The Small Business Institute® is the premier organization dedicated to field-based student consulting and outreach to small businesses. Our members are actively involved with small businesses and entrepreneurial firms in their communities and regions.
Letter from the President

As both President of the Small Business Institute® and Co-Editor of the Small Business Institute® Journal (SBIJ), I am very pleased to announce the release of the fall issue (Volume 8, Issue 2). The Small Business Institute® has a long tradition of outstanding research and SBIJ is one of the organization’s outlets to showcase these efforts (along with the Journal of Small Business Strategy). These journals complement the programming efforts of the Small Business Institute® and feature research that is relevant to academics, practitioners, and policy makers.

This issue provides our members and the academic community with five manuscripts that further build the research base in the field of entrepreneurship and small business management. These manuscripts offer an important contribution to the literature, as well as significant practical implications and new avenues for future research. A key contribution of the SBIJ is that it provides an outlet for diverse types of research, including empirical, conceptual, and pedagogical research, as well as case studies and teaching cases. As the premier organization dedicated to field-based student consulting and outreach to small businesses, the SBI continues to offer valuable publication opportunities for our members.

I want to offer a sincere thanks to everyone involved in making this journal a success, particularly the authors and reviewers who work tirelessly to ensure a peer review process that is timely and collegial. I also want to thank the College of Business at East Carolina University for hosting the SBIJ. The combined efforts of these key contributors allow SBIJ to continue to enhance the research profile of the Small Business Institute®.

In closing, I want to encourage you to consider this journal as an outlet for your future research. The submission and review process features a user-friendly on-line portal. Also, please visit the SBI website to learn more about our organization (www.smallbuisnessinstitute.biz).

Michael L. Harris, National President
Small Business Institute®

Letter from the Editors

With just a quick glance at a local or national newspaper or with just a few strokes on the computer or smartphone keypad, anyone can see that small business is a hot topic in the realms of politics, finance, and just about every other area of life. As we offer the fall 2012 issue of the Small Business Institute® Journal, we hope that you will find resources in these articles for your academic or small business efforts.

This edition covers a variety of topics that once again will appeal to a very diverse and varied readership. We begin with an examination of creativity within individual entrepreneurs followed by an article that utilizes an institutional context, as well as the resource based view, to develop theory concerning the professionalization of family firms in developing and developed economies. Following this we examine survival rates of new firms as well as the motivation behind small CPA-practitioners efforts. We conclude with an exploratory study of entrepreneurship accelerator companies, which should be of great interest for entrepreneurs, entrepreneur educators, and program directors.

We would like to extend our thanks to the multiple reviewers and authors who have contributed to the quality and outcome of this edition of the Small Business Institute® Journal. The success of this journal is of course dependent upon their hard work as well as the continual inflow of manuscripts related to small business. For information about submitting your work for consideration in the SBIJ, please visit the journal website at http://www.sbij.org.

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Creative Individuals and Entrepreneurship: Is There an Inherent Attraction?

John H. Batchelor
University of West Florida

Gerald “Jerry” F. Burch
Virginia State University

In this study, we argue that entrepreneurship is a fruitful pursuit for creative individuals. Using a sample of 152 undergraduate students, we investigated to see if individual creativity predicts one’s intentions to enter into the field of entrepreneurship. Specifically, we looked at one’s ability to think divergently (the generation and elaboration upon ideas) and creative personality in our conceptualization of what it means to be “creative.” Our findings show that divergent thinking was able to predict entrepreneurial intentions alone and that creative personality was best used to increment what is explained by divergent thinking. These findings are discussed along with implications for practitioners and academics.

Creativity and its resulting innovation, due to creative employees (Florida, 2004), is shown to be linked to the ability of organizations to perform, grow, and, most importantly, survive (Mumford, Hester, & Robledo, 2011). For years, many managers and scholars have worked on identifying, selecting, and fostering creative individuals based on variables such as personality, cognitive processes, and environments that lead to increased practical innovations that align with the goals of organizations (Acar & Runco, 2011; Baer, Oldham, Jacobsohn, & Hollingshead, 2008; Farr, 1990; Hocevar & Bachelor, 1989; Reiter-Palmon, Herman, & Yammarino, 2008; Robert & Cheung, 2010).

Herein, we argue that entrepreneurship is a fruitful avenue for creative individuals to flourish and that creative individuals will be more attracted to this form of employment than others. This argument is supported by the findings of Baron and Tang (2011) who, with a sample of entrepreneurs, found that creativity is positively related to firm innovation. Further, they found that this relationship was stronger in dynamic environments, a type of environment often encountered by entrepreneurs. This sentiment is echoed by Ward (2004), who notes that novelty and usefulness, two key aspects of creativity, are important to entrepreneurship. Herein, we argue that the dynamic situations, or what Chatman (1989) terms “weak,” encountered by entrepreneurs require creative solutions, which should be ideally suited for creative individuals.

The purpose of this article is to investigate how creativity functions outside of the traditional organization and if it can be used to predict which individuals will choose to forgo traditional employment in favor of entrepreneurial ventures. Specifically, we intend to investigate how to identify creative individuals, using established creativity measures, and determine if highly-creative individuals are more likely to be attracted to entrepreneurship.

ENTREPRENEURIAL CONCEPTUALIZATION

We define an entrepreneur as a primary owner of a business who is not employed by another organization (Brockhaus, 1980). Like the entrepreneur, entrepreneurship itself can be conceptualized in many fashions. We chose to follow the recommendations of Gartner (1988) and Davidsson and Wiklund (2001), which view entrepreneurship as including the establishment of new organizations and the exploitation of opportunity. Thus our definition of entrepreneurship, with respect to entrepreneurial propensity, is the ownership of an independently owned business(es), their owner-managers, and their efforts to exploit opportunity (Davidsson, 2005).
A UNIQUE GROUP

Entrepreneurs have many distinct characteristics that separate them from managers employed by traditional organizations (Zhao & Seibert, 2006). First, with respect to personality, research has shown that entrepreneurs are higher on conscientiousness and openness, and lower on neuroticism and agreeableness than managers (Zhao & Seibert, 2006). With respect to creativity, the foci of this investigation, entrepreneurs have been shown to be more creative, innovative, and likely to embrace new ideas than other business people (Zhao & Siebert, 2006; Griest, 2011 and Pryntz-Nadworny, 2011 for discussion).

Entrepreneurs are generally more motivated to achieve (Stewart & Roth, 2007) and less constrained by organizational systems and structures than other business people (Daily, McDougal, Covin, & Dalton, 2002). We believe these are key aspects as to why creative individuals may be more attracted to entrepreneurship than others. In that, by being the head of the organization, “their own boss,” entrepreneurs are more free to be creative than others and more motivated to develop and exploit innovation in order to achieve their goals. Yet, this freedom does come at somewhat of a price.

The freedom entrepreneurs possess is the result of a lack of organizational restraints placed upon them by superiors and their organization, such as standard operating procedures or organizational norms, which traditional managers face. This results in entrepreneurs facing mostly “weak” situations, where there is large variation, or latitude, in how individuals can handle a situation (Chatman, 1989), as opposed to “strong” situations where there is little room for individual variation in handling situations, which is often the case for traditional managers. For example, when encountering a customer who is unhappy with his new purchase, a manager employed by a large organization may be very limited, by his or her organization, in what he or she can do to resolve the situation. These limitations may involve hard rules such as not allowing a return because the organization’s rules state that merchandise cannot be returned once it has been opened or used. When confronted with the same situation, entrepreneurs are free to do whatever they see fit because they set their own rules and are free to change them as they please.

Markman and Baron (2003) echo this perspective, arguing that entrepreneurs do indeed face mostly weak situations. Stewart and Roth (2007) elaborate on this point by discussing how founding entrepreneurs must create a business where nothing existed before, define that business and what services or products it will offer, obtain the requisite resources, and establish how the new organization will operate. To do this, entrepreneurs must be creative or they will not succeed or emerge from entrepreneurial nascence. Thus, entrepreneurs are, by necessity, better at making decisions under conditions of uncertainty and ambiguity than others (Bierly, Kolodinsky, & Charette, 2009), that is, conditions where creative practical solutions are required to succeed.

THE RIGHT PERSON FOR THE RIGHT JOB

Not all individuals are equal when it comes to creativity. As with any other psychological constructs, individuals are spread throughout the continuum of creative ability levels. One way to assess creativity is by measuring divergent thinking ability. Divergent thinking is the process that individuals undertake when generating ideas (Acar & Runco, 2011); the process consists of four basic components. First, fluency is the number of new ideas one can generate in a given amount of time (Torrance, 1966). Second is flexibility, which reflects one’s ability to incorporate different perspectives when generating ideas (Baer et al., 2008). Third, originality deals with the uniqueness of one’s ideas (Guilford, 1950). Finally, elaboration is the ability to add detail to preexisting ideas (Torrance, 1966). Thus creativity can be conceptualized as a multi-faceted construct.
We propose that individuals who possess the ability to think divergently will be more attracted to entrepreneurship than others. Although we are not aware of prior empirical testing of this specific relationship, there is substantial support for this idea. Innovation is argued to be a crucial ingredient to new venture creation (Baron & Tang, 2011), and an essential component of our definition of entrepreneurship. Others have gone as far as to state that divergent thinking is so closely related to entrepreneurship that the two concepts are synonymous (Day, Reynolds, & Lancaster, 2006).

Creativity and innovation are two closely related constructs that must coexist. Creativity is the generation of ideas and innovation is the exploitation of these ideas (Wilson & Stokes, 2006). Hence, creativity is, by necessity, a precondition for innovation. Because of the weak situations frequently encountered by entrepreneurs, creativity is essential for this type of employment because there is no organizational set of standard operating procedures to follow when problems arise, except for in commodity like ventures. Hence creativity is positively related to performance in this context of entrepreneurship (Baron & Tang, 2011). Thus it stands to reason that, on average, creative individuals should be more likely to become successful entrepreneurs and more attracted to the field than less creative individuals.

In general, individuals choose employment that places them in situations that are best suited for their personalities (Stewart & Roth, 2007). This is the basic premise of Person-organization Fit Theory which argues that individuals choose their line of work based on how their individual attitudes and abilities fit in with the culture and other attributes of an organization. Person-entrepreneur Fit Theory (Markman & Baron, 2003) is a variation of Person-organization Fit that proposes that some individuals will “fit” the role and responsibilities of an entrepreneur better than others and will be more likely to succeed and be attracted to the field of entrepreneurship. This is the impetus for our first hypothesis.

H1: Creativity is a positive predictor of entrepreneurial intentions.

We agree that one key aspect of “fitting” into the role of an entrepreneur is the ability to handle “weak” situations that require creative solutions. The central aspect of creativity is the ability to generate ideas. This “ideation” is consistent with our previous definition of divergent thinking and centers on one’s ability to generate appropriate answers to problems (McCrae, 1987). As our previous discussion on person-entrepreneur fit argued, people with the prerequisite abilities for entrepreneurship will be more attracted to it. We then argued that creativity is one of these abilities. Our next hypothesis drills down to test if this key aspect of creativity, the ability to generate ideas (divergent thinking), alone predicts entrepreneurial intentions. Thus, through the lens of Person-entrepreneur Fit Theory, we propose that creative individuals who possess the ability to think divergently will be more attracted to the field of entrepreneurship, because they possess the prerequisite abilities necessary to perform this role, as formally stated in the following hypotheses.

H2: Increased individual divergent thinking, and the dimensions of divergent thinking, positively predicts one’s entrepreneurial intentions.

Up to this point it is argued that creative individuals should be more attracted to entrepreneurship than others, and that divergent thinking is key to this process. But, there must be more to being creative than simply generating ideas. For this reason, we look to the personality component of creativity. For over thirty years, personality has been shown to be related to the creativity level of the individual (Gough, 1979; Oldham & Cumming, 1996). In general, industrial and organizational psychologists and management researchers think of personality in terms of the Big Five personality traits of openness to new experiences, conscientiousness, extraversion, agreeableness, and neuroticism (Costa & McCrae, 1992). But, meta-analysis has shown that there is a creative component of personality that is not captured by this conceptualization (Feist, 1998). Thus a personality trait of “creativity” is shown to have divergent validity from the Big Five components of personality, which means that creativity is substantiated as a personality trait in its own rite.
Although divergent thinking is paramount to entrepreneurial success, with reference to creativity, it may not capture all of what it means to be creative. There is evidence of a link between creativity and entrepreneurial intentions. For instance, Barth (1993) and Schein (1978) both suggest that creative individuals desire to create new things, which we extend to include new enterprises. Further, Feldman and Bolino (2000) suggest a link between creativity and self-employment. These assertions were tested by Zampetakis and Moustakis (2006) who found that creative self-perceptions and a creative environment predict entrepreneurial intentions. We extend this line of research by directly testing the link between individual creativity and entrepreneurial intentions. Thus, we propose that one’s creative personality can increment divergent thinking in predicting one’s entrepreneurial intentions, as stated in the following hypothesis.

H3: Creative personality is positively related to entrepreneurial intentions and increments what is explained by divergent thinking.

METHODS

This study included 152 undergraduate respondents from a large southeastern public university. The students were a multidisciplinary group. They were obtained from classes housed in the schools of business, art, and engineering. The average age was 22.7 years and 31.6 percent of respondents were female. All respondents were given identical measures. The undergraduates in this study were given extra credit for their participation and were free to refuse participation without penalty.

DEPENDENT VARIABLE

The outcome variable of interest in this study is entrepreneurial intention; that is, the intent of one to start his or her own business one day. For this measure we used two questions from Crant (1996) and two questions from Luthje and Franke (2003) to comprise one four item scale. An example question is, “I will probably own my own business one day.” The alpha reliability for this scale in this study is .90.

INDEPENDENT VARIABLES

In this study we are interested in how well one’s creative personality and creative ability predict entrepreneurial intentions. Creative personality was measured using Gough’s (1979) Creative Personality Scale (CPS). This scale is comprised of a list of 30 adjectives. Respondents are asked to check the adjectives that they believe describe them best. The reliability for this variable is reported at .70 (Oldham & Cummings, 1996).

The divergent thinking aspect of creativity, conceptualized in this study as creative ability, was measured using the Abbreviated Torrance Test for Adults (ATTA), which is a short form of the original Torrance Test of Creative Thinking (TTCT) (Torrance, 1966). These measures have successfully delivered consistent results when predicting creative performance for over four decades (Crammond, Matthews-Morgan, Bandalos, & Suo, 2005). The test consists of presenting respondents with three figures and asking them to create lists, produce figures, and/or provide titles. The ATTA used in this study was comprised of four components: fluency, originality, elaboration, and flexibility. The alpha reliabilities for these measures in this study were all high, .99, .97, .97, and .99 respectively.

CONTROL VARIABLES

To ensure that our results are not spurious, we included two controls to ensure that our concepts of interest (creative personality and divergent thinking) are truly responsible for our findings. First we control for the “Big Five” personality traits (openness to new experience, conscientiousness,
extraversion, agreeableness, neuroticism) most often investigated by management psychologists. The Big Five personality traits are shown to have a moderately high overall correlation (.41) with job satisfaction (Judge, Heller, & Mount, 2002). With regard to performance, Barrick, Mount, & Judge (2001) found several notable conclusions. They found conscientiousness to be a valid predictor for all occupations across performance measures. A link was found between low levels of neuroticism (emotional stability) and overall work performance. Low levels of extraversion, openness to new experience, and agreeableness did not predict overall work performance well but did predict for certain occupations. As a whole the Big Five personality traits are pervasive to managerial research and are shown to be valid predictors of overall performance and performance in specific contexts. For this reason, we believe that the influence of personality should be controlled for in this study to provide support that our results are not spurious and are indeed due to the independent variables of interest.

Although the discriminant validity of creative personality, from the “Big Five,” is established by meta-analysis (Feist, 1998), we included 20 items of the Mini-IPIP (Donnellan, Oswald, Baird, & Lucas, 2006) to ensure that our analysis is truly evaluating the creativity associated with one’s creative personality rather than other personality constructs. This measure is a shortened version of the original International Personality Item Pool (IPIP) developed by Goldberg (1999). The alpha reliabilities for openness, conscientiousness, extraversion, agreeableness, and neuroticism in this study are .75, .67, .82, .86, and .70 respectively.

ANALYSIS

Hierarchical regression analysis and correlations were used to test the hypotheses herein. In all, four models were tested: Model 1, a control model that included only the six control variables; Model 2, composed of the control variables in step 1 and CPS in step two; Model 3, composed of the control variables in step 1 and the ATTA components in step 2; and Model 4, composed of the control variables in step 1, CPS in step 2, and ATTA in step 3. For each model, a $R^2$ and $R^2$ change is reported.

Second we controlled for cognitive ability. Because of cognitive ability’s pervasive influence on life success (Schmidt, 2002) and its frequent use in psychological research, we believed that control of this variable was necessary to show that the variables in our study increments this construct. Cognitive ability was proxied with standardized test score averages for all available participants.
Table 1. *Correlations*

<table>
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<tr>
<th></th>
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<th>Std. Dev.</th>
<th>1</th>
<th>2</th>
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<td>.357***</td>
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<td>.158*</td>
<td>.041</td>
<td>.161*</td>
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*p<.05
**p<.01
***p<.001
Table 2. Models Predicting Entrepreneurship

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<tr>
<th>Variable</th>
<th>Model 1 Control Variables</th>
<th>Model 2 Control and ATTA</th>
<th>Model 3 Control, CPS, and ATTA</th>
<th>Model 4 Control and CPS</th>
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<td>CPS</td>
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<td>Fluency</td>
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</table>

Model df 6 10 11 7
Model $R^2$ .255*** .332** .363*** .273+
$R^2$ Change .077** .108*** .018+

*Value in cells are unstandardized coefficients
+p<.10
* p<.05
** p<.01
***p<.001

RESULTS

Tables 1 and 2 summarize our findings. Table 1 presents the zero-order correlations between all variables in our study. Table 2 summarizes the results of the three primary models used to test our hypotheses and one post-hoc model. Hypothesis 1 asserted that creativity is a positive predictor of entrepreneurial intentions. Table 1 supports this hypothesis, showing a positive significant relationship between entrepreneurial intentions and both the divergent thinking (ATTA) (.161, p<.05) and creative personality (CPS) (.348, p<.001) aspects of creativity.

Hypothesis 2 is intended to further refine the findings of Hypothesis 1 by looking at how the individual dimensions of divergent thinking (ATTA components) predict entrepreneurial intentions. Table 1 seems to support this hypothesis, showing positive correlations for all four dimensions of the ATTA. However, only the correlation for elaboration (.158, p<.05) was significant at the .05 level. Fluency (.132) and originality (.147) had slightly lower correlations than elaboration and were significant at the p < .10 level. Since one of the goals of hypothesis 2 is to investigate how creativity predicts entrepreneurial intentions over and above cognitive ability and personality, hierarchical regression was performed and results reported in Table 2. These results clearly show that the introductions of the ATTA dimensions do increase the explained variance, over that of cognitive ability and personality, by significantly increasing the $R^2$ from .255 in the control model to .332 in Model 2. However, only one of the ATTA dimensions, elaboration (-.136, p<.05), in Model 2 is significant and it runs contrary to the proposed direction. Thus,
with reference to hypothesis 2, we can say that at a zero-order correlational level, divergent thinking is a positive predictor of entrepreneurial intentions for the dimension of elaboration, thus providing partial support for hypothesis two. However, our hierarchical regression results show that Hypothesis 2 is partially supported, in that one dimension (elaboration) significantly predicts entrepreneurial intentions, but the variable runs contrary to the predicted direction. One explanation for this result is the multicollinearity associated with the variables; multicollinearity has been shown in previous studies to cause regression coefficients to be altered both in magnitude and sign.

Both Tables 1 and 2 provide support of Hypothesis 3 which predicted that creative personality is positively related to entrepreneurial intentions and increments what is explained by divergent thinking. Table 1 shows a significant moderate correlation (.348, p<.001) between CPS and entrepreneurial intentions. The hierarchical regression results of Model 3 in Table 2 show that CPS is a significant positive predictor (.139, p<.05) of entrepreneurial intentions. Further, the introduction of the CPS variable significantly increased $R^2$ from .332 in Model 2 (control and ATTA dimensions) to .363 in Model 3, thus supporting the incremental aspect of Hypothesis 3.

Our findings that CPS was a positive predictor of entrepreneurial intentions lead us to run one additional post-hoc model to see how CPS predicted entrepreneurial intentions above cognitive ability and personality without the ATTA dimensions in the model. As the results of Model 4 in Table 2 show, this variable was of low magnitude and failed to reach significance and did not result in a significant increase in $R^2$ above that of the control model. Thus, the introduction of CPS did not significantly predict variance above that explained by cognitive ability and personality alone.

**DISCUSSION AND PRACTICAL IMPLICATIONS**

Our findings show that creativity can be used to predict one’s intention to enter into entrepreneurship. Further, this construct is shown to predict entrepreneurial intentions over and above two of the most established predictors, cognitive ability and personality, of behavior in industrial and organization psychology and organizational behavior.

Further, our findings reveal that at a zero-order correlational level there is a positive relationship between the divergent thinking aspect of elaboration with creativity and entrepreneurial intentions; and that this relationship is reversed after controlling for cognitive ability and personality. Thus when the influence of personality and cognitive ability is removed, the ability to generate ideas may hinder the creative process. This implies that it may be useful to have one set of individuals generate ideas and another set focus on creative elaboration of those ideas.

It is interesting that elaboration has a significant and moderate to high correlation with all Big Five personality variables and creative personality. Elaboration, in this context, is the ability to add details to previously conceptualized ideas. This component of divergent thinking must, in part, be related to personality. The other part, we assume, is the creative component which produced a negative relationship after controlling for all Big Five personality variables. Thus, the creative ability that allows one to augment previously identified ideas or products decreases one’s intentions to enter into entrepreneurship. We interpret this to signal that individuals who like to expound upon ideas, rather than generate new ideas on their own, may be less attracted to entrepreneurship because of the dynamic environment encountered by most entrepreneurs which requires rapid generation of ideas and does not allow time for extensive elaboration.

Finally, there is evidence that creativity is not merely a static personality trait that cannot be changed. Eisenberger and Armeli (1997) argue that creativity can indeed be fostered. Cropley and Cropley (2000) found that, with training, creativity ability can be increased on both pencil and paper tests and practical
applications. Hence there is hope, through training, for less creative individual interested in occupations, such as entrepreneurship, where creativity is valuable.

Our findings have implications for both practitioners and academics. In both areas, entrepreneurship and creativity are hot topics. For instance, those in the business world often speak of how important creativity is to success in business (IBM Global Business Services Survey, 2010) and Gallup recently released an article on how Singapore’s growing economy is in desperate need of entrepreneurs (Tung & Wong, 2012). Institutions of higher learning highlight their creativity and innovation programs in an effort to appeal to businesses and prospective students alike (i.e. Virginia Commonwealth University da Vinci Center for Innovation). Thus this study encompasses all of these components simultaneously.

We provide and test a method of identifying creative individuals with the desire to become entrepreneurs in one survey. Academics can use this survey method to develop and test new models of entrepreneurship. This can also be used by universities to identify potential students for their innovation centers, by businesses as an employee selection tool, and by nations to identify potential entrepreneurs to nurture and incubate into thriving businesses.

Further, our results show that the best model for predicting entrepreneurial intentions included both the creative personality (CPS) and creative ability (ATTA). Together these measures predicted better than models with either construct alone; this has implications for practitioners and teachers alike. Because of the ease in administering the CPS, relative to the more extensive and time consuming ATTA; one is tempted to simply use the CPS when assessing creativity. Thus, we recommend that if one is interested in assessing a group of individual’s creativity and entrepreneurial intentions, both measures of creativity should be used in concert. Up to this point, no study the researchers are aware of, has evaluated and recommended best practices for assessing creativity as a predictor of entrepreneurship.

This study provides empirical evidence to substantiate the idea that creativity and entrepreneurship are intertwined. Our findings that creative individuals are predisposed towards entrepreneurship should empower both practitioners and educators alike in their efforts to identify and foster the next generation of entrepreneurs.

**REFERENCES**


Family Firms’ Professionalization:  
Institutional Theory and Resource-Based View Perspectives

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Our article examines the assumption that family firms are an inferior organizational form as compared to non-family firms by analyzing family firms’ professionalization in developed and developing economies. We use institutional theory and resource-based view frameworks to analyze how environmental factors may affect the antecedents and consequences of family firms’ professionalization. We put forth three propositions concerning family firms’ professionalization and the relationship to competitive advantages in developing and developed economies.

In developed economies, due to the pressure of social conformity, a family firm is more likely to professionalize, but professionalization is not likely to be the driver of competitive advantages because non-family firms are more likely to professionalize and it would not be rare and valuable. In developing economies, employment of professional managers and adoption of professional norms become costly, but valuable. Therefore, we expect that family firms’ professionalization is more likely to become the source of competitive advantages in an institutional context of developing economies rather than developed economies. We put forth four suggestions based on our propositions for future research. Implications for practice and those advising family firms, particularly small family firms, in developed and developing economies are discussed.

Defined as “a business governed and/or managed with the intention to shape and pursue the vision of the business held by a dominant coalition controlled by members of the same family or a small number of families in a manner that is potentially sustainable across generations of the family or families” (Chua, Chrisman & Sharma, 1999, p. 25), family business is the dominant form of business organization around the world (Aldrich & Cliff, 2003; Chrisman, Chua, & Sharma, 2005a; Sharma, 2004; Morck & Yeung, 2003). Up to 80% of worldwide enterprises are family-owned (Gersick, Davis, Hampton, & Lansberg, 1997) and most global economies are controlled by a limited number of wealthy families (La Porta, Lopez-de-Silanes, & Shleifer, 1999). Studies also show that 44% of publicly-held corporations in major European countries (Facccio & Lang, 2002) and up to 33% of the S&P 500 in the U.S. (Anderson & Reeb, 2003) are controlled and/or managed by families.

Although family firms exhibit family involvement in ownership and management, one important decision many family firms have to make is related to professionalization (Chua, Chrisman & Bergiel, 2009; Lee, Lim, & Lim, 2003; Stewart & Hitt, 2012). In this article, we conceptualize professionalization as a family firm’s behaviors of adopting professional norms (Hofer & Charan, 1984). There currently exist two, seemingly contrary, perspectives on the antecedents and consequences of professionalization in family firms. On the one hand, scholars in developed economies tend to believe that due to the preservation of socio-emotional wealth (Gómez-Mejía, Núñez-Nickel, & Gutierrez, 2001; Gómez-Mejía, Larraza-Kintana, & Makri, 2003; Gómez-Mejía, Haynes, Núñez-Nickel, Jacobson, & Moyano-Fuentes, 2007; Gómez-Mejía, Makri, & Larraza-Kintana, 2010) and the avoidance of potential principal-agent cost (Chua et al., 2009), family governance exhibits relatively less professionalization, and professionalization often brings in undesirable results such as the rise of agency costs (Chua et al., 2009) and the loss of family socio-emotional wealth (Pearson, Carr, & Shaw, 2008). On the other hand, scholars in developing
economies tend to endorse family firm professionalization because the majority of market players in developing economies are non-professionalized family firms. Thereby, professionalization may yield first-mover advantage and above-average-returns that no other approaches can match and substitute.

Using an institutional theory and resource-based framework, we intend to reconcile these two perspectives by claiming that differences in institutional context, such as developed versus developing economies, may impact both antecedents and consequences of professionalization in family firms. Institutional theory suggests that a family firm’s tendency to professionalize is initially impacted by the prevalence of professional norms in its environment (DiMaggio & Powell, 1983; Oliver, 1991; Scott, 1995). A family firm is less likely to professionalize in developing economies than developed economies where the family norm is less prevalent and professional norm is more prevalent (Stewart & Hitt, 2012).

One the other hand, the central question addressed by the resource-based view (RBV) concerns how heterogeneity of organizational resources may differentiate firms from their competitors (Barney, 1991; Penrose, 1959). Thus, the question of whether professionalization can lead to competitive advantages in family firms is contingent upon the value, rarity, imitability, and substitutability of professional norms under a specific institutional context (Barney, 1991). Although family firms are prone to professionalize to a greater extent in developed economies than developing economies as predicted by the institutional theory, professionalized family firms are less likely to obtain competitive advantages because non-family firms are also likely to be professionalized and hence professionalization would not be rare and valuable. In contrast, family norms, such as family social capital and family identity, may be valuable to family firms, and rare, inimitable, and non-substitutable (Chrisman, Chua, Pearson, & Barnett, 2012a; Habbershon & Williams, 1999; Habbershon, Williams, & MacMillan, 2003; Pearson et al., 2008; Pearson & Marler, 2010; Sirmon & Hitt, 2003). These resources are more likely to become the source of sustainable competitive advantages for family firms in developed economies (Barney, 1991; Peteraf, 1993).

Nevertheless, in an environment where most firms, including both family and non-family firms, are non-professionalized, as in developing economies (Peng, 2006; Peng & Jiang, 2010), employment of professional norms either through hiring nonfamily professionals or providing professional education to family principal or other family members may be costly, yet valuable. Owing to the economies of scale and first-mover-advantages facilitated by research and development investment and internationalization (Chen & Hsu, 2009; Dean, Brown, & Bamford, 1998; Claver, Rienda, & Quer, 2008), professionalization may yield above-average-returns that no other approaches can match and substitute. Likely to be driven by educated family members, professionalization in one family firm is not likely to be imitated by others (Chung, 2006; Lin & Si, 2010; Lomnitz & Perez-Lizaur, 1987). Therefore, within an institutional context of developing economies, professionalization may become a source of family firms’ competitive advantages.

This article attempts to contribute to the family business literature in a variety of ways. First, while previous studies focus primarily on the internal factors, we highlight the importance of the institutional context in regards to its effects on the antecedents and outcomes of family firm professionalization. Second, this paper contributes to strategy research in that institutional theory and the research-based view may provide distinctive yet complementary views. Third, we intend to highlight that the family business studies using the resource-based view need to identify the market conditions, particularly the competitors of family firms.

We begin with discussing our research model and a few key definitions and assumptions we employ in this paper. We then turn to explaining how institutional theory and the resource-based view can be combined to explore the antecedents and outcomes of family firm professionalization and how these may be divergent under different institutional contexts. Then, we discuss the implications for future research.
RESEARCH MODEL

Building upon the institutional theory (DiMaggio & Powell, 1983; North, 1990) and the resource-based view (Barney, 1991; Peteraf, 1993), we develop a model to explain how institutional context may moderate the antecedents and consequences of professionalization in family firms. As will be further discussed in a later section, we define professionalization as a family firm’s adoption of professional norms (Hofer & Charan, 1984). While we do admit that employment of nonfamily professionals is sufficient for family firms to professionalize, we argue that this condition is unnecessary. Family firms may professionalize purely by the efforts of family firm founder, successor, and other family members in abandoning family norms and endorsing professional norms.

Combining these two theories reveals that they are distinctive yet complementary regarding the antecedents and consequences of organizations’ behaviors such as professionalization. While the institutional theory draws attention on how prevailing institutional norms may impact market structure in general and organization behaviors in particular, the resource-based theorists highlight the outcomes rather than the antecedents of firm behaviors. Relevant to the topic of family firm professionalization, as illustrated in Figure 1, we intend to argue that institutional context not only impacts the tendency of family firm professionalization (P2), it also moderates the consequence of the professionalization by delineating the value, rarity, imitability and substitutability of professional norms (P3). It should be noted that we believe the value, rarity, imitability, and substitutability of professional norms are partially determined by the structure of the market, i.e. family firm’s prevalence which is further influenced by the features of institutional context (Proposition 1). In this regard, we specify Proposition 1 as an initial reasoning for further discussing the consequences of family firm professionalization in developing and developed economies (Proposition 3).

We now develop our model in detail. In what follows, we explicitly state our conceptualization of professionalization regarding its key assumptions and boundary conditions, develop the mechanisms represented by the model in more detail, and then offer propositions that relate institutional context to the antecedents and consequences of family firm professionalization.
LITERATURE REVIEW

PROFESSIONALIZATION, INSTITUTIONAL CONTEXT, AND KEY ASSUMPTIONS

Though often mentioned in the family business literature, the nature of professionalization is still surrounded by ambiguity. Referred to as a “rational alternative to nepotism and familial conflicts that plague a family business” (Dyer, 1986, p. 101), scholars tend to believe that to professionalize is to make family firms more like non-family firms in terms of its ownership, governance, management structure, and human resource policies (De Kok, Uhlanaer & Thurik, 2006; Hellmann & Puri, 2002; Stewart & Hitt, 2012). Accordingly, professionalism starts to manifest when a family business replaces family shareholders (Gedajlovic, Lubatkin, & Schulze, 2004) or a CEO (Lin & Hu, 2007) by non-family members, establishes functional structure of hierarchical governance (Chandler, 1990), and adopts professional norms and practices with explicitly defined job positions and task responsibilities (Hall & Nordqvist, 2008; Hofer & Charan, 1984). In this regard, non-family professionals are the key in professionalism because they play an important role in initiating, executing, and spreading the principals of professional management in family business (Daily & Dollinger, 1992; Gedajlovic et al., 2004; Parada, Nordqvist, & Gimeno, 2010).

While non-family professionals undoubtedly play an important role, they are not the only ones contributing to professionalization in family firm. For instance, due to long-term centrality of positions in both family and business systems (Gersick et al., 1997), the family owner may execute his authority by adopting professional processes in firm decision-makings (Kelly, Athanassiou, & Crittenden, 2000; McConaughy, 2000). In addition, professionally educated family business successors may make positive contributions in professionalization (Cabrera-Suárez, Saa-Perez, & Garcia-Almeida, 2001; Gedajlovic et al. 2004; Lee et al., 2003; Steier, 2001; Zahra & George, 2002) in which family firms may abandon certain family traditions that are inconsistent with professional norms (Parada et al., 2010). This is especially true given the condition that either family owners are less willing to hire nonfamily professionals or professional talents are short in supply given an institutional context characterized by the prevalence of family norms.

In this article, we conceptualize professionalization as family firms’ adoption of professional norms (Hofer & Charan, 1984). By this definition, professionalization is a critical family firm strategic behavior to acquire and accumulate professional norms by the functions of non-family professionals as well as family members. This definition also assumes professional norms as a key strategic resource, which may or may not impact family firm’s performance depending upon its value, rarity, imitability, and substitutability.

We also assume that family norms may be in contrast with professional norms, and these norms are inclined to crowd out each other in an institutional environment. As will be discussed below, we define family norms as the recognition of subjectivity, privacy, and intimacy without specifying formal and written duties and responsibilities relevant to tasks in business governance (Arregle, Hitt, Sirmon, & Very, 2007; Lansberg, 1983). Family norms are more likely to develop given an institutional context with undeveloped or less developed formal regulative forces (Stewart, 2003). In contrast, the prevalence of formal institutions in a developed institutional context may facilitate the adoption of professional norms of management or “managerial capitalism” (Chandler, 1977, 1990; Peng, 2006). In this regard, family norms and professional norms are mutually exclusive because they are driven by exclusive institutional settings, namely the presence or absence of formal institutional infrastructures (Steier, 2009).

In addition, we also assume that there is a consistency between the formality of institutional setting and the development of functional market such that a formally developed institutional setting should cultivate a functional market in which professional norms can be adopted and implemented at relatively
lower cost (Barney, 1986a). In addition, we assume the rarity and value of adopting professional and family norms are also determined by the market structure: given a market full of family firms, implementing family norms becomes less effective in achieving competitive advantages because many competitors can exploit family norms as well.

Accordingly, we classify countries by the formality of institutional infrastructure and the structure of the market, as we assume that developing or emerging economies tend to have a low degree of institutional infrastructure formality and relatively high prevalence of family firms, and developed or mature economies tend to have a high degree of formality and low family firm prevalence. Though this classification has been applied in both institutional studies (North, 1990) and the family business literature (e.g. Carney, 2007), some scholars tend to believe a uni-dimensional classification may underestimate the complexity in institutional context (Steier, 2009; La Porta et al., 1999).

INSTITUTIONAL THEORY AND RESOURCE-BASED VIEW

Institutional theory in organizational studies provides a theoretical framework to examine the interactions between organizations and the institutional environment (DiMaggio & Powell, 1983, 1991; Scott, 1995). Within the framework of institutional theory, an institution is defined as a collection of “cognitive, normative, and regulative structures and activities that provides stability and meaning to social behavior” (Scott, 1995, p. 33) and “the rule of the game in a society” in general (North, 1990, p. 3). Accordingly, an institutional context consists of regulatory, normative and cultural arrangements that engender, enforce, and limit economic and social activities. This definition outlines both formal and informal institutions. Regulative arrangements are formal and are imposed by authoritative actors often through explicit rules, controls and rewards (North, 1990), whereas normative and cultural ones are informal and introduce prescriptive, evaluative, and obligatory dimensions into social life (DiMaggio & Powell, 1983; Granovetter, 1985).

According to Scott (1995), organizational prevalence and structures are the reflections of the complexity in external institutional contexts in which organizations are initiated but also constrained by social rules. The author (1995) also suggests that organizations follow taken-for-granted expectations of external institutional actors in order to acquire social conformity and legitimate recognition. That organizations are both constrained and enabled by the institutions in their environment has been widely acknowledged in the literature (Scott, 1995). The institutional environment can define and limit prevailing institutional norms, such as family or professional norms, and thus it affects the structure of players in the market like the rate and size of existing organizations as well as the type of emerging new ventures (Aldrich & Cliff, 2003). In addition, organizations tend to follow the demands and expectations of external institutional actors, resulting in convergences of organizational structures and behaviors over time (Aldrich & Ruef, 2006; Baum & Oliver, 1991, 1992; DiMaggio & Powell, 1983; Hodgson, 1998; Scott & Meyer, 1983; Singh, House, & Tucker, 1986). Termed as “isomorphism,” institutional theorists highlight that owing to the same set of constraints in external institutional context, organizational behaviors tend to become isomorphic over time (Aldrich & Ruef, 2006; Baum & Oliver, 1991, 1992; DiMaggio & Powell, 1983; Hawley, 1950, 1968; Hodgson, 1998; Meyer & Rowan, 1977; Scott & Meyer, 1983; Singh, House, & Tucker, 1986; Zucker, 1977). Furthermore, incumbent organizations may manipulate institutional norms and traditions to facilitate their long-term survival and new firms’ adoptions of socially-accepted routines further strengthen the legitimacy of existing norms and traditions initiated by the incumbent organizations (Lewin & Volberda, 1999; Lewin, Long, & Carroll, 1999). Consequently, the pressures for social conformity are highlighted by institutional theorists as an antecedent of the convergence of firm behaviors.

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In sum, the institutional theory yields three relevant predictions. First, the prevalence of organizational types such as prevalence of family versus nonfamily firms, and accordingly the market structure, are initiated and bounded by prevailing institutional norms. Second, behaviors of organizations in an institutional context, such as the adoption of professional or family norms, tend to become isomorphic over time. And third, market structure may further impact organizational development by specifying favorable market incentives and the availability of key resources that may impact firm performance (Foster, 1986).

In contrast to the institutional theory, the resource-based view (RBV) of the firm looks inwardly into the resource heterogeneity in a market and their connections to each firm’s competency over other market players (Barney, 1991; Conner, 1991; Dierickx & Cool, 1989; Rumelt, 1984; Wernerfelt, 1984). According to Wernerfelt (1984), a firm’s resources are those tangible and intangible assets tied semi-permanently to the firm (p. 172). These include all firm specific assets, capabilities, organizational processes, firm attributes, information, knowledge, as well as professional and family norms that allow the firm to develop strategies benefiting its efficiency and effectiveness (Penrose, 1959). The importance of a given resource can only be assessed in comparison to those held by competitors, since only a relatively unique and superior competency can be a source of above-normal economic profit (Collis, 1991). Thus, firm resources that are more valuable and rare compared to competitors and those that may not be easily imitated and substituted by competitors, are attributed to competitive advantages and strategic success (Barney, 1986a, 1991; Barney, Wright, & Ketchen, 2001; Conner, 1991; Reed & DeFillippi, 1990).

While it is certainly possible that all types of assets can be a source of above-normal returns, it is intangible organizational resources, typically developed through unique history and with social complexity, that are frequently found to create sustainable competitive advantage (Barney, 1986a). Compared to tangible ones, intangible assets are less likely to be imitated and substituted because they are asymmetrically distributed in an industry. Moreover, the incodifiable nature of intangible assets makes them imperfectly mobile and less accessible in ex post and ex ante competitions (Dierickx & Cool, 1989; Lippman & Rumelt, 1982; Peteraf, 1993). In Barney’s (1986a) perspective, intangible assets are embodied in the firm’s organizational culture, whereas Wernerfelt (1984) argues that they stem from in-house knowledge of technology. In this article, we consider professional and family norms as two potential resources that may bring in competitive advantages to family and nonfamily firms.

Partially owing to the nature of invisibility, intangible assets are hard to acquire, develop and upgrade (Argyris, 1996; Wernerfelt & Montgomery, 1988). A key challenge facing a firm is to identify the origin of intangible, competitive resources that establish and enhance the firm’s sustainable competitive advantage. While previously ascribed to luck (Barney, 1986a), recent studies tend to trace them to the role played by leaders and administrators of organizations (Sirmon, Hitt, Ireland & Gilbert, 2011; Zahra, Filatotchev & Wright, 2009). Following this track, we assume that the acquisition and accumulation of professional and family norms are executed by nonfamily professionals as well as family members in family firms. Institutional theory draws attention to the antecedents of firm behavior, whereas the resource-based theorists highlight its outcomes. Social conformity, as institutional theorists suggest, may be an antecedent of firm behavior due to the pressures of social acceptance and recognition (DiMaggio & Powell, 1983). But it is unlikely that this behavior may lead to competitive advantages, because owing to isomorphism, other firms in the same institutional context may exhibit the same behavior. In addition, firm behaviors driven by isomorphism can be easily imitated and substituted because firms as individual market players have no direct control on institutional context and thus could not establish ex post and ex ante limits that strengthen the sustainability of competitive advantages (Peteraf, 1993). Thus, strategic behaviors driven by institutional pressures are not likely to be the sources of competitive advantages because they are not rare and valuable, and may be imitated and/or substituted by competitors (Barney, 1991; Oliver, 1991, 1997).
INSTITUTIONAL CONTEXT, FAMILY FIRM AND PROFESSIONALIZATION

Institutions provide the rules of the game in which organizations are the players bounded by those formal and informal rules (North, 1990). Informal institution refers to normative and cultural arrangements that introduce prescriptive, evaluative, and obligatory dimensions to social life (Scott, 1995). Informal institutions often stem from the government’s weak authority to develop formal institutions, or an “institutional void” of formal institutions (North, 1990), which is common in developing transitional economies (Bruton, Ahlstrom, & Li, 2010; Peng, 2004; Peng & Jiang, 2010). Institutional economists suggest that an informal institution in a region can have a strong influence on the organizations embedded within because the absence of professional facilities, norms, and regulations, together with a changing and unstable authoritative enforcement, may cause an increase in business costs (Carroll, 1993; Steier, 2009). Accordingly, the pressure of the increasing costs may motivate organizations to depend on informal institutions, such as family norms, and the approaches associated with these norms, such as family governance and the family kinship network, to conduct business (Ahlstrom & Bruton, 2006; Gupta & Levenburg, 2010; Peng, 2006; Peng & Heath, 1996; Stewart, 2003). From an institutional perspective, informal institutions, such as family norms, are embedded in a society’s cultural settings. Family members often expect financial support, life and career security, and altruistic benefits from each other (Schulze, Lubatkin, Dino, & Buchholtz, 2001). As a payback, they provide capital, emotional support, and commitment to their family firms (Bertrand & Schoar, 2006). Based on such reciprocity, frequent daily coordination and collaboration further facilitate exchanges among family members, which eventually reinforce the stability, interdependence, interactions, and closure in families (Arregle et al., 2007). Thus, in a developing economy, family businesses may become the dominant format because family governance based on family norms may provide a solution to firm survival (Burkart, Panunzi, & Shleifer, 2003; Dyer & Mortensen, 2005).

Proposition 1: Family businesses are expected to be more prevalent in an institutional context of developing economies.

Family norms can be at opposition with professional norms of the business (Shepherd & Haynie, 2009; Stewart & Hitt, 2012) because the pursuit of family-centered, non-economic goals to create and maintain socio-emotional wealth (Gómez-Mejía et al. 2003; Chrisman et al., 2012a) and the discretion to achieve these goals (Carney, 2005) may facilitate certain business behaviors inconsistent with professional routines (Gómez-Mejía et al., 2003). For instance behaviors driven by family norms may take the form of engaging in management entrenchment (Gómez-Mejía et al., 2001), linking lower compensation risk to the family manager (Gómez-Mejía et al., 2003), increasing business risk (Gómez-Mejía et al., 2007), and resisting diversification (Gómez-Mejía et al., 2010), all of which are opposed to behaviors formulated by norms of professional management.

On the one hand, an institutional context characterized by informal institutions, mostly in developing and transitional economies, is less likely to foster professionalization (Carney, 2007; Gupta & Levenburg, 2010; Steier, 2009) because family norms can be approached and implemented at a relatively lower cost. This is because family norms often start to bloom from the early-age education of children and develop through the daily interactions among family members (Aldrich & Cliff, 2003; Bertrand & Schoar, 2006; Carney, 2007; Gilding, 2000; Hofstede, 2001; Leaptrott, 2005; Peng & Heath, 1996). Accordingly, studies show that professionalization is greatly limited in Africa (Khavul, Bruton, & Wood, 2009), Confucian Asia (Chung, 2001; Chung, 2006; Lee & Tan, 2001; Lin & Si, 2010), the Middle East (Kadragic & Ludwig, 2008), and Latin America (Lomnitz & Perez-Lizaur, 1987). In these regions, business property is largely regarded as one part of the owning family and family members are exempt from business regulations (e.g., Africa: Gough, Tipple, & Napier, 2003; Mbebeb, 2008; Confucian Asia: Carney, 1998; Chen & Chen, 2009; Wong, 1985; Middle East: Davis, Pitts, & Cormier, 2000; Latin America: Cruz & Howorth, 2008; Hatum & Pettigrew, 2004). Businesses are usually run by the family or a kinship network (e.g., Africa: Gough et al., 2003; Khavul et al., 2009; Confucian Asia: Chen & Chen, 2004; Weidenbaum, 1996; Middle East: Kadragic, 2004).
On the other hand, despite the contradiction between family norms and the formal institution, family firms tend to professionalize in an institutional context characterized by formal institutions (Melin & Nordqvist, 2007; Parada et al., 2010). Formal institution refers to explicit regulations and rules officially proposed by authoritative entities, such as rule-setting, monitoring, and sanctioning arrangements (North, 1990; Scott, 1995). The rise of formal institutions facilitates the rise of professional norms of management, or “managerial capitalism” in most developed economies (Chandler, 1977, 1990; Peng, 2006; Steier, 2009).

While Chandler (1977, 1990) suggests that professionalization is more likely to take place among non-family firms, family business literature has started to recognize that family firms in developed economies may be active in professionalization (Melin & Nordqvist, 2007; Nordqvist & Melin, 2002; Parada et al., 2010; Zhang & Ma, 2009). Formal institutions are expected to impact the symbolic systems of organizations (Cappelli & Shere, 1991; Mowday & Sutton, 1993; Rousseau & Fried, 2001; Schneider & White, 2004), especially those of family firms (Ellul, Pagano, & Panunzi, 2009; Feito-Ruiz & Menéndez-Requejo, 2009; Hatum & Pettigrew, 2004; La Porta et al., 2009). Professional norms often provide precise descriptions regarding the rights and responsibilities associated with business ownership, and often encourage the separation of ownership and management where nonfamily professionals, rather than potential family members are expected to take the control of the firm after the retirement of the first-generation entrepreneur. Employment and promotion of business administrators are dependent upon the evaluation of managerial qualifications such as working experience and educational level rather than family status, gender, or other demographic characteristics. Although professionalization of family firms is often facilitated via non-family professionals (Barnett & Kellermanns, 2006; Chua et al., 2009), the adoption of professional norms may take a variety of forms. Family firms may voluntarily professionalize due to the pressures of social conformity in developed economies where family firms may abandon certain family traditions inconsistent with professional norms (Parada et al., 2010). Formal institutions may be transferred due to business education and the family firm founder and the successor with prevailing professional education may become the supporters of professional norms (Chua et al. 2009; Gedajlovic et al. 2004; Parada et al., 2010), which may elevate equality and justice in family business governance (Barnett & Kellermanns, 2006; Craig & Moores, 2004; Moores & Mula, 2000).

Moreover, formal institutions in developed economies may impose the pressure of market competition that motivates family firms to consciously employ non-family managers (Anderson, Mansi, & Reeb, 2003; Bennedsen, Nielsen, Pérez-González, & Wolfenzon, 2007; Villalonga & Amit, 2006). External shareholders and stakeholders, whose cognitive expectations are standardized by formal institutions through professional unions, business schools, and the public media, may facilitate professionalization in family firms (Parada et al., 2010; Tsao, Chen, Lin, & Hyde, 2009; Zhang & Ma, 2009). For example, independent board members may mitigate owning-family nepotistic and opportunistic behaviors that expropriate minor shareholders’ interests (Anderson & Reeb, 2003).

Therefore, an institutional context characterized by formal institutions, mostly in developed economies, is more likely to facilitate professionalization of family firms (Gupta & Levenburg, 2010; Steier, 2009).

**Proposition 2:** Family firms are less likely to professionalize in an institutional context of developing economies than in developed economies.
RBV, FAMILY FIRM PROFESSIONALIZATION AND ITS CONSEQUENCES

RBV theorists largely recognize that the interactions among family unit, business entity, and individual family members, can lead to competitive advantages or “familiness” in family firms over nonfamily competitors (Chrisman, Chua, & Steier, 2005b; Habbershon & Williams, 1999; Habbershon et al., 2003; Pearson et al., 2008). In this regard, “familiness” often stems from the spillover of family norms to family business decision-making by converging family member behaviors, creating and maintaining family business identity, implementing informal human resources practices and manipulating the overlapping of social networks between the family and the business systems (Arregle et al., 2007; Gersick et al., 1997; Shepherd & Haynie, 2009). The adoption of family norms can facilitate the manifestation of family socio-emotional wealth in planning for strategic behaviors so that oftentimes family-centered non-economic goals, rather than the economic rationality of the firm, dominate decision-makings in family firms (Gómez-Mejía et al., 2003; Chrisman et al., 2012a). In addition, family-centered strategic behaviors may further differentiate family firms from non-family firms by developing family norms (Eddleston, Kellermanns, & Sarathy, 2008; Sirmon & Hitt, 2003). For example, family firms are inclined to exploit family and kinship networks (Lester & Cannella, 2006), exhibit informal corporate governance (Carney, 2005), tacit knowledge transfer (Cabrera-Suárez et al., 2001), supplier and customer orientation (Tokarczyk, Hansen, Green, & Down, 2007), family reputation (Dyer, 2006), and family social capital (Pearson et al., 2008) that nonfamily firms are less willing and/or less capable to develop. Because family norms are intangible yet valuable, nonfamily firms are not likely to perfectly imitate or find appropriate substitutes. Hence, family scholars tend to believe that the adoption of family norms are the fundamentals of competitive advantages in family firms (Chrisman et al., 2005b; Habbershon & Williams, 1999; Habbershon et al., 2003; Pearson et al., 2008).

Partially owing to the optimistic belief about “familiness,” researchers tend to attribute professionalized family firms with inferior firm performance in developed economies (Chua et al., 2009). One of the reasons is that the professionalization in developed economies is often initiated and facilitated by nonfamily professionals owing to their prevalence in the market and comparatively lower cost of employment compared to family counterparts in developing countries. Because of their natural incompatibility to family norms, employment of non-family professionals may bring additional costs in merging their interests with those of family owners and monitoring their self-serving behaviors (Chrisman, Chua, & Litz, 2004; Fama & Jensen, 1983; Jensen & Meckling, 1976).

On the other hand, owing to family’s altruism toward family members, non-family professionals, despite their superior qualifications, are less likely to be fairly paid in comparison to family managers (Chrisman, Memili & Misra, 2012; Chua et al., 2009). Non-family managers may experience unjust and unprofessional treatment and perceive that employment in a family firm may limit their career prospects within both the family firm and job market (Barnett & Kellermanns, 2006; Lubatkin, Durand, & Ling, 2007; Sirmon & Hitt, 2003). While family firms may have agency problems deriving from altruism that may harm firm performance, professional executives who are not members of the owning family can be treated as scapegoats and condemned for inferior firm performance (Barnett & Kellermanns, 2006; Chrisman et al., 2012b). Organizational injustice can make family firms less attractive to non-family professionals. Consequently, non-family agents may require a higher level of compensation than that in non-family firms, leading to a higher cost of obtaining and accumulating professional norms compared to nonfamily firms in developed economies (Chua et al., 2009; Chrisman et al., 2012b; Gibbons & Murphy, 1992; Gomez-Mejia et al., 2003; Holmstrom, 1979; Lee et al., 2003; Memili & Barnett, 2008). Hence, although professional norms are easy to obtain by family firms in developed economies, it would be easier for nonfamily firms. Moreover, owing to the prevalence of business education and professionalism, professional managers are easily accessible and tradable in the developed markets (Parada et al., 2010). Consequently, family firms are unable to create ex ante and ex...
post limits to competition based on professionalization. Thus, although professionalization may be critical to firm performance, especially when firms grow from small scale to medium and large size, it may not be the source of competitive advantage in family firms in the context of formal institutions.

Comparatively, in an institutional context characterized by informal institutions, such as developing economies, professionalization can be the source of family firms’ strategic success (Chung & Yuen, 2003; Zhang & Ma, 2009; Weidenbaum, 1996). Different from developed economies, developing countries are characterized by the adolescence of factor markets with professional norms. Professional education is less prevalent and professional talents are less available. Hence, family firm professionalization is often catalyzed by family business founder, successor and other family members, making the professionalization less imitable and substitutable by both nonfamily firms and other family firms. In this section, we follow the framework of value, rarity, imitability and substitutability proposed by Barney (1991) in further discussing the consequences of family firm professionalization in developing economies.

Valuable. Employment of professional managers may improve organizational efficiency that owner-manager governance is unable to provide (Fama & Jensen, 1983). Although not fully valuable to small-sized family firms (Ainsworth & Cox, 2003; Bjuggren & Sund, 2001; de Lema & Durendez, 2007; Getz & Petersen, 2004; Johannisson & Huse, 2000; Venter, Boshoff, & Maas, 2005), professionalization is important to firm growth, especially when firms grow from small to large (Fiegener, Brown, Dreux, & Dennis, 2000; Miller, LeBreton-Miller, & Scholnick, 2008; Van den Heuvel, Van Gils, & Voordeckers, 2006). This may be more important in developing economies because most firms in emerging countries are small in size. Therefore, the economies of scale may bring in larger above-average rents to large size firms in developed economies (Audretsch & Thurik, 2000; Dean et al., 1998; Peng, 2004, 2006). Furthermore, professionalization in developing economies may provide family firms opportunities to acquire and accumulate functional resources, such as resources relevant to research and development (R&D) and internationalization (Chen & Hsu, 2009; Chrisman, Chua, & Kellermanns, 2009; Daily & Dollinger, 1992; Gedajlovic & Carney, 2010; Gedajlovic et al., 2004; Graves & Thomas, 2006; Peng & Jiang, 2010). Functional resources are valuable to firms in developing economies, because most of firms are unable to invest in functional resources (Peng, 2004, 2006), R&D (Miller & Le Breton-Miller, 2005; Zahra, 2003), and internationalization (Claver et al., 2008; Fernandez & Nieto, 2005; Graves & Thomas, 2008), which can lead to further first-mover advantage and higher profits.

Rarity. As suggested by Proposition 1 and 2, family business professionalization is expected to be rare in developing economies. Firstly, as indicated in Proposition 1, most of the players in developing markets are family firms, making the adoption of professional norms rare by nature. In comparison, informal institutions of family norms motivate family firms in developing economies to use family values and family networks to expand business (Light, 2005; Karra et al., 2006; Yeung, 2000) and the absence of professional education further deteriorates the lack of professional managers in the factor market (Stewart & Hitt, 2012). Owing to weak property rights protection, professional managers’ interests may be easily expropriated (Barnett & Kellermanns, 2006; de Kok et al., 2006; Doh, Smith, Stumpf, & Tymon, 2011; Memili & Barnett, 2008), making them more inclined to develop turnover intentions compared to their colleagues in developed economies (Firth, Fung, & Rui, 2006; Wierdema & Bantel, 1993).

Inimitability and non-substitutability. Professionalization in developing economies tends to be inimitable. Due to the limited labor in the factor markets, professionalization in family firms is generally initiated by family founder, successor, or other family members whose interests are closely linked to the fate of the family (Chung, 2006; Lin & Si, 2010; Lomnitz & Perez-Lizaur, 1987). Hence, family firms in developing economies largely professionalize by sending family members to receive professional education which is not only costly but also time-consuming. Hence, professional norms, as a critical competitive resource, are not likely to flow from one family firm to another simply because they are
limited by the scope of the family. In addition, while family members can obtain business education for the purpose of professionalization, this approach is not likely to be replicated by nonfamily firms. This is because employees in nonfamily firms may choose to move to other firms in exchange of better compensating conditions or choose to start their own ventures after receiving high-quality business education, and this possibility may hinder nonfamily firms’ motivation to professionalize. Furthermore, since professionalization of family firms is costly and time-consuming, it is not likely to be imitated by other family firms immediately, providing a foundation for at least temporary competitive advantage.

Similarly, professionalization tends to be non-substitutable in developing economies. Although family norms may provide capital that help firms survive (Sirmon & Hitt, 2003), it is less likely to be the source of growth (Chandler, 1977, 1990). Family and kinship networks may motivate family firm’s growth in smaller size firms, but increasing likelihood of conflict and altruistic behaviors towards the family may harm the family firm in the long run (Karra et al., 2006). Therefore, professionalization of family firms in developing economies is not likely to be substituted by family-centered governance stemming from family norms. In sum, because professionalization of family firms in developing economies is rare, value, inimitable and non-substitutable, it could be the source of competitive advantages for family firms in developing economies.

Proposition 3: Family firms’ professionalization is less likely to become the driver of competitive advantages in an institutional context of developed economies than in developing economies.

DISCUSSION

Combining institutional theory and the resource-based view, we attempt to outline the effect of institutional context on the antecedents and consequence of family firm professionalization. In developed economies, due to the pressure of social conformity, a family firm is more likely to professionalize, but professionalization is not likely to be the driver of competitive advantages because non-family firms are more likely to professionalize than family firms and professionalization would not be rare and valuable. Nevertheless, in an environment where most of firms are not professional and would fit the classification of small businesses as in developing economies, adoption of professional norms becomes costly and time-consuming yet valuable. Therefore, we expect that family firm professionalization is more likely to become the source of competitive advantages in an institutional context of developing economies rather than developed economies. In this section, we discuss the implications of this study and suggestions for future research.

First, while prior studies primarily focus on the internal factors, we highlight the environmental factors that may contribute to the variety of family business behaviors. The family business literature starts to recognize that although the family firm is ubiquitous, owing to the discretion to pursue family-center goals (Carney, 2005), firm specific assets (Gedajlovic & Carney, 2010), transaction costs (Memili & Barnett, 2008) and agency costs (Shleifer & Vishny, 1997), environmental factors may cause heterogeneity among the family business population (Chang et al., 2008). Therefore, future research on family firms needs to consider both the economic and institutional contexts (Sharma, 2004) and how environmental factors may impact the behaviors and performances of family firms and the effect of size, if any. Implications for family businesses that are small businesses could be further explored.

Second, previous studies on family firm professionalization assume that the decision-making is driven by the rise of agency costs (Jensen & Meckling, 1976) and loss of family-centered values and/or socio-emotional wealth (Chrisman, et al., 2012; Gómez-Mejía et al., 2003; Gómez-Mejía et al., 2007). This rationalist perspective suggests the potential outcomes of family firm professionalization motivate/impede family firms to professionalize whereas the antecedents and outcomes of family firm
professionalization may not be the same. In this article, we attempt to outline that the pressure of isomorphism may initially impact the likelihood of family firms’ professionalization, but professionalization for social conformity does not provide firms with competitive advantages. On the other hand, family firms in developing economies, though less likely to professionalize owing to the prevalence of informal institutions, may gain competitive advantages by strategically professionalizing their business.

Third, we outline the significant roles of family founders and successors in the process of professionalization (Cabrera-Suárez et al., 2001). In this concern, we suggest that employment of nonfamily professionals is a sufficient but unnecessary condition for family firms to professionalize. Instead, we believe that the true catalyst is the family founder, successor and/or other family members who not only dominate the decisions regarding the employment of nonfamily professionals, but also implement professional routines and approaches by themselves. Hence, although the pursuit of family-centered goals of socio-emotional wealth hinders professionalization in developing economies, family founders and successors who are influenced by professional norms through labor unions, business schools, and public media (Handler & Kram, 1988; Parada et al., 2010) may consciously adopt professional norms by themselves.

Fourth, we highlight the difference between antecedents and outcomes of professionalization in terms of their stage at the life cycle of family firms. Isomorphism is likely to rise in the entrepreneurial and adolescent stages of organizations as they adjust their structures according to socially accepted norms (DiMaggio & Powell, 1983), while the pursuit of competitive advantages may take place after firms fulfill social conformity needs. Thus, isomorphism in institutional theory may represent the social pressures that a firm must bear in the beginning of its life, while seeking for competitive advantages represents the tasks in an older and more mature stage. Moreover, the pressure to conform to social norms and the need to obtain competitive advantages may also suggest that firms must dynamically manage their portfolio of resources in different stages in the life cycle. Future research can explore how, when, and to what extent the resource management may conform to social norms and seek for competitive advantages.

OPERATIONALIZATION OF PROPOSITIONS

We developed our propositions by drawing upon institutional theory, the RBV and the extensive family business literature. An important next step would be to test our propositions empirically. As we work toward building cumulative knowledge on family business studies, it is extremely important to share in detail the methods used, definitions of variables of interest and their operationalization, and research instruments such that the validity and reliability of empirical findings can be verified by future repetition (Handler, 1989). In this section, we discuss the potential ways to operationalize our constructs and approaches to empirically test our predictions.

First, our discussion follows the logic that it is the extent of adopting family norms that indeed differentiates family firms from nonfamily firms. This condition signifies that the essence approach is more appropriate than the components-of involvement approach in operationalizing family firms (Chrisman et al., 2005a). The components-of involvement approach is based on the belief that family involvement in business, such as family owners and managers, is sufficient to make a firm a family business, whereas the essence approach suggests that family involvement must be directed toward behaviors that are different from those of nonfamily firms. Accordingly, a firm lacking the intention, vision, familiness, and/or behaviors that constitute the essence of a family business should not be operationalized as a family firm.
Second, we define professionalization as family firm’s adoption of professional norms. This definition clearly states that hiring nonfamily professionals in family firms is not the necessary condition to signal family firm’s professionalization. Instead, an operationalization consistent with our argument should measure the introduction and enforcement of professional routines and approaches, often in an explicit and precise manner that both firm managers and common employees can understand and utilize.

Third, when discussing competitive advantages, we intend to emphasize that nonfamily business is not the only competitor of family business, and family firms may compete with one another when they form the majority in the market. Thus, operationalization of competitive advantages according to this study should neither be completely based on internal measures, such as return on assets or sales, nor a simple comparison between family and nonfamily firms. Rather, we suggest that a thorough understanding of competitive advantages in family firms should consider the competitors of both family and nonfamily firms (Armstrong & Shimizu, 2007). Accordingly, we believe that operationalization of competitive advantages in family firms should address these concerns as well.

**PRACTICAL IMPLICATIONS**

This article has important implications for family business practitioners and small business advisors. First, this article has implications regarding the possible strategies of professionalization that small firms could execute. We intend to present that employment of professional managers is neither the only way, nor the optimal way, of family firm professionalization given the heterogeneity of external contexts. This conclusion is critical to small firms because they are often limited in capital and resources and recruiting nonfamily professional managers can be very costly (Chrisman et al., 2012). Our discussion suggests that family firms may professionalize through the efforts of family business founders and other family members. In this regard, educated family leaders may advocate professionalism in the venture creation stage, and family firms may embrace professional norms, approaches, and routines even though they may still be small in size.

Second, development of small firms is partially path-dependent, meaning that the strategy employed in the early stage may have continuous effects upon strategic decision-making in later stages. Hence, one pivotal challenge small firm practitioners must confront is how to make the transition from family management to professional management given the increasing complexity of task responsibilities as firms grow larger. Thus, the difficulty of professionalization in family firms not only stems from owning family’s unwillingness in adopting professional norms, but also family firm’s incapability to switch from nepotism- and altruism-centered decision-making to a professional approach owing to the nature of path dependence. Our discussion suggests that small-sized family firms can encourage family successor(s) and other family members to obtain professional business education, thus the occurrence of family succession may become the turning point regarding the renewal of business policy and management practices and in small-sized firms. We further argue that this way is relatively more inexpensive and independent of moral hazard risk because family members are generally loyal and thus unlikely to quit after the training.

Third, this article also implies that the optimal strategy that small family as well as nonfamily firms should apply is partially determined by external contexts. The majority of small firms in the world are family firms and they grow by the support of family capital, family resources, and family or kinship-based networks. Hence, by nature, small firms are inclined to apt for family-centered approaches to development. While family-centered approaches may be effective in reducing environmental uncertainty and increasing the possibility of survival when firms are still young, they are not the optimal way if small-sized family firms intend to grow larger and gain advantages over their competitors. In this regard, a relative question is “who are competitors of family businesses?” This question is important because when small-sized family firms are more prevalent in developing economies, competitors of
family firms are likely to be family firms as well. Thus, in developing countries “familiness” driven by family norms is not likely to be the drivers of family firms’ competitive advantages since the competitors may also have “familiness”. Therefore, family-centered norms would not differentiate a family firm from its competitors. As such, practical recommendations based on previous family business studies using the resource-based view are more appropriate in an institutional context of developed economies, in which family businesses are less prevalent. Family businesses in developed economies could gain competitive advantages over non-family competitors by intentionally capitalizing on family firm specific norms that build firmly upon the advantages of family governance such as family identity, family social capital, and inclusive family network. Advisors to family firms in developed economies should stress the advantages that family norms provide to the long term viability of the business.

Fourth, this article also suggests that family business practitioners in developing economies could gain competitive edge by imitating valuable and rare features of non-family businesses. Nevertheless, simply hiring non-family professionals may not sustain competitive advantages in the long-run owing to the mobility of professionals in the labor market. Hence, family businesses can attain sustainable competitive advantages only if professionalization is initiated and maintained by family members, such as family business founders or successors. Advisors should work with the family business to encourage professionalization, which would give a competitive advantage to the small family firm in developed economies and would increase the likelihood of sustaining a competitive edge.

LIMITATIONS

Our research agenda contains a number of limitations owing to the assumptions and bounded conditions we proposed in the beginning of this article. In this section, we further discuss the limitations of our assumptions.

First, we made the assumption that family norms may contrast with professional norms and the presence of one should crowd out the presence of the other. While this assumption may seem valid, it overlooks certain economies where family tradition and business practice are closely intertwined and may not be specified separately. For instance, in Latin and Nordic Europe, although family members are highly incorporated in the daily operations and family values are closely linked to firm behaviors, decision-making processes are still under strong professional regulations (Howorth & Ali, 2001). In this concern, family norms and professional norms are “activated together but not to act in a way consistent with currently requires actions in consistent with the other” (Shepherd & Haynie, 2009). Hence, it is likely that one institutional context exhibit a mix of professional and family norms. While our framework may provide a foundation for further discussion, special attention should be paid when analyzing a specific institutional context.

Second, we also assumed that the prevalence of professional norms is internally related to the prosperity of professional labor market, but this assumption overlooks certain transactional economies in which the market structure is not necessarily compatible with its institutional context. For instance, while family norms prevail in Eastern Europe (Karra et al, 2006), the labor market of professional talents is flourishing as well (Vadnjal & Glas, 2008). In this case, while family firms are relatively less likely to use professional approaches, professional norms can be adopted and developed at a relatively lower cost. In addition, strategic advantages through professionalization are further reduced, because competitors can easily imitate professionalization and it can become substitutable.

Third, we articulated our discussion based on a binary classification of institutional contexts. In the manuscript, we draw most of our attention to two institutional settings, namely developing and developed economies that we believe are internally contrasting with each other. Nevertheless, a significant portion of world economies may exhibit a combination of these two extremes. In particular,
the role of the government, and consequently the function of “state capitalism” have been highlighted in the literature as family governance may become the initial driver and later interest-sharer (Steier, 2009). For example, Rajan and Zingales (2003) describe how first generation entrepreneurs raised money to finance industrialization at the beginning of the century, and subsequently they or their heirs formulated for government policies that impaired their countries’ financial systems to prevent competitors from raising capital. Political connections could help family business groups attain and maintain their positions by overcoming government-imposed regulation and bureaucratic oversight. Given a high level of institutional informality and weak enforcements of government regulations, corruption abounds, and black and grey markets constitute a significant portion of economic activities. In this regard, wealthy families may collaborate with the elite group engaging in rent-seeking activities such as obtaining government contracts, import or export rights, protection from competition, or monopoly power.

CONCLUSION

Our paper draws upon both institutional theory and the resource-based view to outline the effects of institutional context on the antecedents and consequences of family firm professionalization. In developed economies, due to the pressure of social conformity, a family firm is posited to be more likely to professionalize. Professionalization, however, is not likely to be the driver of competitive advantages because other firms, especially non-family firms, are more likely to professionalize. Thus, professionalization becomes less rare and valuable. Nevertheless, in an environment where most firms, including family and non-family firms, are non-professionalized, as in developing economies, most firms are non-professionalized, and employment of professional managers and adoption of professional norms become costly yet valuable. Therefore, we expect that family firm professionalization is more likely to become the driver of competitive advantages in an institutional context of developing economies rather than developed economies.

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Survival Rates of New Firms: An Exploratory Study

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This study examines the survival patterns of new firms that were created during difficult economic times (2009-2011), and how their survival rates might compare to earlier research, given that we used a more inclusive measure of births. Our findings indicate a similar survival pattern compared to previous studies for the first year of a firm's existence but a significantly worse rate for the second year. We discuss the implications of this finding in light of our more inclusive sample and the current macro-economic climate.

In these difficult economic times, the media, researchers, policy makers, and the general public have focused on job creation and venture creation. The overall macro growth rate in the numbers of businesses and jobs in the US is essentially a function of four activities: openings, closings, expansions and contractions of firms (Knaup, 2005). Openings typically consist of new business births and businesses that are reopening, including seasonal openings (Knaup & Piazza, 2007). Taken collectively, these four activities are known as churning (Knaup, 2005); in an economy that is growing, the net effect of churning is that the openings and expansions outweigh the closings and contractions.

One of the first issues that are encountered when doing research on churning is the relative lack of reliable data on small business failure (Watson & Everett, 1996; Wu & Young, 2002). You cannot talk about survival rates without an understanding of failure rates. In their literature review, Watson & Everett (1996) note that failure rates can vary depending on the definition of failure. A bankruptcy with a loss to creditors is the narrowest definition and results in the lowest failure rate (and therefore the highest survival rate) whereas a much broader definition is the discontinuance of the business, which results in a much higher failure rate. Another concern is the ability to collect reliable data on small company failure rates as these are typically private firms, with no reporting requirements (Wu & Young, 2002). In addition, many studies on business failure often focus on what factors influence new firm survival and do not examine the overall survival rate (Acs, Armington, & Zhang, 2007). Other problems stem from the misinterpretations of statistics. For example, Watson and Everett (1996) note that when a certain percentage of failed businesses in a given year are under five years of age, that does not mean that percentage is the failure rate for all small firms. For example, saying that “over 90 percent of the businesses that failed were less than ten years old….does not mean that over 90 percent of all businesses failed within ten years” (Watson & Everett, 1996:57). However, this distinction can be lost in the media, and perception of failure rates can become distorted.

For those studies in the literature that do discuss survival rates, the likelihood of new firms continuing has varied. After allowing for different definitions of failure, van Praag (2003) notes that new firms have only a 50 percent survival rate over the first three years. Monk (2000) offers a similar outlook as he indicated that most new small firms will not make it past their fifth year. Other studies have proven to be more optimistic and fairly consistent, even if the time frames studied are different and the numbers must be adjusted accordingly to be comparable. For example, Knaup and Piazza (2007) found that in year one, 19 percent of the firms in their study went out of business. Geroski, Mata and Portugal (2010) also noted a similar pattern in that 21 percent of firms in their sample failed in the first year.
researchers have looked only at longer survival rates, i.e., how many firms are still around after 4 or 5 years (or the reverse- how many firms have exited the market in that time frame). Dunne, Robertson and Samuelson (1988) found a five year exit rate of 52 percent which translated into a similar survival pattern as Knaup’s 2005 study. Survival rates have also been looked at by industry sector, and scholars have reported a remarkable similarity in these rates across different types of businesses (Knaup & Piazza, 2007; Knaup 2005). When using a newer database (see LEEM explanation below), Acs, Armington, and Zhang (2007) found that approximately 63 percent of service sector firms survived for three years. Even in industries that conventional wisdom suggests are exceptionally risky, such as restaurants (part of the leisure and hospitality industry), failure rates do not reflect a difference from the national average (Knaup, 2005). In general, the previous studies suggest a range of about 19 percent to 22 percent of firms exit the market in their first year of existence.

Of course, economic impact is not measured by firm survival only; growth also matters. Some of the industry sectors experience higher growth rates among their survivors, which can lead to a greater overall economic impact, despite that industry losing more firms than other sectors. For example, employment growth was stronger in the information sector than in education, despite the fact that the information sector experienced a lower survival rate (Knaup & Pizza, 2007).

As noted before, our interest was in the survival rates of new businesses in difficult economic times (2009-2011) and how these rates might compare to other studies that were generally conducted when the macro-economic climate was more favorable. An earlier study (van Praag, 2003) noted that regional unemployment rate was not a factor in a firm’s failure rate but that it could influence the decision to enter into a venture. Wu and Young (2002) noted that there was some evidence that the survival of small firms is affected by overall economic conditions upon entry, and that this can vary by region. In general, however, the local small business environment mattered the most (Acs, Armington, & Zhang, 2007; Wu & Young, 2002).

Another area of interest for the current study is whether there exist any differences between studies of previous survival rates and our study as a result of using a more inclusive measure of births than some of these earlier investigations. For example, the Knaup (1995) and the Knaup and Piazza (1997) studies use Business Employment Dynamics (BED) data from the Bureau of Labor Statistics (BLS). These data sets draw "from state employment insurance tax databases and collect information from approximately 98% of nonfarm-payroll business in the US (Knaup, 2005, p50)." Hence, the total number of businesses cited by Knaup and Piazza (2007) in the US in 2007 was 8.9 million. However, the BED data does not capture all of the new business entities created in that time frame. What is missing from the BED data is the solo business entity that does not have employees. Similar to BED, some of the more recent studies have used the Longitudinal Establishment and Enterprise Microdata (LEEM) database, developed by the Bureau of the Census. This database, like BED, tracks all U.S. private sector non-farm businesses with employees (Acs, Armington, & Zhang, 2007).

However, one difference that makes LEEM more accurate than BED is that LEEM can track establishments over time, even if they change hands (Acs, Armington, & Zhang, 2007). Nevertheless, the businesses tracked still must have employees, making them a subset of the total number of firms. In contrast, the United States Small Business Administration (SBA) employs a broader measure of the number of firms that exist; its measure of existence is determined by the filing of a business tax form that shows some business activity. According to the SBA, in 2008, the number of businesses in the US was 29.6 million (Small Business Administration, 2011), which also reflects solo entities. Like the SBA data, our sample includes not only the BED and LEEM firms (ones with employees) but also includes solo enterprises. Our only limitation on firm inclusion was the requirement that these enterprises have a separate business location; we excluded home-based businesses.
HYPOTHESES

We were interested in seeing if the survival rate for the one year old firms was different than the survival rate for two year old firms. Previous studies have indicated that the longer firms survive, the less likely they are to fail in the succeeding year. Or, to look at it another way, the failure rates are the highest in the first year of a firm's existence, and then diminish over time. For example, Knaup and Piazza (2007) found that in year one, 19 percent of the firms in their study went out of business. In year two, another 15 percent went out of business. In year three, an additional 12 percent failed. Geroski, Mata and Portugal (2010) noted a similar pattern in that 21 percent of firms in their sample failed in the first year, followed by 11 percent in the second year. As noted by Knaup (2005), other studies like Dunne, Roberts and Samuelson (1998) had 5 year survival rates of 38 percent, which translated into a similar survival pattern. Accordingly, we expected to find that the survival rate for firms who were one year old and survived to the second year would be higher than firms who were new and survived to their first year, and, therefore, tested the following hypothesis:

H1: Firms that were one month old would have a higher failure rate as they aged to one year old than firms who are one year old and aged to two years old.

We were also interested in learning if the survival/failure rates of the sample would vary for firms based on the number of employees. Previous studies suggested that the firms with a larger number of employees were indicative of a more substantive venture (Geroski, Mata, & Portugal, 2010; Knaup, 2005). In small, privately-held ventures, sales and profitability data is often not available. Hence, number of employees and employee growth has been used as a proxy for business success (Longenecker, Moore, Petty, & Palich, 2010). Consistent with the assertion that a larger number of employees indicates a more substantive venture, we believe that firms with a larger number of employees would be more resilient and would be less likely to fail in the coming year, and, therefore, tested the following hypothesis:

H2: Firms with a larger number of employees would have a lower failure rate than firms with a smaller number of employees.

METHODS

Our data came from the New Businesses database that is part of ReferenceUSA, a commercial firm that offers listings of new and existing businesses. When using ReferenceUSA's New Businesses database, lists of firms can be generated using a number of criteria, including date of creation. We downloaded information on New Jersey firms that were created over a twelve month period from June 2009 to June 2010. We selected a random sample from this list and took every fifth firm in three categories: firms that were 1 month old, 6 months old, and 1 year old.

We chose New Jersey as our geographic focus, as we were interested in examining startups from a highly populated region, and New Jersey is the most densely populated state in the country (Wu, 2011). When accessing this database, we also specified businesses that were started in a commercial space (versus a home-based venture), and were full-time (ReferenceUSA categorizes full-time as meaning that the venture was the primary occupation of the founder). Given the expense and associated financial risk associated with renting a separate business location, we believed that these firms would tend to be more substantial than home-based ventures. Similarly, we believed that the likelihood that employees would be utilized was also greater.
Finally, as only about 70 percent of the firms in this database have phone numbers, we also only took firms with phone numbers as we would be making calls to our sample to check on the accuracy of the information we were using. Since the information in the New Businesses database is gathered from a number of sources but is not vetted by ReferenceUSA prior to its inclusion in the database, (B. Zielinski, personal communication, 7/18/2011), we wanted to ensure that firms in our sample were as represented when we contacted them.

Given the nature of this database, and previous experience with ReferenceUSA, we checked the accuracy of the sample. We made calls to all firms in our sample and experienced a number of different responses which we categorized as follows: the phone number was no longer valid, we reached an answering machine for the business, we talked to an employee (non-owner), or we reached the owner. We found that a number of these phone numbers were not working numbers, even in the newest group (1 month old firms).

As we were making these calls, we also wanted to verify the accuracy of the ReferenceUSA database’s stated number of employees, as employee growth is often used to reflect economic well-being, particularly in circumstances where sales and/or profit data is not available (Longenecker, Moore, Petty, & Palich, 2010). Further, since this data was going to be used for a time series, having accurate starting data was critical. To check the number of employees, we asked two simple data points when we were verifying the firm’s existence: the current number of fulltime employees, and the number of fulltime employees at the time the business opened. We were successful in getting an employee number on 86 of 459 firms (the others either refused to answer the question or we reached an answering machine when we called). As noted before, although we verified this data we did not restrict our sample to those ventures that had employees.

Our total sample size was 730 New Jersey firms that were started between June 2009 and June 2010. It consisted of 244 firms that were one month old, 246 that were six months old, and 240 that were 12 months old. We identified firms as still in business by whether or not they still had a working phone number when they were called. If we spoke to the owner, employee, or reached a business answering machine, we considered them in business. If we reached a bad number, we used the internet to try to locate the firm in case the firm had moved or the database information was inaccurate. If we were unsuccessful in finding the firm, they were considered out of business (labeled “bad numbers”). Phone calls were completed by early August, 2010. The end result was that 271 firms were unable to be contacted and were deemed out of business. Table 1 delineates the results of our efforts to verify the existence of the businesses in our sample.

What we could not determine was the disposition of these 271 firms. Did they try the marketplace and were unsuccessful or was there an accuracy problem in the ReferenceUSA database and we experienced a “garbage in, garbage out” issue? ReferenceUSA’s promotional literature for the New Businesses database states that they identify these businesses from public documents and startup milestones like arranging for utilities (ReferenceUSA, 2004). However, since conversations with a ReferenceUSA representative revealed that these firms are not checked for accuracy when they are entered in the New Businesses database, a fair number of these 271 missing firms may be from data error. What we are sure of is that in August 2010, 459 firms in our dataset were still in business and these firms ranged in age from 1 month to 1 year. Specifically, they consisted of 146 firms that were 1 month old, 161 that were 6 months old, and 152 that were 12 months old. Going forward, our sample had very similar numbers in each group, just like the original 730 firms, leading us to believe that whatever the reasons were for the 271 firms to be missing, the initial data problems were evenly distributed among the remaining 459 firms in our sample.
These 459 firms were contacted again in July 2011 to measure their survival rate. We used the same methodology as before: if we spoke to the owner, employee, or reached a business answering machine, we considered them in business. If we reached a bad number, we then used the internet to try to locate the firm, in case the firm had moved. If we were unsuccessful in finding the firm, they were considered out of business (labeled “bad numbers”). Of these 459 firms, 103 were out of business, leaving 356 survivors. The results of these phone calls are as follows:

**Table 2- July 2011 Results**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interviewed owner</td>
<td>21</td>
<td>4.6</td>
</tr>
<tr>
<td>Talked to employee</td>
<td>180</td>
<td>39.2</td>
</tr>
<tr>
<td>Answering machine</td>
<td>155</td>
<td>33.8</td>
</tr>
<tr>
<td>Bad number</td>
<td>103</td>
<td>22.4</td>
</tr>
<tr>
<td>Total</td>
<td>459</td>
<td>100.0</td>
</tr>
</tbody>
</table>

When they were contacted the second time during 2011, the surviving firms would be between 13 and 24 months old. Therefore, part of this sample was already approximately 2 years old and would provide a useful comparison on survival rates.

**FINDINGS**

Hypothesis 1 - Dividing our sample into the age cohorts revealed no differences in survival rates based on whether the firms in the sample were 13 or 24 months old. Of the 459 businesses that were still in business in the summer of 2010, 146 of them would have been 13 months old and 152 of them would have been 24 months old if they all survived when they were contacted again in the summer of 2011 (161 would have been 18 months old). Comparing the survival rates of these one year old firms vs. two year old firms, 76 percent of the one year old firms made it through their first year (24% failed), but what was surprising was that a very similar percentage of firms, 76.3, made it from their first year of existence to their second year, for a 23.7 percent failure rate. Table three summarizes the survival rates. Using a Chi-Square test, there was no difference between these two survival rates (p=.953) and, therefore, hypothesis one was rejected.

**Table 3- Survival Rates for Firms that Aged from Birth to One Year Old v s. One Year Old Firms that Aged to Two Years Old**

<table>
<thead>
<tr>
<th>New to 1 year old firms</th>
<th>1 year to 2 year old firms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Survived</td>
<td>111- 76%</td>
</tr>
<tr>
<td>Failed</td>
<td>35- 24%</td>
</tr>
<tr>
<td>Total</td>
<td>146</td>
</tr>
</tbody>
</table>

This finding is clearly different than previous research which showed failure rates decreasing as firms’ age. In our study, firms continued to fail at approximately the same frequency as they aged from year one to year two.
Hypothesis 2 - We compared the survival rates of firms that had more employees to firms that had less employees. In the summer 2010, we had confirmed employment data on 86 firms. After the follow up calls in the summer of 2011, we examined the number of employees in firms that survived versus firms that failed. Using a t-test to compare the mean difference of the number of employees between firms that survived and those that failed, the average number of employees in the firms that survived was 8.64 versus 5.42 for the firms that failed. However, this different was not significant (p=.287) and, therefore, the hypothesis was rejected.

Table 4 - Comparison of the Number of Employees in Survived vs. Failed Firms

<table>
<thead>
<tr>
<th></th>
<th>Average Number of Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surviving Firms</td>
<td>8.64</td>
</tr>
<tr>
<td>Failed Firms</td>
<td>5.42</td>
</tr>
</tbody>
</table>

DISCUSSION

When looking at the number of employees hypothesis, there was an average difference of 3.21 in the number of employees in firms that survived (8.64) versus failed (5.42), but the difference was not significant, even though previous studies (Geroski, Mata, & Portugal, 2010; Knaup, 2005) noted that employee size is a factor in firm survival. This may be a function of the fact that we were only able to confirm employee size in a sub-sample of our firms, as we did not get that information from any firms if we reached an answering machine or in some cases, if we reached an employee who did not cooperate. As a result, the difference here in employee size - over three- is a variation that cannot be definitively explained. Future research should seek to investigate this further.

However, our most interesting finding relates to hypothesis one and not finding a difference in survival rates. Contrary to previous findings, our study revealed that the odds of a firm surviving from year one to year two appear to be no better than the odds of them surviving from inception to year one. This difference seems to manifest itself in a poorer survival rate as the business ages and becomes two years old, and the main difference when compared to the earlier studies is in the year two survival rate. Nationally, from the studies that used BED/LEEM data, the survival rate for firms in their first year of existence was approximately 80 percent (Knaup, 2005; Knaup & Piazza, 2007). Although there were some variations based on industry sectors, previous research does show a remarkable consistency in survival rates (Dunne, Roberts, & Samuelson, 1988; Geroski, Mata, & Portugal, 2010). As noted earlier, in these studies, year two survival rates were better than year one in that about 20 percent of new firms failed in the first year, whereas only about 15 percent of those who survived year one failed in the second year (please note that this 15 percent is a marginal difference and cumulatively, about 35 percent of the firms failed over two years). When we looked at our firms that would have been one year old in 2011, about 24 percent had failed during that first year, which is not much different than the BED/LEEM data. However, when looking at our firms that were 2 years old, the failure rate for firms that aged from one year to two years old was 23.7 percent, or almost the same as the failure rate for firms in their first year of existence. This is the departure from the previous studies, which showed a failure rate of 15 percent for firms that were the same age as our sample.

We think that this finding is related to the uniqueness of our sample. Compared to other studies of new firm survival rates that used BED/LEEM data, our study is more robust as it included a sample of all firms who started a non-home-based business in the time frame indicated, as opposed to studies that only used those firms who had employees. Therefore, our sample would tend to be smaller (as it includes non-payroll businesses) and possibly less fiscally sound than samples consisting only of businesses with employees. However, since we did eliminate home-based businesses, our sample would theoretically have at least some initial capital, enough to rent a business address.
Another possibility for the increased failure rate is the potential risk factor if a firm shuts down. For example, if an owner tries a venture and is able to minimize his/her startup costs and has no employees, running the venture may become a “heads I win, tails I don’t lose much” scenario, and the decision to exit the venture could be easier than in a firm with more at stake. While these ventures would often require more capital than a home-based venture, having no employees does remove one level of consideration when closing.

The macro-economic conditions could also come into play here. The earlier studies cited all looked at data from before the economic crisis in 2008. In the current difficult economic times, firms may continue to experience trouble remaining viable and, therefore, are as much in danger of closing in year two of their life as in year one. However, if this were the case, the macro-economic conditions would also impact the one year old firms in our study and one would expect to see a spike in year one failures when compared to previous studies. This was not the case. Consistent with this, Headd and Kirchoff (2009) found that survival rates were not affected by macro-economic conditions and that the rates remained ...“stable in a recovery period, in the beginning of a downturn and even during a period of rapid expansion” (p .545). In fact, the year one failure rate of our sample was very similar to previous research and it was only in year two that it diverged. Finally, given the severity of the recession and the current economic conditions that exist once the recession ended (slow growth/sluggish recovery- when compared to previous downturns), perhaps the macro-economic conditions now do have an impact of on firm survival rates.

CONCLUSION & IMPLICATIONS

Our exploratory study found that the survival patterns of startups in recent years were different from what has been found in previous research. We believe that this is a result of using a more robust sample of startups (by including non-payroll businesses) than were utilized by previous studies. Other researchers might also consider examining survival rates using this broader measure of business creation to determine if their findings reflect a survival pattern closer to what our sample has experienced so far, rather than the pattern revealed by earlier studies. It may also be useful to separate new firms with employees from new firms without employees, and compare the survival rates of those two groups directly. With additional substantiating research, we might begin to first understand the causes of the difference in the second year of survival rates, and then to make that information widely available.

Another area of interest would be the macro-economic climate. As noted above, perhaps the severity of the recession and the historically weak recovery has changed the “rules of the game” and the macro-economic climate now does play a role in firm survivability. One way this could occur is by lengthening the amount of time a firm may spend in the initial startup stage of its lifecycle. Models of lifecycles vary but there are typically four to five stages: birth/survival, growth, maturity, and decline (Hoy & Sharma, 2010; Churchill & Lewis, 1983, Miller & Friesen, 1984). The issues related to resource scarcity and customer acquisition typically found in stage one (birth/survival) would then continue longer into a firm’s existence, and the growth challenges more commonly found in the next stage may occur later in the firm’s life. Therefore, it is possible that moving past the birth/survival stage is simply taking longer now than before, and the survival patterns will still follow past studies, but with a delay. Conversely, one might expect that regardless of the macro climate, this delay should not occur as small firms are good at adapting, as research has found that small firms are better equipped to deal with difficult economic conditions than larger firms (Bumgardner, Buehlmann, Schuler, & Crissey, 2011). However, the comparison we examined is not the adaptability of small versus large firms. Rather, since there were small firms in both our research and the previous studies, there should not be any difference in the adaptability based on size. This kind of data would be important to policymakers and economic development officials who are tasked with helping small businesses, to researchers and academics who regularly use this data, and to potential business owners who may wish to adjust their business concepts based on better information of survivability.

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Finally, along with replication and extension of this study (including examining different areas of the country than New Jersey), another interesting area for further research would be to continue to track this sample of firms as they age to see the pattern of business survival develop over a longer time frame. Will there be further divergence of survival rates from previous studies as these firms age? Additional research can help better answer that question.

REFERENCES


Rules or Consequences: Which Matter More to CPA-Practitioners?

Denise Dickins  
East Carolina University

Steven Platau  
University of Tampa

The last decade is rife with highly publicized audit and tax failures descriptive of CPA-practitioners either ex ante ignoring the possibility of personal adverse economic consequences or weighting more greatly adherence to rules. This leads us to question whether CPA-practitioners consider possible adverse consequences, or just follow the rules. This question has implications for small businesses as approximately half of all accounting firms are comprised of fewer than six accounting professionals (AICPA, 2011), and therefore may be described as small businesses. Further, many small businesses retain CPA-practitioners to assist with record-keeping, financial statement preparation, and regulatory reporting (e.g., income tax returns, payroll tax returns). If accounting firms increasingly fail, business owners will have fewer accounting firms from which to choose, which may lead to higher prices for accounting services. Results of a between-subjects experiment suggest CPA-practitioners are more likely to retain clients who represent the threat of an economic loss, compared to clients whose accounting practices violate a rule. Hence, current events, such as the shift to less rules-based accounting standards, may lead to an increase in accounting firm failures.

The last decade is rife with highly publicized audit and tax failures resulting in significant adverse economic consequences to CPA-practitioners. For example, it has been suggested that Enron improperly used mark-to-market accounting and failed to consolidate certain financing partnerships (Haldeman, 2006). Initial reports suggested Enron’s auditors, Andersen, may have followed the technical letter of the rules (generally accepted accounting principles and generally accepted auditing standards) in rendering their auditor’s report on Enron’s financial statements (Norris & Eichenwald, 2002; Roper, 2006; Benston et al., 2006). The Enron debacle led to the breakup of Andersen and ultimately, the firm’s demise.

KPMG was charged with helping clients evade taxes using structuring techniques that arguably followed the letter of the rules (tax laws and regulations), but were ultimately considered not in the spirit of the rules. KPMG suffered a $456 million fine as a result of the matter. Tyco and its officers failed to disclose numerous self-serving transactions which their auditor, PricewaterhouseCoopers (PWC), may have justified as being “immaterial.” Tyco’s audit engagement partner was barred by the Securities and Exchange Commission (SEC) from practicing as an accountant (Taub, 2003) and PWC agreed to pay $225 million to settle this and other Tyco fraud-related matters (Johnson, 2007).

3 Financial Accounting Standards Board Statement of Financial Accounting Concepts No. 2, Qualitative Characteristics of Accounting Information, defines materiality as “the magnitude of an omission or misstatement of accounting information that, in the light of surrounding circumstances, makes it probable that the judgment of a reasonable person relying on the information would have been changed or influenced by the omission or misstatement.” Materiality judgments are made in light of surrounding circumstances and necessarily involve both quantitative and qualitative considerations (AU Section 312, Audit Risk and Materiality in Conducting an Audit, available at: http://www.aicpa.org/Research/Standards/AuditAttest/DownloadableDocuments/AU-00312.pdf, accessed May 29, 2012).
Examples of the actions of smaller CPA-practitioners resulting in adverse economic consequences occur but are not as frequently reported in the popular press. For example, auditors with the accounting firm Williams and Webster of Spokane, Washington, appropriately required their client, Diatect, to adhere to accounting rules which prohibited the recognition of a gain on the company's mining claims until the claims were sold. Diatect then transferred the assets to an entity in exchange for an 18-year promissory note. Although it is unclear from published reports whether the auditors knew that the acquiring entity was owned by one of Diatect's outside directors, the Public Company Accounting Oversight Board (PCAOB) required that Diatect reverse the gain, and barred the CPA-practitioners from associating with a public accounting firm for an admitted lack of skepticism, and for issuing an unqualified report on Diatect's financial statements (Taub, 2007).

These examples, descriptive of CPA-practitioners either ex ante ignoring the possibility of personal adverse economic consequences or weighting more greatly adherence to rules, lead us to question whether, in terms of their decisions, CPA-practitioners consider possible adverse consequences, or just follow the rules. The answer to this question is highly relevant in light of recent shifts in the importance of accounting principles and concepts over accounting rules, and the in-process convergence of U.S. Generally Accepted Accounting Principles (GAAP) and International Financial Reporting Standards (IFRS).

Regulators and promulgators of accounting pronouncements have suggested future accounting standards should be more principles-based (U.S. House of Representatives, 2002; FASB, 2002); and IFRS are more principles-based than are GAAP (Dickins & Cooper, 2010). Critics of rules-based standards have cited the overwhelming volume and complexity of standards as hindrances (e.g., Schuetze, 2001) and argue that rules-based standards replace accountants' norms and professional behavior, usurping personal responsibility (Sunder, 2005). Although rules-based standards can reduce imprecision and enhance comparability, they can also lead to structuring transactions in a manner to achieve financial reporting goals, while technically meeting accounting rules (Schipper, 2003; Nelson, 2003) (e.g., employing a two-partner ownership structure of 49.99 and 50.01 to avoid consolidation for financial reporting purposes).

In addition, the answer to the research question has implications for small businesses. Approximately half of all accounting firms are comprised of fewer than six accounting professionals (AICPA, 2011), and therefore may be described as small businesses. Further, many small businesses retain CPA-practitioners to assist with record-keeping, financial statement preparation, and regulatory reporting (e.g., income tax returns, payroll tax returns). If accounting firms increasingly fail as a result of adhering to accounting or professional rules while ignoring potential negative economic impacts, small businesses will have fewer accounting firms from which to choose. In economic terms, fewer choices generally lead to higher prices, and many business owners already find professional accounting help costly (Tahmicioglu, 2004; del Villar, 1989).

This paper proceeds as follows. The next section develops the study's hypothesis. The following sections describe the experimental methodology, present results, and discuss conclusions, implications, and limitations of the study's findings.

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4 An alternative explanation may be that CPA-practitioners are poor at envisioning the possibility of adverse personal economic consequences, a view supported by Venuti (2004) who find auditors' reports include going concern modifications only 48 percent of the time when companies declare bankruptcy. Our experimental methodology attempts to control for this alternative explanation by being explicit about the possibility of negative economic consequences. In the absence of client fraud, other explanations such as lack of access to (or poor) information are likely indicative of a lack of skepticism associated with the auditor under-weighting the possibility of adverse economic consequences.
HYPOTHESIS DEVELOPMENT

While anecdotal reports imply accountants may be more conservative and risk averse than the general population (e.g., Coate et al., 2003) which suggests their decisions may be influenced by the possibility of personal adverse economic consequences, at least one empirical study provides evidence which disputes this stereotyping. Martin and Previts (1982) find CPAs have a slight tendency to take more risk than other groups responding to the same risk situations. Further, the results of prior research suggest that in spite of high levels of education which are usually associated with high levels of moral reasoning (Blasi, 1980; Rest, 1979), and the general population’s progression from lower to higher levels of moral reasoning, accountants generally do not advance to the highest levels of moral development. Instead, accountants typically fall into the “conventional” classification on Kohlberg’s scale of moral development (Ponemon & Gabhart, 1993).

Individuals characterized as being of conventional moral development may be described as concerned with fulfilling agreed-to duties and obligations (law and order-oriented), and their decisions generally fail to consider self-chosen ethical principles (universal rights and justice) and consequences (Reinstein et al., 2006). As summarized by Abdolmohammadi et al. (1997), compared to the conventional level of moral development, individuals in Kohlberg’s “lower” pre-conventional level display more self-centered ethics of convenience; they seek to avoid punishment and obtain personal rewards. Individuals at the “higher” post-conventional level are more concerned with principle-centered ethics of conviction and with doing the “right” thing.

Differences in the moral development of accountants versus the general population may, in part, be explained by differences in the experiences and decision-making contexts of accountants. Specifically, accounting majors’ university-level curriculum is generally less focused on ethical decision-making than it is for other business majors (Abdolmohammadi & Reeves, 2000); and accountants’ decisions, particularly as necessitated by being a member of a small or sole practitioner firm, are frequently made individually rather than in groups (Abdolmohammadi et al., 1997).

These differences may also influence accountants’ decisions. Advancing theories about the nature of ethical judgments suggest that the specifics of the situation, including history and societal/governmental expectations highly influence individuals’ ethical decisions (Robin, 2004). White (2001/2002) suggests that moral development may play a less dominant role in ethical behaviors than do environmental factors, such as work characteristics, organizational culture, and immediate job context, and may explain why individuals’ moral judgments and their ethical behaviors may not align. Organizational and individual self-selection bias may also contribute to the explanation of differences in both the moral development and decisions of accountants as rule-followers are more likely to hire other rule-followers (Abdolmohammadi et al., 2003).

Although the study’s research question (do CPA-practitioners consider possible adverse personal consequences, or just follow the rules) may or may not be characterized as an ethical dilemma, these prior findings shed light on related behaviors of CPA-practitioners. Specifically, they suggest that while both rules and consequences likely influence CPA-practitioners’ decisions, because “following the rules” is such a critical aspect of their day-to-day auditing, tax preparation, and financial reporting

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5 While an organization, such as a CPA Firm, cannot be characterized as making ethical or moral decisions, its management may assert views or take actions which are ascribed to the organization. Pierce (2006) performs a literature review of studies related to ethics and the professional accounting firm. She concludes that the accounting profession’s members should place emphasis on integrity over rules to ensure that ethical judgments prevail, and that further research is needed to assist in the development in strategies to achieve this goal. In particular, Pierce recommends future research investigate how accounting firms develop their culture, what determines a ‘good’ or ‘bad’ accounting firm culture, and how the focus on commercial success by professional firms can be reconciled with high moral standards.
responsibilities, CPA-practitioners are more likely to retain clients with situations that may adversely impact them economically, than clients in situations where accounting or professional rules may be violated. Formally stated:

H1: CPA-practitioners are more likely to retain clients who represent the threat of an economic loss, compared to clients whose accounting practices violate a rule.

METHODOLOGY

We test our hypothesis using CPA-practitioners and a between-subjects experimental design. Participants were solicited from six sessions of continuing professional education (CPE) conducted in June 2011, in four different states. Curriculum at each of the sessions was identical and unrelated to the research question, and the instructor was the same individual at each session. Although participation in the experiment was voluntary, nearly all CPE session-participants completed the experimental instrument. In total, 258 CPA-practitioners participated in the study. Demographic statistics of the participants are presented in Table 1.

Table 1. Demographic Statistics (n = 258)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Scale</th>
<th>Percentage Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>1 = 21 to 30</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>2 = 31 to 40</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>3 = 41 to 50</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>4 = over 50</td>
<td>49</td>
</tr>
<tr>
<td>Gender</td>
<td>0 = female</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>1 = male</td>
<td>60</td>
</tr>
<tr>
<td>Position</td>
<td>1 = staff</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>2 = senior</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>3 = manager</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>4 = partner/owner</td>
<td>54</td>
</tr>
<tr>
<td>Discipline</td>
<td>0 = tax</td>
<td>70</td>
</tr>
<tr>
<td></td>
<td>1 = audit</td>
<td>30</td>
</tr>
<tr>
<td>Firm</td>
<td>1 = local/sole practitioner</td>
<td>74</td>
</tr>
<tr>
<td></td>
<td>2 = regional</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>3 = national</td>
<td>1</td>
</tr>
<tr>
<td>Experience</td>
<td>1 = less than 2 years</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>2 = 2 to 4 years</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>3 = 5 to 7 years</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>4 = 8 to 10 years</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>5 = more than 10 years</td>
<td>67</td>
</tr>
</tbody>
</table>

On average, the participants represent a group of highly-experienced CPA-practitioners. Approximately 67 percent have more than ten years of experience, 54 percent hold the position of partner/owner in their respective accounting firms, and 49 percent of the participants are over age 50. Local/sole practitioner accounting firms comprise 74 percent of the study’s participants. Approximately 30 percent of participants describe themselves as audit practitioners, and 60 percent are male.
To reduce the likelihood that the study’s results are situation-specific, the experimental materials included two different client situations described as the “toxic waste” and “attest engagement” scenarios, and two outcomes for the CPA-practitioner, “rule violation” or “adverse economic consequences.” Each participant received only one situation and one outcome, and answered a single client retention question. Distribution of the experimental situations and outcomes are presented in Table 2.

Table 2. Distribution of Experimental Situations (n = 258)

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Toxic Waste</th>
<th>Attest Assignment</th>
<th>Total (percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rule Violation</td>
<td>67</td>
<td>60</td>
<td>127 (49)</td>
</tr>
<tr>
<td>Adverse Economic Consequence</td>
<td>59</td>
<td>72</td>
<td>131 (51)</td>
</tr>
<tr>
<td>Total (percentage)</td>
<td>126 (49)</td>
<td>132 (51)</td>
<td>258 (100)</td>
</tr>
</tbody>
</table>

As depicted, the experimental situations were fairly evenly distributed. Out of the 258 participants, 49 (51) percent responded to the toxic waste (attest assignment) situation, and 49 (51) percent responded to the rule violation (adverse economic consequence) outcome.

Development of the experimental instrument took into consideration the expected demographics of the population from which participants were to be solicited (i.e., primarily CPAs of local and sole practitioner accounting firms). The situations and possibilities described were:

Situation 1 - “You are the auditor in charge of an important client in your firm. Your client is a closely-held business with a long history of stable growth and steady profits. The client manufactures a growing line of plastics-based consumer products available for sale through multiple distribution channels. Recently, you learned that the client’s toxic waste capture system was malfunctioning for several months. The problem has since been corrected, clean-up has been completed, and the waste problem is not ongoing. It is possible that, if investigated, the client would be subject to a fine material to the client’s financial position and results of operations.”

And, description of a rule violation,

“Generally accepted accounting principles require disclosure of this material uncertainty, but the client refuses to disclose the matter. The probability of any sort of action being taken against the company in the upcoming fiscal year is remote.”

Or, description of an adverse economic consequence,

“Other enterprises with similar toxic waste situations have been fined as much as $5 million. The client has no insurance. If assessed, such fines would likely result in the client going out of business, likely exposing your auditing firm to shareholder lawsuits.”

Situation 2 - “Your compilation and tax return practice has been steadily growing for the past decade with clients that extend statewide. A major customer of one of your best and most profitable clients recently asked for a CPA certification that all of the client’s employees are citizens or legal residents of the US. Services performed for the client in the past have been limited to preparation of Federal and multi-state tax returns. The client has asked you to prepare the certification and has implied that if you are unable to perform the service, it may be necessary to change accounting firms. Your CPA firm has never performed this type of service.”
And, description of a rule violation,

“Although there is a chance you may be engaged next year to perform an audit of the client’s financial statements, CPA Professional Standards prohibit providing this type of attest service when the CPA’s only basis for evaluation is other non-attest services.”

Or, description of an adverse economic consequence,

“Other enterprises with incidents involving immigration issues have been fined as much as $5 million. If assessed, such fines would likely result in the client going out of business, likely exposing your firm to shareholder lawsuits.”

Each participant was then asked to respond to a client retention question pertaining to their assigned situation. In the case of the toxic waste situation, participants were asked, “Do you retain the client?” In the case of the attest assignment situation, participants we asked, “Do you perform the necessary work and issue the attest report to retain the client?” Responses were recorded categorically, yes or no.

RESULTS

Table 3 depicts the percentage of participants selecting to, “retain” the client, by situation (toxic waste or attest assignment), and by outcome (rule violation or adverse economic consequence).

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Situation</th>
<th>Difference (p-value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rule Violation</td>
<td>Toxic Waste</td>
<td>13%</td>
</tr>
<tr>
<td></td>
<td>Attest Assignment</td>
<td>12%</td>
</tr>
<tr>
<td>Adverse Economic Consequence</td>
<td>Toxic Waste</td>
<td>51%</td>
</tr>
<tr>
<td></td>
<td>Attest Assignment</td>
<td>19%</td>
</tr>
</tbody>
</table>

In the toxic waste situation, when confronted with a rule violation participants reported retaining the client 13 percent of the time, compared to retaining the client 51 percent of the time when confronted with the possibility of an adverse economic consequence, a statistically significant difference ($p < 0.001$). In the attest assignment situation, participants reported retaining the client 12 percent of the time under the rule violation outcome, compared to retaining the client 19 percent of the time under the adverse economic consequence outcome, a marginally statistically significant difference ($p = 0.078$). As hypothesized, these results suggest CPA-practitioners are more likely to retain clients when faced with adverse economic consequences, than with accounting and professional rule violations.

Although under both the toxic waste and attest assignment situations, participants choose to retain clients more frequently when faced with an adverse economic consequence than with a rule violation, significantly more select “retain” under the toxic waste situation (51 percent versus 19 percent, $p < 0.001$). This finding suggests the type of situation may influence CPA-practitioners’ willingness to retain clients when faced with economic consequences. In particular, a priori personal experience with a given scenario may influence CPA-practitioners’ client retention decisions.

Supplemental post hoc analyses of the impacts of collected demographic characteristics (Table 1) on participants’ client retention decisions reveal the only characteristic significantly correlated with retention decisions is gender. Males are more likely to retain clients than their female counterparts in

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6 We have used the convention that reports results at $p < 0.05$ as statistically “significant,” and those at $p = 0.05$ to $p < 0.10$, as “marginally significant.”

7 Participants’ locations (n = 6) and states (n = 4) are not reported in Table 1. However, supplemental analyses confirm that consideration of these potential covariates does not alter the study’s findings and conclusions.
both of the toxic waste and attest assignment situations ($p < 0.05$ – not tabulated). As both experimental situations could be construed as evoking ethical dilemmas, this gender difference is not surprising. Findings of prior research investigating moral development and reasoning in other business-related contexts suggest women business majors score at least marginally higher on Kohlberg’s scale of moral development (e.g., Abdolmohammadi et al., 1997; Abdolmohammadi & Reeves, 2000), females score more highly on Reidenbach and Robin’s multidimensional ethics scale (Nguyen et al., 1990), and female marketing professionals make more ethical judgments in the context of marketing-mix decisions (Lund, 2008).

To determine the impact, if any, of gender on the study’s results, we performed a supplemental analysis of covariance finding that consideration of gender as a covariate does not alter the study’s results. Both males and females are more likely to retain clients with adverse economic consequences, than those with rule violations ($p < 0.001$ – not tabulated).

**CONCLUSIONS, IMPLICATIONS, AND LIMITATIONS**

**CONCLUSIONS**

Motivated by high profile CPA firm failures and losses, we investigated whether the potential for personal negative economic losses matters less to accountants than does adherence to rules. As predicted, and consistent with the results of prior research concerning the moral development of accountants, our results suggest CPA-practitioners are highly influenced by rules. We find CPA-practitioners are more likely to retain clients who represent the threat of an economic loss, compared to clients whose accounting practices violate a rule. These results are unaffected by measured demographic characteristics of the study’s participants (age, gender, position, discipline, size of firm, and experience).

Although the results of prior research suggest females score higher on certain scales that purport to measure moral development or ethical behavior, our results suggest, with respect to decisions concerning personal adverse consequences or adherence to rules, such differences are not significant enough to matter. Further, although the results of Hartikainen and Torstilie (2004) suggest a positive correlation between age and job-related ethical judgments in the finance profession, our results did not identify a similar relationship. These conflicting results may be the result of systematic differences in the experiences of individuals in finance or accounting careers, or it may be that there was insufficient variation in the age of the study’s participants to detect such differences. Similarly, the lack of significance of other potential covariates (size of firm, and experience) may be attributed to a lack of variation among participants. Future research may want to more fully investigate these possibilities.

The study’s findings are both good news and bad news. The good news – CPA-practitioners purport to follow the rules even if it means losing a profitable client. As accountants engaged in auditing services (among other services) are required to maintain a mental attitude independent of their audit clients, this finding suggests they are likely able to comply with this standard. The bad news - less rules-based accounting standards may be problematic for CPA-practitioners who like following the rules and whose decisions appear to be less impacted by the potential for adverse economic consequences that may result from clients adopting strategies that increase their (and their firm’s) risk. If accounting firms increasingly fail as a result of adhering to rules while ignoring potential negative economic impacts, business owners will have fewer accounting firms from which to choose, which may lead to higher prices for accounting services.

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IMPLICATIONS

Our findings have implications for CPA-practitioners, business owners, standards setters, and academics. For CPA-practitioners, being cognizant of the possibility of improperly weighting adverse economic consequences is essential. Practitioners should consider adopting policies and procedures (e.g., client acceptance and retention approvals) to reduce the possibility they assume too much personal risk. Supported by the findings of Abdolmohammadi et al. (1997), CPA-practitioners (particularly those in small and sole practitioner firms) should also consider consulting with other CPA-practitioners (group decision-making), to help reduce the risk of personal economic loss.

Although many advocate education as a means of developing or enhancing ethical behavior (e.g., Hartikainen & Torstile, 2004), such a strategy may or may not be appropriate to address CPA-practitioners’ apparent choice of rules over consequences. Accounting, auditing, and tax rules are enacted because regulators believe they are in the best interest of the general public. It is only when individuals blindly adhere to rules without considering potential adverse consequences that unintended harm may occur. Through education, it may be possible to raise awareness of this issue. On the other hand, there is still much to be learned to substantiate the presumed positive association between teaching and learning of moral judgment and ethical behavior in adults (Wright, 1995). Future research is needed to assist accounting firms and CPA-practitioners develop cultures that place emphasis on integrity over rules to help ensure that ethical judgments prevail (Pierce, 2006).

Business owners both engage CPA-practitioners and employ accountants as bookkeepers, controllers, and/or chief accounting officers. Similar to CPA-practitioners, internal accountants are likely highly influenced by rules. In most cases, this rule-following characteristic is good, but in some circumstances, consideration of the possibility of adverse economic consequences is more important. Enron provides an example where internal accountants were able to justify adhering to minimal criteria to purportedly support non-consolidation of investments – a decision that did not end well for any of the parties involved. Rules-based accounting standards with “bright-line” tests open up the possibility of engineering transactions to fit the rules while avoiding the intent of the standards (SEC, 2003). Clever accountants may be able to identify rules to support accounting practices that may lead to adverse economic consequences for business owners. It is therefore important for business owners to set an ethical, “do the right thing,” tone at the top of their organizations.

Establishing a culture of accountability contributes positively to employees’ ethical decision-making (Nwachukwu & Vitell, 1997); however, Arjoon (2006) cautions that, similar to the establishment of rules-based accounting standards, companies risk unintended consequences and excessive costs if businesses rely too heavily on rules to influence behavior. Key to the development of a robust accountability culture are clearly-communicated, reasonable expectations, with positive (negative) performance appropriately rewarded (punished) (Grimshaw et al., 2006).

In recognition of accountants’ bias toward rules, regulators should take care to balance accounting, auditing, and tax standards’ focus between principles and rules to reduce the likelihood of unintended consequences. Results of the study indicate continued investigation by standard setters (as in Agoglia et al., 2011) of the treatment afforded transactions under comparative accounting pronouncements may be appropriate. For example, comparing CPA-practitioners’ recommended accounting treatment for recognition of barter revenue or a free software upgrade under the FASB and International Accounting Standards Board (IASB) joint revenue recognition proposal, Revenue Recognition: Revenue from Contracts with Customers, to the current, more specific guidance under U.S., Accounting Standards Codification, Entertainment (920-845-25-1), or Software (985-605-25-2).
LIMITATIONS

As with all experimental and survey-based research, it is possible the study’s results may not generalize to the population of CPA-practitioners. Our use of two different scenarios and a geographically-disbursed large group of participants help to minimize this possibility. It is also possible our findings are influenced by participants’ engagement-specific experiences or familiarity with the rules described in the experimental scenarios. Although we believe these differences are likely to be random among the study’s participants, and we attempted to control for the influence of possible systematic differences, further research may be appropriate to confirm the study’s results. In addition, the study’s analyses may be further expanded to investigate differences among types of accountants. For example, future studies may compare the propensity of internal and external accountants, and tax practitioner and audit practitioner accountants, to be influenced by rules.

REFERENCES


Analysis of Accelerator Companies:
An Exploratory Case Study of Their Programs, Processes, and Early Results

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The current study utilizes an exploratory case study approach to examine leading accelerator companies in the United States. Specifically, five of the top seed capital companies or accelerators in America were selected and analyzed for purposes of this study. Due to the brief existence of accelerator companies, the limited number of graduates from accelerator programs, and limited quantitative data available, three extensive within-case and three between-case analyses were conducted. The accelerators were examined through case studies, interviews, website analysis, and observation. The results led to propositions that accelerator companies use unique selection criteria and have higher success rates for their graduates. Success rates were based on new ventures that continued to receive subsequent funding or continued to pursue business endeavors versus those who failed. Findings indicate that mentorship driven programs increase the overall success rates of start-ups by providing entrepreneurs with access to angel investors and venture capitalists which tend to increase success rates.

Small businesses play an important role in the U.S. economy in growth periods (State of Small Business, 2007) and recessions (State of Small Business, 2010). In the economic growth period leading up to 2007, small businesses generated approximately 50 percent of the GDP, 60 percent to 80 percent of new jobs and a large portion of American innovation (State of Small Business, 2007). Conversely, small businesses constituted 60 percent of the nation’s net job losses from their inability to secure funding during the 2008 recession (State of Small Business, 2010). Currently, they provide 50.2 percent of all nonfarm payrolls (State of Small Business, 2010). In addition, the Small Business Administration anticipates small business will lead the U.S. economy out of the recession with jobs and innovation (State of Small Business, 2010). Therefore, the economy relies on a steady stream of nascent firms for today’s and tomorrow’s progress. In 2007, about 5 million businesses were in existence in the United States, of which nearly half a million were nascent firms or start-up companies (Strangler, 2010). Unfortunately, today’s economy makes it extremely difficult for new ventures to obtain the necessary funding to develop their ideas, expand, and grow. There is a predominant gap in early funding, which forces start-ups to turn to accelerator companies to help fill the funding void.

The intent of this paper is to examine accelerator companies’ roles in assisting nascent firms. Specifically, the paper will address the following questions: 1) Do accelerator companies play a vital role in the support, education, and aid the success of fast-growing start-ups or nascent firms? 2) What support do accelerator companies provide to participants? 3) What is the screening process that accelerators use? 4) According to accelerator companies, what are the challenges and obstacles new ventures face?

For the purpose of this article, the authors define start-up or nascent firms as organizations established in an uncertain and volatile environment with the intent to bring a new opportunity to the marketplace. The paper will follow the lead of other researchers that used the terms start-up and nascent firms interchangeably (Davidson & Honig, 2003; Delmar & Davidson, 1999; Reynolds, Carter, Garthner, & Greene, 2004; Sebastiao & Golicic, 2008).
THEORETICAL AND CONCEPTUAL BASIS

FUNDING

Prior to the 2008 economic crisis, Robb and Robinson (2008) found that most high growth firms (their term was gazelles) used banks for funding. However, their study relied on 2004 data which was prior to the Great Recession of 2008. After banks, most nascent firms relied on traditional methods of funding (Dorf & Byers, 2005; Falbe, Kumar & Welsh, 2011). Unfortunately, the recent recession limited both banks and traditional sources of funding (State of Small Business, 2010), thus forcing start-ups to look elsewhere for capital. The conceptual basis for this paper is that seed-capital or accelerator companies have emerged to fill the funding gap for entrepreneurs. The paper examines how accelerators aid start-ups, their requirements for selection, and accelerator participant success rates.

THE RESOURCE BASED VIEW OF THE FIRM THEORY

The value of exploratory case studies is to gain insights that are not accessible by traditional quantitative methods, or as in this case, lack large sample sizes for statistical analysis. Case studies provide insight into enhancement of current theory (Nutall, Shankar, Beverland & Hooper, 2011; Tracy, 2010).

Penrose (1959), in her book The Theory of the Growth of the Firm, advocated the resource based view (RBV) which describes firms as bundles of resources, capabilities, and competencies. If these competencies are unique, they can become difficult to emulate which leads to distinctive competitive advantages (Penrose, 2003). The resource based view furthered the strategic planning literature by positing that firm resources should be considered along with the firm’s focus on products or resources (Wernerfelt, 1984). Subsequently, other researchers added that resources with value, not easily imitated or not easily substituted, can further competitiveness (Barney, 1991; Eisenhardt & Martin, 2000; Ravenswood, 2011).

The resource based view led to two distinct approaches: the structural approach and the process approach. The former includes unique resources (Barney, 1991; Wernerfelt, 1984). The latter focuses on internal processes creating efficiencies including intangible human capital or organization capital (Fiol, 1991; Hart, 1995; Miller & Ross, 2003).

The resource based view was criticized by De Toni & Tonchia (2003) and Hart (1995) for its under-emphasis of the role that external environmental factors play specific to a firm and its industry. Despite this, we believe that the resource based view is an appropriate theory to apply in order to understand if and when accelerators are successful. If accelerators enhance start-up success because of the added resources they provide, then the results of the study would add support to the resource based view. These results would support the proposition that accelerator resources are relevant and in fact create additional value for new ventures. If the resources are found to be helpful, then the study could examine whether the structural or process components of the resource based view were utilized and whether De Toni and Tonchia’s (2003) criticism applies to these results. In contrast, if accelerators do not enhance start-up success, then the resources provided by accelerators are not relevant to start-ups.

LITERATURE REVIEW

EARLY STAGE FUNDING

Historically, nascent firms relied on traditional sources of funding such as bootstrapping, family and friends, angel investors, and venture capitalists (Falbe et al., 2011). Entrepreneurs bootstrap by minimizing start-up costs, utilizing low cost or free techniques, minimizing personal expenses, turning
fixed costs into variable costs, selling personal assets, and leasing instead of purchasing, and selling personal items (Dorf & Byers, 2005; Falbe et al., 2011). Bootstrapping allows entrepreneurs to start a venture with smaller amounts of total capital and little debt, thus enabling founders to tweak their ideas through trial and error, while keeping costs down and building the venture slowly.

Following bootstrapping, the most utilized traditional source of funding is borrowing from friends and family (Ballou et al., 2008; Lesonsky, 2007). Unfortunately, this form of funding usually involves borrowing from individuals that the entrepreneur knows. This tactic can be beneficial or harmful to personal relationships (Dorf & Byers, 2005). In fact, current articles warn entrepreneurs against borrowing from friends and family because it can damage personal relationship even if the financial agreement is in writing (O’Donnel, 2010). Finally, the Great Recession of 2008 has decreased available funding from family and friends, thus forcing entrepreneurs to look elsewhere for money.

A third source of traditional funding for nascent firms comes from angel investors. Angels are wealthy, sophisticated investors who invest in companies in exchange for ownership or equity (Hatten, 2009; Osnabrugge & Robinson, 2000; Scarborough, Wilson, & Zimmer, 2009). Historically, angels invest in start-ups because they have experience or personal interest in the industry and they tend to invest in earlier rounds of funding compared to venture capitalists (Barringer & Ireland, 2010; Lesonsky, 2007; Osnabrugge & Robinson, 2000). On average, angels invest between $10,000 and $2 million in a single start-up company (Freear, Sohl & Wetzel, 1994). Recent data shows that angels invested approximately $25.6 billion a year in over 51,000 small start-ups (Center for Venture Research, 2007). Traditionally, angel investors are more reluctant to invest in new technology firms. However, a new trend among angel investors is to band together becoming “super angel groups” that act like syndicates or venture capitalists (Baer, 2010; Mitchell, 2010). These super angels provide funding to startups in the post seed stage and invest in high-tech firms and in other emerging, exploding growth opportunities.

A final traditional source of funding for new technology firms is venture capital. In 2007, 1,300 venture capitalist (VC) firms invested about $5 billion in approximately 1,000 firms (Strangler, 2010). Venture capitalists pool their experience from several partners, some of whom are full time investors who monitor and mentor the progress of the new venture (Dorf & Byers, 2005; Mariotti & Glackin, 2007). Historically, VC investments range from $50,000 to $5 million and focused on high-tech and exploding growth ideas (Center for Venture Research, 2007).

The 2008 recession affected both angels and VCs, resulting in their reluctance to invest in many nascent firms (Mitchell, 2010). Recent research confirms that angels and VC’s invest predominantly in later-stage investment opportunities which leave critical gaps for seed capital funding for start-ups (Center for Venture Research, 2007; Mitchell, 2010). Venture capitalists, in particular, are more selective and invest in more established firms that have proven track records and market acceptance, such as sales (Baer, 2010).

ACCELERATORS

THE BIRTH OF ACCELERATORS

The reluctance of venture capitalists to invest after the Internet bust of 2000 left angel investors to carry the burden and risk. However angels are individuals who tend to invest much smaller dollar amounts compared to venture capital firms. As a result of the reduced investment and capital potential, many new ventures were left without sufficient money to launch their businesses (Mitchell, 2010). This gap stimulated a new breed of investment firms to emerge, known as accelerators.
In the late 1980’s and 1990’s incubators and accelerators were commonly known as research laboratories instead of seed funding firms for entrepreneurs (O’Connell, 2011). However, in early 2000 a new type of accelerator was established and led by experienced, successful entrepreneurs who mentored and guided nascent ventures with the intention of reducing high failure rates (O’Connell, 2011).

Accelerators are groups of experienced business people who provide services, office space, guidance, mentorship, networking, management services, knowledge, and expertise to nascent firms on an as-needed basis to help them succeed in the early stages of venture life (Fishback, Gulbranson, Litan, Mitchell, & Porzig, 2007). Accelerators assist with building the venture team, fine-tuning the idea, and mentoring the business from idea, prototype, through product development. Accelerators provide intensive, boot-camp training comparable to entrepreneurship classes at the collegiate level (Fishback et al., 2007). Boot camp and accelerator contestants are selected from a pool of qualified candidates led by start-up teams with stellar ideas. Like venture capitalists, accelerators fund along themes and in specific industries with which they are familiar or knowledgeable. Some of the most well-known and successful accelerators nationally and internationally are the Foundry, Inc., Techstars, Y-Combinator, YEurope, and the Accelerator Corporation (Fishback et al., 2007).

More startups are applying to accelerator programs to help them launch and grow their ventures (Mitchell, 2010). Paradoxically, accelerators view today’s uncertain economic environment as an excellent time to invest in innovation, especially technology, because costs are decreasing and open development platforms are more robust (Launch Box Digital, 2010).

The founders of TechStars stated that they started their company to help provide the assistance that they could not find when they were starting ventures as entrepreneurs (TechStars, 2010). They explained that their motivation was to “give back” to the entrepreneurial community. Interestingly, TechStars viewed accelerators as much more than incubators (Cohen, 2010). There is no evidence in the literature that accelerators examined incubators for guidance. However, incubators are the historical antecedents of nascent firm assistance.

Incubators were started in the U.S. at the Batavia Industrial Center in Batavia N.Y. in 1959 (National Business Incubation Association, 2011). Currently, the National Business Incubation Association (NBIA) has 1,900 members in 60 countries that include for profit, nonprofit, economic development, and government incubators (NBIA, 2011). They provide office space, financial, technical, managerial support, and access to investors (Katz & Green, 2009). Qian, Haynes, and Riggle (2011) report that in the year 2005, 2,007 incubators assisted 27,000 start-up companies, created more than 100,000 jobs, and generated revenue of $17 billion. The University of Michigan (1997) claims an 87 percent success rate after five years. In contrast, the Small Business Administration reports a 50 percent success rate for small businesses after five years of operations (SBA, 2007).

HOW ACCELERATORS WORK

The five prominent accelerators selected for this study include (in alphabetical order): Capital Factory, Launch Box Digital, Start@Spark, Tech Stars, and Y Combinator (Davidson, 2011; MacManus, 2010). They all provide a combination of assistance: an intense in-house program of mentorship, mentoring, office space, access to legal advice, internet access, access to a network of entrepreneurs who help entrepreneurs tweak and improve their business concepts, and opportunities to pitch their ideas to VCs and angels. Specifically, the intensive “boot camp” is intended to provide office space, access to successful entrepreneurs, mentors, and other technology experts, a place to socialize with other new venture founders, and a safe environment to share ideas or methods. The boot camps vary from 10 to 12 weeks in length and provide the time and support for the start-up founders to build or tweak their
prototype (Arrington, 2007; Avery, 2007; TechStars, 2010). The selected founders/participants take time away from jobs and families to interact with others and receive encouragement, additional knowledge, and greatly needed assistance.

All the accelerators provide encouragement, assistance, and help with technical issues. In addition, they all provide seed money ranging from $18,000 (TechStars, 2010) to $20,000 (Capital Factory, 2010). However, Start@Spark provides funding above $20,000, with a combination of conventional loans up to $250,000. This loan converts to equity during a subsequent round of funding at a 20 percent discount. Start@Spark also retains the right to provide 50 percent of the next round of financing if needed (Start@Spark, 2010).

**EQUITY VERSUS CONTROL**

In exchange for funding, accelerator companies take a 5 percent to 6 percent equity stake of their participating boot-camp venture. Most of the accelerator companies state that they have no interest in controlling the nascent firm. Virtually all of the accelerators require a small portion of equity with an increased equity requirement for additional angel or VC rounds of funding.

**VALUE ADDED—WHAT ACCELERATORS PROVIDE: EARLY STAGE FUNDING AND ASSISTANCE**

Accelerators provide value to their participants with early stage funding and, equally important, intensive mentorship. While the average start-up needs early stage funding, it is not a massive amount of capital (Bluestein & Barrett, 2010). The financial assistance mentioned in the previous section provides enough support for the start-up to survive while attending a Techstars boot camp or similar type of accelerator program. TechStars (2010) limits the amount of funding they provide to $6,000 per company founder, with a maximum of $18,000 funded per venture.

In addition to the above, accelerators provide value with their assistance to startups. Once a startup is selected for seed capital, the founders are immersed in a boot-camp style environment with intensive training/workshops, networking, education and high-level mentorship. This environment is established to provide nascent entrepreneurs with an opportunity to learn from key experts or mentors in their field. Mentors work with startup founders throughout the duration of the program, dispense advice, and provide valuable feedback based on personal experience as business owners and entrepreneurs. The accelerator companies select mentors based on their level of expertise, experience, profitability, and desire to help new entrepreneurs succeed.

This type of assistance is invaluable for new entrepreneurs. According to the founders of accelerators, the key ingredient for a successful start-up is early, high quality mentorship (Bluestein & Barrett, 2010; TechStars, 2010). Similarly, SBDCs report that for their small business clients, success rates are highest where mentorship was involved (Katz & Green, 2009).

It is important to note that most accelerator companies studied operate in a similar manner. All provide boot camps with extensive mentoring. As a result of their hands-on approach, accelerator companies are extremely selective in choosing their boot camp participants. Each company’s idea merits careful consideration, along with whether mentorship is available to help the firm itself. While capital investment is kept to a minimum, the overarching goal of accelerators is to foster the entrepreneurial ecosystem, aid in opportunity generation, and help with sustainment (Bluestein & Barrett, 2010).
METHODOLOGY

EXPLORATORY CASE STUDY METHODOLOGY

The exploratory case study methodology utilizes multiple sources of evidence to examine phenomenon within their actual contexts (Yin, 1992). One of the principles of case study methodology is that an examination of the context is equally as important as an examination of the phenomena itself. In addition, the approach is not limited to qualitative or quantitative data, but can lead to propositions and theory building where none exist (Yin, 1992). The strengths of the approach are its ability to examine the following: the context in addition to the phenomena, a series of activities over time, and several different important participants. The approach is also capable of examining complex outcomes that are beyond the capabilities of single factor analyses (Yin, 1981). Case study is widely accepted and has been utilized in family business studies for many years (Barach & Gantisky, 1995; Dunn, 1999; Murray, 2003; Santiago, 2000). Specifically, this approach has been used to examine the succession transition process in family businesses (Murray, 2003), succession in Philippine family businesses (Santiago, 2000), and family business governance (Lambrecht & Lievens, 2008).

RESEARCH DESIGN

The research design was an exploratory case study of five accelerator companies. The case study approach was selected because it allowed the researchers to closely examine a current phenomenon within a real-life setting (Yin, 2003). For the purpose of the study, the research included multiple qualitative methods as recommended by Tracy (2010). We observed boot camp participants, interviewed accelerator principals, studied the accelerator’s websites, and analyzed relevant blogs and other available materials.

DATA COLLECTION

The five most prominent accelerators were chosen based on their longevity, prominence in the investing world, substantial media coverage, and their service as role models for other accelerators. The study employed a number of exploratory case study methods. The accelerator founders were contacted via telephone or e-mail and asked to fill out a basic open-ended questionnaire. This was followed up with phone calls, website review, and numerous emails. The authors had no prior connection or involvement with any of the accelerator firms who participated in the research process. The second author has experience as an angel investor, but is not directly involved with any of the accelerator businesses studied.

Specifically, the authors contacted five prospective accelerators that met the requirements of: 1) having a boot camp, 2) having an application process, 3) being widely publicized in the media, 4) currently involved in seed-capital and taking applications, 5) willing to participate and share information, and 6) are well established leaders in the accelerator ‘world.’ Of the five firms contacted, three actively participated and willingly took part in the study. Two accelerators deferred the authors to open-source documents from which to gather information. The authors collected data and conducted an in-depth analysis of each accelerator company, one at a time. The primary data collection methods employed were as follows: 1) qualitative, open-ended questions concerning the role and support the accelerator company provides in helping entrepreneurs grow their business and succeed, 2) supplemental observation of accelerators, participants, and the interaction among them, and 3) review of company information such as websites, blogs, personal interviews, open-source materials, and other relevant documents.
The authors purposely selected well-known accelerator companies. The three accelerator companies that fully and willingly participated in the case study were TechStars, Capital Factory, and Launch Box Digital. Additional data was collected on the two non-respondent accelerator companies Y-Combinator and Start-Spark through published open-source information. The results of this study include an analysis of the types of assistance, mentorship obligation, amount of seed money, percentage of equity, the application process, and percentage of participants who received subsequent funding. According to past case study research, three to five cases of in-depth analysis fall within acceptable range for the case study approach (Creswell, 1998; Eisenhart, 1989).

INTERVIEW DATA

All accelerators were asked open-ended question about their accelerator selection process, purpose of their company, key benefits of the business, success and failure rates, equity requirements, funding provided to boot-camp participants, and challenges for the future. This research design allowed accelerators to elaborate when needed or select from pre-existing sets of multiple choice questions when applicable. Participants were encouraged to expand on their answers, thoughts, and opinions when necessary.

AUTHORS’ ROLES

Various scholars of qualitative research (Nutall et al., 2011; Tracy, 2010) require transparency and a description of an authors’ involvement in order for readers to understand their roles and assess whether the roles add or detract from the richness of data collection and assessment (Tracy, 2010). For the purpose of this study, both authors are small business owners, consultants, and faculty members. In addition, one of the authors has a deep understanding of accelerator companies because her angel investment group actively funds numerous start-up companies, many of which came from accelerator programs. This unique role provided access to principals, access to blogs, discussions with principals, interaction with participants, observation of participant pitches to angels, and angel investment.

RESULTS

The following results present both with-in case and between-case results (Yin, 1981, 1992). First, each case had certain components common to the other accelerators such as: a boot camp, extensive mentorship, and access to further funding. Fortunately, these similarities also allow for between-case comparisons.

PERCENTAGE OF EQUITY REQUIRED AND AMOUNTS OF SEED MONEY

Table 1 supports the literature review which discovered that the founders of accelerators desire to fill the early stage funding gap in exchange for equity and to provide services to help start-ups succeed. However, their motivations are totally unique to them. The majority of accelerator companies require equity in exchange for funding. The most common equity percentage was 5 percent or 6 percent, with the average seed capital amount ranging from $17,000 to $20,000. Virtually all accelerator companies explained that they provide office space, mentorship, and access to venture capitalists or angel investors who aid in subsequent stages of funding. For greater details, please see Table 1 below.
Table 1. Accelerator Company Information

<table>
<thead>
<tr>
<th>Accelerator</th>
<th>Equity Percentage</th>
<th>Amount of Seed Money</th>
<th>Other Funding</th>
<th>Access to VCs &amp; Angels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital Factory</td>
<td>5%</td>
<td>$20,000 &amp; free stuff</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>LaunchBox Digital</td>
<td>Up to 65%</td>
<td>$20,000</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Start@Spark</td>
<td>Up to 65%</td>
<td>Loan up to $250,000</td>
<td>Retain right to fund next round</td>
<td>Yes</td>
</tr>
<tr>
<td>TechStars</td>
<td>5-6%</td>
<td>$6,000 (per founder) max $18,000</td>
<td>Office space</td>
<td>Yes</td>
</tr>
<tr>
<td>Y Combinators</td>
<td>2-10% usually 6-7%</td>
<td>$17,000 (2 founder) $20,000 (3 founder)</td>
<td>Office space</td>
<td>Yes</td>
</tr>
</tbody>
</table>

REASONS THE ACCELERATOR COMPANY WAS CREATED

Table 2 supports the literature review which found that the primary motivation for the creation of an accelerator company was to help entrepreneurs succeed, grow, and provide capital to launch. Virtually all the accelerator founders explained that they created their accelerator company to help support entrepreneurs and to help fill a gap or lack of capital during the early years of operating a new tech venture.

Table 2. Reasoning behind Accelerator Companies

<table>
<thead>
<tr>
<th>Accelerator</th>
<th>Reason Accelerator was Founded</th>
</tr>
</thead>
<tbody>
<tr>
<td>LaunchBox Digital</td>
<td>Support entrepreneurship and fill the early-stage capital gap</td>
</tr>
<tr>
<td>TechStars</td>
<td>Ecosystem development</td>
</tr>
<tr>
<td>Capital Factory</td>
<td>Personal initiative - both rewarding and fun</td>
</tr>
</tbody>
</table>

EXPLANATION OF RESULTS

The motivations of the founders of accelerators are completely different from founders of other early stage assistance programs. For example, incubators are typically started by local, regional, or state government entities including economic development offices or universities to promote entrepreneurship (Katz & Green, 2009; Qian et al., 2011; University of Michigan, 1997). In most cases the ultimate goal of an incubator is to create jobs and economic activity inside a specific geographical area (Katz & Green, 2009; Qian, et al., 2011; University of Michigan, 1997).

In contrast, accelerators are motivated to provide assistance to start-ups because they believe that the business concept is viable, the accelerator is personally interested in the idea, or likes the entrepreneur team. For example, Techstars stated that they fund ideas that they have an interest in, have excellent potential to scale, or have promising market niches such as medical devices or mobile applications.

The accelerator programs offer an opportunity for accelerator founders and their angel partners to obtain equity at the seed and early stage funding phases for promising business concepts and promising new ventures. As Tables 1 and 2 suggest, most accelerators take equity positions in only the best prospects. While somewhat altruistic, their motivations include some return on their investments. The founders of incubators usually do not take equity positions with their clients. While an exception is the current trend for private and public cooperation, the primary role of the public entity is some form of development in their area.
PERCENTAGE OF GRADUATES, SUCCESS, FAILURES, ACQUISITIONS

Most accelerator founders explained that they anticipate nearly 20 percent of participating ventures to fail at some point, while nearly half of accelerator graduates will become self-sustaining by year five (Table 3). In addition, three-quarters of accelerator founders anticipate that more than three-quarters of the boot-camp participants who graduate from their accelerator programs will receive subsequent funding at some point, and several will be acquired (see Table 3). In fact, several of their graduates have already been acquired. Techstars boasts that five of their graduating businesses have been acquired by top-tier and well established companies in the space. As of May 2011, three (3) of the 39 Boulder TechStars participants failed (Davidson, 2011). In addition, according to TechStars, nine of the Boulder 2009 boot camp graduates raised $12,896,000 and eleven from the Boulder 2011 class raised $8,903,042 in subsequent funding (Davidson, 2011).

SELECTION PROCESS: TYPES OF COMPANIES AND IDEAS FUNDED

Most of the accelerator companies in the study emphasize that they invest predominantly in technology based start-ups, especially mobile, I-pod, web applications, cloud computing, social networking software, and other evolving technology. Launch Box Digital (2010) funds new venture technology focused on gaming, social media, social communications, digital media, or software-as-a-service. Capital Factory (2010) seeks out nascent ventures that have new technology but only those that have established expertise and can to which they can add “value” to a concept. Virtually all the accelerators companies studied state that they prefer technology based business concepts; however they will occasionally accept non-technology ideas. TechStars (2010) firmly states that they will not accept the following: local service companies, restaurants, consulting agencies, medical device companies, and biotechnology companies. Most accelerators want concepts that have large upside potential that can be scaled to meet national or global demand.

Table 3. Graduates, Success, Failures, Acquisitions

<table>
<thead>
<tr>
<th>Accelerator</th>
<th>Participants Per Year</th>
<th>Number of Applicants</th>
<th>Graduate From Program</th>
<th>Receive Further Funding</th>
<th>Failure Rate</th>
<th>Number Acquired</th>
<th>% Self Sustaining</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Launch Box 2008</td>
<td>10</td>
<td>250</td>
<td>17</td>
<td>70%</td>
<td>10-15%</td>
<td>3</td>
<td>41-60%</td>
<td>3 series A 3 angel funding $6 mill add’l</td>
</tr>
<tr>
<td>TechStar</td>
<td>10 per city (4 cities)</td>
<td>600+</td>
<td>70</td>
<td>75%</td>
<td>10%</td>
<td>6</td>
<td>41-60%</td>
<td>70% finish and receive other funding</td>
</tr>
<tr>
<td>Capital Factory</td>
<td>5</td>
<td>300</td>
<td>10</td>
<td>60%</td>
<td>10-20%</td>
<td>0</td>
<td>41-60%</td>
<td></td>
</tr>
<tr>
<td>Y-Combinator(^1)</td>
<td>NA</td>
<td>NA</td>
<td>Approx. 145 in program</td>
<td>24 IPO’s</td>
<td>15-20%</td>
<td>14</td>
<td>57%</td>
<td></td>
</tr>
</tbody>
</table>

\(^1\)Y-Combinator data came from (MacManus, 2010) \(^2\)Over the next five years
CRITERIA FOR SELECTING CANDIDATES INTO ACCELERATOR COMPANIES

According to accelerator founders, the single most important criteria used for selecting candidates for their boot-camp programs is the accelerator company’s ability to make a difference to the start-up (see Table 4). In addition, half of the participants in the study reported that start-ups must have strong lead founders, a willingness to adapt their business concepts if necessary, and a business concept that solves a real-world problem in a creative way. A working prototype and stellar technical expertise were viewed as important, but not vital when selecting candidates for the boot-camps.

SCREENING PROCESS

According to the results, all accelerator companies interview and review applications prior to selecting their candidates (see Table 5). In addition, half of the accelerator companies look at the business concept itself and the team’s ability to be on-site for three months.

Table 4. Criteria for Selection

<table>
<thead>
<tr>
<th>Accelerator</th>
<th>Most Important Criteria for Selecting Candidates</th>
</tr>
</thead>
<tbody>
<tr>
<td>LaunchBox Digital</td>
<td>Strong Lead Founder</td>
</tr>
<tr>
<td>Capital Factory</td>
<td></td>
</tr>
<tr>
<td>TechStars</td>
<td>Tech Expertise</td>
</tr>
<tr>
<td>LaunchBox Digital</td>
<td>Accelerator’s Ability to Add Value to Incoming Start-Up</td>
</tr>
<tr>
<td>Capital Factory</td>
<td>Working Prototype</td>
</tr>
<tr>
<td>TechStars</td>
<td>Idea Solves a Real Problem</td>
</tr>
</tbody>
</table>

Table 5. Accelerator Screening Process

<table>
<thead>
<tr>
<th>Accelerator</th>
<th>Screening Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>TechStars</td>
<td>Interview Start-up Founders</td>
</tr>
<tr>
<td>Capital Factory</td>
<td>Review Application</td>
</tr>
<tr>
<td>LaunchBox Digital</td>
<td>Ability to Be On-site for 3 Months</td>
</tr>
<tr>
<td>TechStars</td>
<td>Video/Demo</td>
</tr>
<tr>
<td>Capital Factory</td>
<td></td>
</tr>
<tr>
<td>LaunchBox Digital</td>
<td></td>
</tr>
</tbody>
</table>
Tables 4 and 5 illustrate that each accelerator company has its own unique screening process and selection criteria. Accelerators emphasize that they will only accept concepts for which they can add value. As a consequence, they may reject good ideas because they do not believe that they can assist the venture. Lastly, accelerators look to invest along certain themes or within certain key industries. If an idea does not fit into an accelerator’s theme, the venture will not be funded even though it has potential. As a general rule, accelerators will not invest in restaurants, basic service businesses, highly niched or highly localized ventures. Instead, they invest in radically changing, exploding growth, internationally or nationally scalable venture ideas.

**CHALLENGES/OBSTACLES THAT START-UPS FACE**

Nearly three-quarters of the accelerator companies believe that next to funding, the greatest obstacles that new ventures face are not understanding their target market, not having a strong marketing expert working for the business, difficulty reaching their customers, and lacking overall experience in their proposed business (see Table 6). The accelerator owners each explained that marketing expertise is crucial for the success of a new venture and that an inexperienced entrepreneurial team could break the business. Another commonly viewed obstacle was that the founding entrepreneurial teams either did not understand the target market or were having trouble reaching their target consumers.

Table 6. *Greatest Challenges/Obstacles that Participating Entrepreneurs Face*

<table>
<thead>
<tr>
<th>Accelerator</th>
<th>Obstacles</th>
</tr>
</thead>
<tbody>
<tr>
<td>LaunchBox Digital</td>
<td>Misunderstanding target market</td>
</tr>
<tr>
<td>Capital Factory</td>
<td></td>
</tr>
<tr>
<td>LaunchBox Digital</td>
<td>Lack of marketing expertise</td>
</tr>
<tr>
<td>Capital Factory</td>
<td></td>
</tr>
<tr>
<td>TechStars</td>
<td>Inexperience of entrepreneur/team</td>
</tr>
<tr>
<td>Capital Factory</td>
<td></td>
</tr>
<tr>
<td>LaunchBox Digital</td>
<td>Team unwilling to adapt/mold idea to market needs</td>
</tr>
</tbody>
</table>

**CHALLENGES FOR THE ACCELERATOR COMPANY**

Two-thirds of the accelerator companies surveyed indicated that the greatest challenge accelerator companies’ face is finding great companies with great ideas (see Table 7). One-third of accelerator participants indicated that funding the next level or early stage after seed level is challenging.

Table 7. *Future Accelerator Company Challenges*

<table>
<thead>
<tr>
<th>Accelerator</th>
<th>Obstacles</th>
</tr>
</thead>
<tbody>
<tr>
<td>LaunchBox Digital</td>
<td>Gaps in the funding supply chain (we do a great job but there is nobody there to fund to the next level)</td>
</tr>
<tr>
<td>TechStars</td>
<td>Finding great companies to fund</td>
</tr>
<tr>
<td>Capital Factory</td>
<td>Finding great companies with great ideas to fund</td>
</tr>
</tbody>
</table>
BENEFIT OF ACCELERATORS

The most commonly cited benefit of accelerators is networking. Virtually all the accelerators believe their greatest value is the opportunity for mentorship and networking opportunities provided to the nascent firms (see Table 8). Networking provides accelerator participants with the ability to receive subsequent rounds of funding, and increases their likelihood to receive further help from mentors after the boot camp program concludes.

Table 8. Greatest Benefit that Accelerator Company Provides

<table>
<thead>
<tr>
<th>Accelerator</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>LaunchBox Digital</td>
<td>Mentorship/Network Opportunities</td>
</tr>
<tr>
<td>TechStars</td>
<td>Networking Opportunities</td>
</tr>
<tr>
<td>Capital Factory</td>
<td>Mentorship</td>
</tr>
</tbody>
</table>

DISCUSSION

GENERAL COMMENTS

The published results from accelerator programs looks very promising compared to the usual statistics on successes and failures for small business. The SBA reports that 50 percent of small businesses fail in the first four years (SBA, 2007). Launch Box, TechStars and Capital Factory data shows that 60 percent to 70 percent of all accelerator participants received additional funding and several were acquired (see Table 3).

Currently, almost 75 percent of TechStars participants received follow up funding or are profitable immediately after graduation from the TechStars accelerator program (TechStars, 2010) (Table 3). Four out of ten TechStars team companies were acquired from the TechStars’ Class of 2007 (Kincaid, 2008, TechStars, 2010). As noted above, the TechStars Boulder classes of 2009 and 2010 raised $12,896,000 and $8,903,042 respectively (Davidson, 2011).

Based on a recent study, approximately 60 percent of companies from every TechStars Program receive subsequent funding (MacManus, 2010). In addition, almost 70 percent of TechStars graduates raised or bootstrapped their companies to positive cash flow (MacManus, 2010). Finally, approximately 75 percent of TechStars startups are operating and active; four were bought for over $2 million, one was bought below $1 million, and only 10 percent failed (MacManus, 2010). Similar studies were conducted on competing accelerator programs and results were similar. It is important to note that although the results are preliminary and more studies should be conducted, these results are encouraging with high potential for helping entrepreneurs who apply to accelerator programs.

Recent research on accelerators used a combination of graduates, subsequent funding, and quality of mentorship to rank the top 15 accelerators in the U.S. Their ranking placed TechStars Boulder first, TechStars Boston fifth, TechStars Seattle seventh, Launch Box fourth, Y Combinator second, and Capital Factory eleventh out of the top 15 accelerators in the U.S. (Gruber, 2011).

APPLICATION OF RESOURCE BASED VIEW TO RESULTS

Research into accelerators provides a unique opportunity to apply and perhaps enhance the resource based view. This theory posits that firms are a bundle of resources, talents, and capabilities that create
unique competencies or competitive advantages (Penrose, 1959; Wernerfelt, 1984; Penrose, 2003; Ravenswood, 2011). The structural part of the theory focuses on unique resources (Wernerfelt, 1984; Barney, 1991) while the process part of the theory emphasizes all the internal processes that create efficiencies (Fiol, 1991; Hart, 1995; Miller & Ross, 2003). Accelerators provide a “structure” of assistance starting with boot camps then mentorship and angel input followed by subsequent funding.

This is also a RBV process approach because accelerators follow a process of assistance over time. The results may also meet De Toni and Tochian’s (2003) criticism of RBV that it does not examine the role of external environmental factors. This analysis of external factors is provided by mentors guiding start-ups into relevant market niches.

Accelerators match the nascent founder with mentors contributing real world experience in that market, idea, technology, or industry. The mentors provide additional human capital resources in addition to another form of external market validation – the mentor would discontinue if the idea was not feasible. Therefore mentors provide external validation that the idea should be further developed. If confirmed with longitudinal research, such results could be used to enhance RBV. The nascent firm founder brings resources to which the mentors and angel investors add additional resources. Such findings would support other research that assistance to nascent firms from SBDCs or incubators (Todorovic & Suntornpithug, 2008; Katz & Green, 2009) enhances their success rates.

LIMITATION OF THE STUDY

Although the comparisons with Small Business Administration data look promising at this time, these comparisons come with several caveats. First, this data is collected over longitudinal periods of five and ten years. Data on accelerator graduates is only two years old. The term success can also be somewhat misleading as the data does not accurately track small companies that are purchased or merged. Some of the purchased accelerator graduates are “successes” because the founders’ intent was to grow valuable enough to be purchased by a larger company. Not enough data exists on the graduates that are not purchased but still exist; it is unknown how many companies will survive to the five and ten year marks. A final caveat is that because only a few major accelerators exist, statistical analyses are unavailable or limited, thus leaving only the descriptive analyses provided in this paper.

Finally, very few nascent firms are accepted into accelerator programs compared to the large number of new start-ups created each year. Therefore, other start-ups such as restaurants, service oriented companies, local businesses, niche businesses and retail stores are not assisted. However, these results may encourage establishment of accelerators by different groups to promote economic activity in their location.

CONCLUSION AND FUTURE RESEARCH

PROPOSITIONS

When possible, exploratory case research should lead to propositions for further scholarly discussions or generate propositions (Eisenhardt, 1989). Based on these results, the authors believe that subsequent research could determine the validity of the following propositions.

Proposition 1. The overall motivations of accelerator companies are different from the founders of other early stage assistance programs. Accelerator companies were established to help support, educate, and fill the funding gap for entrepreneurs in exchange for equity. This proposition is the direct result of comments made by one of the TechStars founders, David Cohen (2010). Cohen (2010) stated that his primary motivation was to provide a source of funding for ventures not available to him when
he started earlier ventures. In addition, accelerators receive a percentage of the equity and have access to cutting edge ventures that interest them. This can be verified in the future with follow up surveys of accelerator founders.

**Proposition 2.** Accelerator graduates have higher success rates compared to non-accelerator graduates as measured by longevity in business and receipt of further funding. The data in Table 3 is promising because it shows that between 60 percent and 70 percent of boot camp graduates received further funding and more are self-sustaining. If these results are substantiated when the data becomes available, such conclusions would validate accelerators’ worth.

**Proposition 3.** Accelerator companies utilize completely different criteria than other early stage assistance programs in selecting ventures and screening ideas. Tables 4 and 5 show that accelerators use different criteria which should be verified in the future when more data is available.

**Proposition 4.** Both accelerator founders and accelerator graduates face unique obstacles and challenges. Accelerators view insufficient experience and misunderstanding the target market as major obstacles for nascent firms. This result could be compared with the experience of other start up assistance programs (such as incubators –University of Michigan data and others). At this time, accelerators perceive their main challenges to be an insufficient supply of ventures in their areas of interest to invest in. However, this may change with the current or future economic changes at some point.

**Proposition 5.** Accelerator programs believe the added-value obtained from their programs includes networking and mentorship. The above discussions revealed that in addition to seed money, a significant value added from accelerators is the intensive mentoring and social networking available through the boot camps and subsequent funding. Each boot camp participant receives extensive help during the boot camp and beyond.

**OTHER FUTURE RESEARCH**

One area that has not been well researched is the potential benefits to the mentors and/or angels in these relationships. By participating in these accelerator companies, mentors can watch, help, assess, and invest in new technologies as they occur in real time. Another exciting area of research would be the network process and the “how” of the phenomena (Nuttall et al., 2011; Tracy 2010).

As experience with accelerators continues, the authors believe other economic development organizations will establish accelerators, especially in developing countries. If this initial success continues, it is likely that new accelerators will emerge in other countries. Other successful founders may desire to give back to their communities and provide services that were not available when they were starting their own ventures (TechStars, 2010).

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Jack E. Brothers    Stephen Osborne
Sam Bruno          Howard F. Rudd, Jr.
Roosevelt Butler    Ronald Rubin
Donald M. Clause    Homer L. Saunders
Ronald Cook        Lowell M. Salter
Joel Corman        Pamela Schindler
Richard T. Dailey   Lincoln Simon
Dale Dickson       Leo Simpson
Paul Dunn           Joseph Singer
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Fred Fry            George T. Solomon
Geralyn McClure Franklin    Matt Sonfield
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