

## **Learning Strategies of Nascent Entrepreneurs**

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## ABSTRACT

### **Learning Strategies of Nascent Entrepreneurs**

This research utilizes a longitudinal methodology to study the entrepreneurial learning strategies of a representative sample (n=171) of nascent entrepreneurs in Sweden. We examine Sarasvathy's theory of effectuation with respect to six different learning strategies and their effect on the progression of start-up processes. The results show that the progression of the start-up process, as represented by the number of gestation activities undertaken during each time period, is systematically related to the nascent entrepreneur's learning strategy. The analysis covers 24 months, and findings indicate that learning strategies associated with effectuation processes have positive effects on the progression of the start-up process. We also found positive effects from persistent learning strategies in the progression of the start up process.

Key Words: Nascent entrepreneurship, Organizational learning, Learning strategies, Effectuation

# Learning Strategies of Nascent Entrepreneurs

## Introduction

Despite considerable research regarding the characteristics of new entrepreneurs in small and medium sized enterprises (SME's), we know little about the process in the early stages of organizational design (Gartner, 1985; Gartner, 1988; Ripsas, 1998). Nascent activities are arguably one of the most crucial and understudied aspects of the study of organizational development, as they determine the critical point at which certain individuals succeed or fail at creating new organizations. Our current knowledge regarding existing organizations tells us little about what might be done to support, nurture, or in any way promote the development and activities of nascent entrepreneurs – those individuals at various stages in the process who are attempting to develop new businesses (Katz & Gartner, 1988). A noted exception to this dearth of knowledge is the American Panel Study of Entrepreneurship Dynamics (PSED; formerly referred to as the “ERC study”) and its sister projects in various countries (Alsos & Kolvereid, 1998; Carter, Gartner & Reynolds, 1996; Delmar & Davidsson, 2000). The present study is based on the Swedish derivative of PSED.

Reynolds defined nascent entrepreneurship according to a range of specific behaviors that include planning, obtaining resources, networking, registration, and similar activities related to organizational emergence (Carter, Gartner & Reynolds, 1996; Reynolds, 1997). While some of these activities define the critical point by which certain individuals succeed or fail in creating new organizations, others represent intermediary steps of limited consequence, depending upon the exact nature of the business organization emerging. Studying this nascent activity allows for the examination of resource requirements which are likely to be quite

different from more mature organizations, those that form the bulk of our current theoretical reference points.

New firms establish themselves by introducing new goods, new methods of production, new markets, new sources of supply, or new ways of organizing (Carland, Boulton & Carland, 1984; Gartner, 1985). The rapid pace of economic and social changes that enable such activity continues to fuel considerable interest in dynamic models of organizational learning, particularly from a strategic perspective. Nascent entrepreneurs, who by definition are in the early stages of their learning curves, are particularly susceptible to these considerable forces, and must repeatedly anticipate and react to new events.

### **Nascent activity and organizational learning**

Although there appears to be a relationship between the frequency of gestation activities and the start of a business, research regarding the sequential importance of gestation activities has not been conclusive (Carter, Gartner & Reynolds, 1996). Because only a few percent of all individuals undertake nascent activities during a given time period, with an even smaller number going on to actually start businesses, our information regarding strategic approaches to learning has been quite limited (Reynolds, 1997). Aldrich argues that while many nascent enterprises are simply reproducing organizations, innovative activities can be quite different and ground breaking in their approach. He points out that organizations employing new types of knowledge are able to put older organizations at a distinct disadvantage (Aldrich, 1999).

Just as environmental characteristics constrain various activities, resulting in the creation of different organizations, so the process by which they are developed eventually affects outcomes. Firms created in a rapidly changing environment have more opportunities to incorporate innovative approaches. Firms created by individuals with a penchant for scanning

and learning new approaches will also be more likely to incorporate innovation. The learning process, which eventually determines the strategic direction of the organization, occurs from the very outset of organizational development, and is particularly relevant to nascent activities. It is during early formulation and emergence that the business opportunity is located, resources are accumulated, products conceptualized, markets identified, and the fundamental building blocks of the organization formed. This learning process allows the nascent entrepreneur to integrate environmental, organizational, and individual processes into something that resembles strategic value (Gartner, 1985).

Traditionally, learning theories have emphasized a causal approach to organizational learning. Organizations are said to establish goals within the organization, and then find the means to fulfill that goal (Drucker, 1976; Wildavsky, 1979). In reaching such a goal, the organization is expected to engage in extensive market, competitor, supplier and product research (Kotler, 1991). Entire management systems, such as “management by objective” have been designed to take advantage of this process (Drucker, 1976). Under this paradigm, the learning process is designed to find the appropriate means to achieve an aspired set of goals.

There are many reasons to suspect that causal learning is a rare activity, bounded by rules, convention, communication constraints, and turnover (Simon, 1991; Meyer & Rowan, 1977). In one alternative paradigm, learning is conducted through experimentation, evaluation, and assessment (March & Olsen, 1975). Sarasvathy, focusing primarily on entrepreneurial decision making, proposes another alternative learning theory, “effectuation”. Using an effectuation approach may be seen in opposition to the causal approach to learning. The effectual process starts with a set of given means, and attempts to combine those means into a coherent and winning strategy. Means include current knowledge, traits, abilities, and social resources. Thus, while a chef engaged in a causal process develops a menu first, and obtains the

necessary ingredients and resources to execute a set of predetermined goals, the effectual chef looks in the cupboard, sees what is available, and produces a menu based on available resources. For the effectual strategy, the learning process is aimed at finding the appropriate effects of the given means (Sarasvathy, 2001). In real life, actors can go back and forth between causal reasoning and effectual reasoning or in fact engage in both activities almost simultaneously.

We agree with Sarasvathy that a useful definition of learning must incorporate both adaptive elements and causal learning. In order to evaluate organizational learning, it is first necessary to identify the learning strategy of the organization under study. This study aims to compare two categories of nascent strategy, those flexible and adaptive (effectual), versus those that are more systematic and formalized (causal). In educational terms, the latter strategy is comparable to formal institutional education, such as that obtained in High Schools and Universities, representing systems that focus on what has been known to be relevant but which are typically slower to respond to environmental changes. This contrasts with an adaptive strategy comparable to informal education, or learning by experience, where freedom from institutional constraints allows for more rapid adaptation and environmental relevance, but where the risk of haphazard or too high/low attention to idiosyncratic issues is also greater.

Shrivastava (1983) argues that learning systems can be classified according to the process by which they come to exist in the organization. Learning systems may develop without a conscious effort to design or contrive the learning mechanisms that emerge in the organization. Such learning systems are called evolutionary. Contrasting the evolutionary learning systems are the designed learning systems, which are purposely designed to fulfill the needs for learning in the organization. Shrivastava introduced a typology of six learning systems related to adaptive as well as institutional demands of mature organizations (Shrivastava, 1983). The six are as follows: 1) *one man institution strategy*, 2) *information seeking culture*, 3)

*participative learning system, 4) formal management systems, 5) bureaucratic strategy, and 6) mythological learning systems.* While this categorization provides good insight into the range of potential learning strategies, they are somewhat generic and fail to provide insight into the specific conditions necessary for learning in nascent organizations.

New organizations, in particular, are frequently required to improvise under situations of resource and time constraints (Moorman & Miner, 1998; Weick, 1993). The environments where new firms are most likely to emerge are characterized by rapid change, high uncertainty, and under-defined norms and competitive rules (Brews & Hunt, 1999). Such environments may preclude systematic rational planning and learning, depending instead upon different strategies, such as flexible and incremental planning. For example, Brews and Hunt (1999), found that in unstable environments, achieving specific organizational goals are associated with flexible planning. They noted the importance of revising and adjusting plans on a frequent basis.

Sarasvathy (2001) argues that pre-firms or very early stage firms created through a process of effectuation will perform better than those who are created through a process of causation. They will be able to experiment with more ideas at lower costs, they are more likely to enter a new industry successfully and they are more likely to engage in “seat of the pants” marketing/selling activities and alliances. Effectuation processes are characterized by constantly searching for new opportunities (effects) given the organizations current operations (Sarasvathy, 2001). Thus, in terms of learning, entrepreneurial organizations that continuously adjust their organizational learning strategy are an indication of alignment with Sarasvathy’s effectuation process.

***Hypothesis 1: A continual adjustment learning strategy will have a positive effect on the number of gestation activities undertaken in subsequent periods.***

Exploitation processes according to Sarasvathy (2001) are based on affordable loss or acceptable risk, rather than expected returns. We examine this aspect of learning strategy by identifying whether the entrepreneur has a preference for testing the ground in small steps rather than big, one-time decisions. Thus an incremental strategy is an indication of alignment with Sarasvathy's effectuation process and should thus perform better.

***Hypothesis 2: An incremental learning strategy will have a positive effect on the number of gestation activities undertaken in subsequent periods.***

Effectuation is contrasted with causation in Sarasvathy's theory. Causation is a process characterized by prediction and is hypothesized to be of negative benefit to the new organization. That is, new organizations should not use strategies that involve extensive planning and predictions for the future. Sarasvathy (2001) characterizes causation processes as heavily based on analysis and research. Learning of this kind is based on analysis and research of known aspects rather than continuous tests on the market. Thus, focusing heavily on research and development is an indication of an emphasis on causation processes.

***Hypothesis 3: An R&D based learning strategy will have either no effect or a negative effect on the number of gestation activities undertaken in subsequent periods.***

The main difference between the causation and effectuation paradigms can be found in their focus. While effectuation processes focus on given means and the possible effects that can be created with them, causation processes focus on a given effect and the selection of what means should be used to accomplish that effect. Thus if the organization focuses on a systematic

search directed at finding solutions to a specific known end, it is seen as an indication of a causation process.

***Hypothesis 4: A Systematic search strategy will have either no effect or a negative effect on the number of gestation activities undertaken in subsequent periods.***

We also examine two learning strategies whose main characteristics do not fall naturally within the causation vs. effectuation continuum, namely the persistent learning strategy and the random learning strategy. The main characteristic of a *persistent strategy* is the tendency not to give up. Persistence in the learning strategy is equally possible for adaptive and systematic approaches. We contend that persistence is helpful in making progress during the start-up process, whether applied with systematic or adaptive learning.

***Hypothesis 5: A persistent learning strategy will have a positive effect on the number of gestation activities undertaken in subsequent periods.***

A *Random strategy* is akin to Shrivastava's (1983) "mythological learning systems" as well as to what March refers to as "superstitious learning" (Choen & March, 1974; March & Olsen, 1975). This strategy is obviously not systematic, but due to its stated lack of direction and focus it may not be very adaptive, either. We hold that a random learning strategy is not likely to be helpful for making progress in the start-up process. This leads us to the following hypotheses:

***Hypothesis 6: A random learning strategy will have no effect or a negative effect on the number of gestation activities undertaken in subsequent periods.***

## METHOD

### Introduction

In order to fully assess learning practices, it is necessary to follow a trajectory that includes studying one parameter of organizational ignorance, identifying targeted learning activities, and reassessing organizational competence in that particular sphere after the learning activity has occurred. In this way, the entire dynamic process of planning, analysis, forecasting, and deciding is examined. Essentially, this entails observing different responses to the same stimulus. Even with a controlled experiment, however, it is quite difficult to ascertain that different responses are the result of learning. Changes in responses might also be the outcome of stochastic processes, or reflect a much more active organization (Weick, 1991). In practical terms, understanding organizational learning suggests a qualitative case study approach, with the resulting conclusions subject to assertions of non-generalizability.

This study is based on longitudinal survey data. What we *are* able to measure through survey research are stated learning strategies - the cognizant goals of specific members (the lead entrepreneur) of an organization regarding their strategic direction and educational goals. Further, while we might be able to correlate these strategic goals to various organizational outcomes, we should be careful not to infer organizational learning as the sole cause of any particular outcome. Rather, it is sufficient to note relationships between strategic learning styles and organizational behaviors, even if these behaviors are not rationally based artifacts (Meyer & Rowan, 1977).

### Sample

The study was designed to provide population estimates for business start-up efforts and to follow a random sample of nascent activities leading to the possible start of new businesses.

Data are based on two samples of randomly selected individuals living in Sweden. The first sample consists of individuals aged between 16-70 years and the second sample consists of individuals aged between 25-44 years. The purpose of the first sample was to get a representative sample of the adult population in Sweden, while the second sample was to increase the yield of nascent entrepreneurs. Previous research indicated that this age group has the highest rate of business founders (Reynolds, 1997).

Because nascent entrepreneurs constitute a relatively small group in society, every respondent went through a screening interview with the objective of selecting out the nascent entrepreneurs. They were asked “Are you, along or with others, now trying to start a new independent firm”? The individuals who responded affirmatively were then asked if they were willing to participate in a longer telephone interview. The interviews were conducted during the period of May-September 1998, with follow-up interviews at 6, 12, 18 and 24 months.

35,971 Swedish individuals were randomly contacted by telephone, and 30,427 (84.6%) agreed to participate (appendix Table 1). Of these, 3.2%, or 961, were identified as engaged in one or more nascent gestation activities, and 623 of these nascent entrepreneurs or intrapreneurs agreed to participate in the study, and participated in the initial screening interview and were sent mail questionnaires for supplementary items. Over the course of the following 24 months, 168 cases left the study due to termination of efforts or refusal to participate, 244 failed to complete a mail questionnaire that was the basis for four of our six learning strategy questions, and 38 were disqualified as nascent intrapreneurs developing new ventures for established firms, and missing data further reduced the sample by two. The remaining 171 nascent entrepreneurs were evaluated at the initial screening period, at six months, 12 months, 18 months, and 24 months by telephone survey.

A case was considered qualified for the panel if at the first interview at least one

gestation activity was completed. Gestation activities were determined as any of 46 different sequences accounting for 20 different behaviors that were considered demonstrative of actively beginning the business creation process (see Table 2 appendix). The 20 nascent gestation behaviors are identical or nearly identical to those used in other studies (Alsos & Kolvereid, 1998; Carter, Gartner & Reynolds, 1996; Davidsson & Honig, forthcoming; Reynolds, 1997). Note that while the nascent entrepreneur is always “nascent” with regard to the current start-up effort, he or she may previously and/or concurrently (have) run other businesses. That is, not all nascent entrepreneurs are novices.

## **Measures**

The dependent variables utilized in this study is the total number of 46 steps or sequences toward 20 gestation activities counted at the time of initial screening, and over the course of the subsequent 24 months. When appropriate, each phase of behavioral sequencing was coded by a dummy variable for completion. For example, preparing a business plan, however informal, was coded “1”, a written informal plan coded again as “1”, and a formal written plan for external use was also identified. Thus, each nascent might receive anywhere from 0-3 sequences under the business plan gestation behavior, with similar multiple sequence operations accounting for most of the gestation behaviors.

### **Independent variables**

Independent variables which otherwise might have been considered a gestation sequence behavior, such as organizing a team or having customer contacts before starting, were omitted from the dependent variable.

As regards explanatory variables we use the following measures of learning strategies:

*Research and Development* strategy: Those who indicated “spending on research and

development will be a major priority for this new business”.

*Systematic Search* strategy: Those who completely or generally agreed to the following: “I have engaged in a deliberate, systematic search for an idea for a new business“.

*Continual Adjustment* strategy: Those who completely or generally agreed to the following: “I spend considerable time making the organizations I belong to function better”.

*Incremental* strategy: Those who completely or generally agreed to the following “For me, identifying business opportunities has involved several learning steps over time, rather than a one-time thing.”

*Persistent* strategy: Those who completely or generally agreed to the following “If this business idea is not successful, I am willing to try up to ten other business ideas before I go to work for someone else”.

*Random* strategy: Those who completely or generally agreed to the following: “The best business ideas just come, without a need to search for them”.

Note that logically these are not mutually exclusive. Accordingly, it is possible for our nascent entrepreneurs to represent more than one of the strategies. However, the overlaps are not very big. The frequency of various learning strategies varied considerably. Fifty-seven percent utilized an incremental strategy, followed by fifty-three percent that made use of a random strategy, forty three percent a continual adjustment approach, 31 percent an R&D strategy, and only 15 percent a persistent strategy. The pair-wise correlations between learning strategies are moderate (see Table 1).

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Insert Table 1 about here  
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### **Control variables**

Much activity and research in the field of entrepreneurship (e.g., Bennett & Robson, 1999; Wood, 1994; Honig, 1998) is based on assumptions regarding human capital theory, which views education as an investment that yields higher wage compensation in return for individual variations of skills, training, and experience (Schultz, 1959; Becker, 1964; Mincer, 1974).

*Human capital* of the nascent firm owners was determined by two methods. Owners were asked to indicate the highest level of education they had completed, coded into number of years. Respondents were also asked their total years of full time paid work experience in any field, to provide the Work experience variable.

Social capital theory maintains that social networks provided by extended family, community-based, or organizational relationships enhance the effects of education, experience, and financial capital (Bourdieu, 1983; Loury, 1987; Coleman, 1988; Coleman, 1990).

Organizational research holds that social networks play an important role in the emergence of organizations (Van De Ven, 1993). They bring both diversity of ideas and resources, as well as strong relationships that serve to endure and provide critical trust (Aldrich, 1999; Granovetter, 1985; Granovetter, 1993).

*Social capital* was determined utilizing a number of variables representing an external network, an internal network, and a customer oriented network. Start-ups that were owned by more than one person were identified as team start-ups. One question asked nascent entrepreneurs if they were involved in any formal business networks for the specific purpose of helping this start-up. Another question concerned encouragement from family and friends for going into entrepreneurship. Finally, nascent owners were asked if they knew their customers before starting up, or if any of their customers had helped in financing the new start-up. A “customer contact” dummy variable was created for those individuals who indicated they had

either of these previous customer contacts.

In a related paper (Davidsson & Honig, forthcoming) we have examined in some detail the effects of human and social capital in the firm gestation process. We therefore refrain from repeating the theoretical arguments here. Instead, we include a number of indicators of social and human capital as control variables. Doing so is important, as our previous analysis showed that in particular social capital variables have strong and systematic effects. If these variables were excluded from our current analyses the estimated effects of learning strategies might get exaggerated or distorted.

*Other control variables:* The age of the nascent entrepreneur was used as a control, as this was found to be a factor in other studies (Reynolds, Hay & Camp, 1999; Reynolds, Wolters & Zevenbergen, 2000). A gender dummy was also included. Finally, nascent entrepreneurs who indicated they married or living with a partner was coded 1 on a dummy variable (married). In addition, the number of 46 gestation sequences was totaled at the beginning of the survey, and this number was used in one analysis as a control variable.

## **Data Analysis**

The analysis of learning strategy on gestation activity utilized ordinary multiple linear regression, with the total number of gestation sequences as a dependent variable. The analysis is repeated for the total number of gestation sequences at 0, 6, 12, 18 and 24 months, respectively. With two exceptions, the explanatory variables were assessed during the first interview (0 months). The exceptions are customer contact, which was not asked about until the 6-month interview, and the network variable for which the most current data during months 6-24 was used. This means that except for the 0-month regression the time order of variables is correct for causal analysis. Projects that were abandoned, or where the respondents failed to continue with

the survey, were dropped from the analysis, in order to minimize any biases resulting from reduced activity resulting from early termination or insufficient data.

## RESULTS

Table 1 presents the correlation matrix for the entire data set, including means and standard deviations.

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The average nascent entrepreneur was 39 years old, married, and had 12.7 years of education. About half of the start-ups were team-based projects, reporting, at the start of the interview series, an average of 5 gestation sequences. The number of sequences increased considerably over the course of the study, to an average of 22 for the entire group. Approximately 44 percent of the nascent entrepreneurs reported having relationships with potential customers before starting their businesses. Thirty-six percent of the nascent entrepreneurs were members of a business network.

In general, the variables studied were not highly intercorrelated. The highest inter-variable correlation in learning strategy was between the persistent and systematic strategies, and it was only at the .16 level. All other correlations were found to be negligible and not statistically significant.

Table 2 displays the results for five regression analyses using number of gestation activities as the dependent variable. There is a time sequence such that the farther to the right, the “longer term” is the estimated effect. The following observations can be made. The regression functions are significant and yield non-negligible  $R^2$ -values. The explanatory power increases over time. This is a logical pattern if the explanatory variables have real and lasting

effects. However, explanatory power drops back again in the last analysis. This may be due to a ceiling effect. At this time many start-up projects approach completion. Hence, most relevant gestation activities have been completed already and there are few to add.

The strongest effects are ascribed to some social capital indicators – networking in particular – while little effect is found for human capital or other control variables. These results are consistent with previous analyses with slightly different model specifications (Davidsson & Honig, forthcoming). An unexpected negative effect appears for “customer contact” in the zero and six months regressions, but this effect disappears over time.

Hypothesis 1 states that a continual adjustment learning strategy will have a positive effect on the number of gestation activities undertaken in subsequent periods. Continual adjustment strategy is assigned positive effects in the six-month regression, and coefficients are positive (though non-significant) in all others. Thus we consider hypothesis 1 supported.

Hypothesis 2 states that an incremental learning strategy will have a positive effect on the number of gestation activities undertaken in subsequent periods. Positive effects of incremental learning strategy are found in the last two regressions, and only one analysis (6 month) has negative non-significant results. Thus we consider hypothesis 2 supported.

In all, we consider Hypothesis 1 & 2 supported – and can conclude that effectuation based learning strategies have a positive effect on the progression of the start-up process.

Hypothesis 3 holds that R&D based learning strategies will have neutral or negative effects on the number of gestation activities undertaken in subsequent periods. No statistically significant results were found for the R&D strategy. Thus, hypothesis 3 is supported.

Hypothesis 4 states that a systematic search strategy will have a neutral or negative effect on the number of gestation activities undertaken in subsequent periods. In the last two

regressions (18 and 24 month) the systematic strategy shows (marginally) statistically significant negative results. Hence, we regard hypothesis 4 as supported.

According to Hypothesis 5, a persistent learning strategy will have a positive effect on the number of gestation activities undertaken in subsequent periods. A positive and significant effect is estimated in the last of the five regressions. We regard this as support for the hypothesis, especially as the estimated effect tends to increase with time. Thus, Hypothesis 5 is supported.

Hypothesis 6, finally, holds that a random learning strategy will have no or negative effects on the number of gestation activities undertaken in subsequent periods. The estimated effect is negative and non-significant in two five regressions, and negative and statistically significant in both the initial and 24-month periods. Hypothesis 6 is supported.

In summary, all six hypotheses are supported at least to some extent. However, apart from the results for incremental strategy the estimated effects and their explanatory power are modest.

## **DISCUSSION**

Organizational learning is both a complex and exceedingly difficult activity to research. Even a hypothetical “pure” simulation is difficult to administer, as the researcher must examine behaviors that may be related to artifacts that exist outside the knowledge-learning dynamic. Further, as organizations are composed of multiple individual intelligences, the task of identifying any collective behavior becomes more complicated by magnitudes.

By examining organizational activity in its earliest stages, we were able to observe results from the primary actor (nascent entrepreneur) before dilution in a more complex organizational structure, thus avoiding some of the aforementioned complexities. Inspired by a typology of organizational learning systems, we operationalized and examined Sarasvathy’s

theory of effectuation and related these to the number of gestation activities undertaken in subsequent periods.

From the limited analysis conducted in this study, it appears that learning strategy *does* matter, and that it is possible to identify efficient strategies for nascent or emergent organizations. Our results point out learning strategies based on effectuation processes characterized by continual adjustment and – in particular – incrementalism as effective tools for making the start-up process move forward. By contrast, causation based learning strategies had no reliable positive effects in our analysis. Importantly, “adaptive” should not be confused with “random”. We examined random learning strategy separately and found – as predicted – that learning strategy to be ineffective. Apart from support for adaptive strategies we also found some support that persistence is helpful. In summary, our results are in line with the view that nascent entrepreneurs should have a strong commitment to clear over-arching goals, but be prepared to use flexible means in order to reach these goals. While statistically significant in many cases our estimated effects of learning strategies are relatively weak for the most part. This may be because many other factors determine the progression of venture start-up processes. It must be noted, however, that the measures of learning strategies employed in this study utilize only a single independent variable – the stated style or strategy of the nascent entrepreneur, coded as dichotomous variables at one point in time. Using a single parameter for each strategy may result in producing comparatively weak effects in the model. It is therefore likely that with improved measurement the estimated effects of learning strategies would be greater.

Of course, only additional longitudinal analysis will determine if the relationships disclosed in this study are persistent and indicative of financial success. Further, it is entirely possible that a particular strategy is more suitable for emergence, while another is more suitable for subsequent organizational evolution. The findings in this study suggest that the speed with

which gestation takes place is dependent upon the favored learning strategy of the entrepreneur. Carter et al (1996) demonstrated a relationship between the number of gestation activities and the actual start of a new business, further noting that the frequency of activities diminished rapidly over time for those who failed to launch their business. Identifying a learning strategy that provides more consistent gestation activity may be a critical factor in predicting eventual success. From a public or managerial policy perspective, this research suggests that it may be advantageous to provide nascent entrepreneurs, and potential nascent entrepreneurs, with learning models that promote such gestation activity. Doing so represents a deviation from common institutional practices in the education and promotion of small businesses, which tend to favor the production of business plans, marketing and financial analysis. Our results suggest that adaptive learning strategies should be more emphasized.

Our results show an interesting development over time for the effects of different learning strategies. While it cannot be ruled out that this apparent pattern is due to stochastic variation, it is interesting to note that it is only when the analysis period is 12 months or longer that the superiority of adaptive strategies, and the positive effect of persistence, begin to stand out. This has implications for practitioners and for researchers. For the practitioner it means that it may take some time before an adaptive learning strategy starts to pay off. For researchers it points out the necessity of covering as much of the process as possible. Had this been a cross-sectional study or a study with just one follow-up, the results and their interpretation would have been very different from what we have been able to report.

In conclusion, this research confirms Sarasvathy's theory of effectuation. Effectuation processes are beneficial in creating new organizations, while causation processes were found uncorrelated with progress in the creation of the new organization. It demonstrates the importance of adaptive and persistent learning strategy as well as social capital to nascent

entrepreneurs. Of particular interest is that we know of few programs that attempt to intentionally foster these two characteristics. Given the apparent contribution of learning strategy on gestation sequence activity, this research suggests that incubation and entrepreneurial promotion programs would be advised to consider providing lessons in strategic learning to their clientele and effectuation process reasoning. Additional research regarding the longitudinal outcomes of both social capital and strategic learning, particularly utilizing multi-method approaches, will help immeasurably with the design and implementation of appropriate programs.