the central hypothesis. Specifically, the results show significant positive correlations between planning formality and long-range (i.e., 5 year) revenue expectations, as well as between planning formality and gestation activities.

Further, the results show a strong interaction effect between team size and planning formality on revenue expectations. Introducing the interaction effect removes the significance of planning-revenue expectations (from significantly positive to significantly negative for team size). This change shows that it is the interaction between team size and planning formality that causes high long-term revenue expectations rather than team size or planning formality independently.

In order to explore if the Plan X Team moderator is an effect of overconfidence and group think, or in fact reflects improved revenue making capacity, we tested the full model on revenue expectation change from the first to the second wave of data collection. If more team members make better plans, then we would expect limited long-range revenue expectation change. If more team members make the planning process more susceptible to overconfident group think, we would expect a downward revision of long-range revenue expectations.

We tested the relationship between business planning formality and team size on revisions of long-range (i.e., 5 year) revenue expectations between year 1 and year 2. In the base model, both planning and team size show negative but nonsignificant correlations with a downward revision of long-range revenue expectations in year 2. However, adding the interaction between plan formality and team size shows interesting results. Both planning formality and team size now show a significant correlation with an upward revision of long-range revenue expectations. Yet the interaction term shows a negative correlation irrespective of age, sex, marital status, formal education level, and ethnicity. We also ran the interaction models with the degree of formality as a five-item measure and as a dichotomous measure. Both indicate strong interaction effects. Together, these results suggest that planning formality in relatively larger teams inflates revenue expectations when it is written and that this significantly influences the need to reduce long-range revenue expectations in subsequent years.

DISCUSSION & IMPLICATIONS

Our findings that formality results in a significant revision of initial revenue expectations extend the literature on the business planning-performance relationship. By examining expectations in the early stages of venture creation, we provide insight into the precursors and process that help to explain more widely studied outcome measures like overall profitability or first sale (Delmar & Shane, 2003; Castrogiovanni, 1996). It appears that the act of formally writing a business provides a mechanism for defining goals (Armstrong, 1982) and organizing and relating timely information about the marketplace and customers (Gruber, 2007). In doing so, it provides a sense of actionability (Delmar & Shane, 2003) for pressing forward with gestation activities in the absence of internal historical operational data that also appears to lend itself to a strong sense of initial optimism with respect to revenue generation.

The present findings also confirm the suggestion of previous studies that team size has an initially positive impact on early optimism by bringing additional social resources to the venture start-up process (e.g., Brinckmann & Hoegl, 2011; Chandler et al., 2005). Yet interestingly, we find a moderating influence implying a systematic need for a downward revision of revenue expectations one year following the development of such optimism. Collectively, these findings extend the literature by demonstrating not only that business planning formality may lead to new venture founders being overly optimistic (Ucbasaran et al., 2010; Koellinger, Minniti & Schade, 2007), but also help to explain why. In line with Cassar (2010), it seems that planning is related to overoptimistic revenue projections. Yet it is also largely an interaction effect between team size and formal planning that increases the risk for optimistic group think in the revenue forecasts (Lechler, 2001; Schoejdt & Kraus, 2009), a finding which could help to explain the impact of planning on forecasting accuracy (Gartner & Thomas, 1993; Tyebjee, 1987). Our study suggests that while the outside view might initially offer valuable advice to relatively larger entrepreneurial teams, venture capitalists and support organizations should be extra aware of the risk of downwardly revised revenue forecasts of entrepreneurial teams.

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