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Martin Bressler, Editor
Southeastern Oklahoma State University

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LETTER FROM THE EDITOR

We are extremely pleased to present *the Academy of Entrepreneurship Journal*, an official journal of the Academy of Entrepreneurship, Inc. The AOE is an affiliate of the Allied Academies, Inc., a non profit association of scholars whose purpose is to encourage and support the advancement and exchange of knowledge, understanding and teaching throughout the world. The *AEJ* is a principal vehicle for achieving the objectives of both organizations. The editorial mission of this journal is to advance the knowledge and understanding of entrepreneurship throughout the world. To that end, the journal publishes high quality, theoretical and empirical manuscripts, which advance the entrepreneurship discipline.

The manuscripts contained in this volume have been double blind refereed. The acceptance rate for manuscripts in this issue, 25%, conforms to our editorial policies.

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Martin Bressler, Editor
Southeastern Oklahoma State University

MEASURING SUSTAINABILITY AND EFFECTIVENESS OF SOCIAL VALUE CREATION BY SOCIAL SECTOR ACTORS/SOCIAL ENTERPRISES, WITHIN DEVELOPING COUNTRIES

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ABSTRACT

There has been proliferation of endowments, foundations, NGOs and other organisations operating within many developing countries over the past 20 years as social entrepreneurs/enterprises. These organisations have been supporting and working in developing countries, attempting to transform the quality of lives of their beneficiaries; essentially creating social value. While there is evidence on output and outcome from programmes, there is little evidence of meaningful, sustained impact and hence effectiveness, despite millions of dollars being spent. The lack of this evidence begs the question of the justification for continued funding, state benefits and tax exemptions for the programmes. Additionally, it raises the issue of sustainability of the intervention process, given that the primary source of funding for many of these organisations is grants and/or philanthropic contributions. The paper adopts the Ashoka Foundation's lead, which measures sustainability/vulnerability of supporting organisations and the effectiveness of these entities in creating and sustaining social value. It employs Kushner's Model of 'An Open Systems Model of Organisational Effectiveness' to inform the empirical methodology and develops the instrument used. It furthers the process by employing regression analysis in identifying the significant variables in determining organizational effectiveness. The results show that the organisations 'Ability to Adapt' and 'Resource Adequacy' are significant determinants for organizational effectiveness. The results thus present meaningful insights for funders (foundations, endowments, corporations), policy makers and organizations on how they can improve their effectiveness and justify the financial support they received from their donors.

Key Word: Social Entrepreneurship, Social Value creation, Developing Countries, Social Enterprises, Logit and Probit models

INTRODUCTION

Resulting from a number of factors including poor governance and ineffective strategic planning, numerous developing countries have found themselves on a downward spiraling development trajectory. A resulting effect has been the disempowerment of their population

manifesting itself in the breakdown of social cohesion, increasing crime and violence. Ultimately this results in decreasing social, political and economic capital amongst the population. In response to this, numerous institutions, which can be classified as social sector actors (SSA) (including foundations, endowments, NGOs and faith-based institutions¹), have established social intervention programmes with the aim of improving the quality of lives of the targeted beneficiaries. This is to essentially create sustained social value among their constituents.

Millions of dollars has been spent on these endeavors, yet the evidence of meaningful change is not forthcoming (The UNDP Caribbean HDR (2012) and The UNODC (2010)). The question, which arises, is why. One recurring explanation given is that many of these institutions, while receiving funds to develop intervention strategies, have no clear understanding and methodology of measuring their effectiveness in social value creation. Worse yet there are questions about how sustainable these organisations are in generating and maintaining the value creation strategy. It is this concern, which has motivated this research.

Many of these organisations in developing countries have not examined and identified what are the significant elements that drive social value creation within their organization; and how to effectively develop their intervention strategies. They are locked into an output and outcome mode; failing to focus on impact. The Ashoka Institute, emerged in the 1980s as a response to some of these societal needs that were not addressed by the government and business sector (Brooks 2008), has led the process in measuring social value creation. Over the years they have developed tools to measure the effectiveness of their partners in doing so (Leviner 2006). Kushner has also developed models to measure organizational effectiveness for over 15 years, from the 1990s 'An Open Systems Model of Organisational Effectiveness'. Brooks (2008) further highlights that measuring organizational effectiveness and vulnerability is imperative in determining sustainability of the interventions and the organisations as well. The paper draws on the model of Kushner (1996, 2002) and ideas of Brooks (2008) in conducting the research². It employs an empirical approach in the methodology to assess vulnerability and how effective these organisations are in generating social value; and applies an econometric approach in unearthing the significant factors that drive social value creation among these organisations. The findings thus present relevant data that can be used to inform intervention strategies for these organisations, as well a performance measurement framework through which they can more effectively measure their impact through social value creation.

Jamaica, like many developing countries, has many social sector actors, including public and private endowments and foundations, as well as NGOs. They all share a similar mandate of improving the quality of lives of beneficiaries. UN (2009) has revealed that there are significant questions regarding these major interventions in particular their sustainability and effectiveness. Despite the money being spent, there continues to be breakdown in social, political and economic capital among the targeted beneficiaries (UNDP 2011). Crime and violence continues to increase, while social sector actors continue to request additional funding. Jamaica is thus used

as a case to examine how vulnerable/sustainable these social sector actors/organisations are; perceptions about their effectiveness; how they measure social value and what are the significant elements which determine the organisations' effectiveness in generating social value.

The remainder of the paper is as follows. The following section reviews the literature on social entrepreneurship and social value creation. This is followed by the context of the study, which presents an examination of the situation in Jamaica³, the method used in the research, the results and the discussion of the results. The paper concludes with recommendations and the implications of the findings for research and policy development.

LITERATURE REVIEW

What is Social Entrepreneurship/Enterprises

The phenomenon of social entrepreneurship is not new, however the way it is articulated seems to be just emerging, generating significant attention in the scholarship (Williams and Knife 2012 and Shane and Venkataraman 2000). From as early as Marcus Garvey in the 1930s (Knife et.al 2011) to the present, there have always been organisations and individuals who sought to meaningfully transform the lives of citizens. Though some of these interventions have not been sustained and are flawed within the approaches, the efforts are noteworthy. This has spurred increasing interest in their activities (Mair and Marti 2006 and Alvord et al 2004), despite meaning different things to different actors (Ramirez 2012 and Dees 1998). As argued by Williams and Knife 2012, this inconsistency in some of the definitions, theoretical development and boundaries are not surprising given that this is a field of study in its developmental stage.

Some researchers view social entrepreneurship as not for profit intervention strategies that generate social value in critical non-traditional sectors (Peredo and McLean, 2006 and Pomerantz, 2003). In explaining this concept Mair and Marti (2006) argues that it is a process of generating social change and addressing social needs by employing innovative approaches in attaining the objective. Increasingly the emphasis is on the social value generated from these innovations in addressing these needs (Williams and Knife 2012 and Bornstein and Davis 2010). The discussions surrounding the discipline are wide and varied, with the general consensus that social entrepreneurship is the process of creating social value (Martin and Osberg 2007). In keeping with this thinking the SSA examined are considered to be among the various forms of social enterprise (SE) venture aiming to create social value as change agents⁴.

Dees from the 1990s advised that understanding social entrepreneurship could be gained through understanding the attributes of the social entrepreneur and their role as change agents in the society (Dees, 1998). He emphasized their focus on their mission to create value, exploiting opportunities to fulfill this mission through continuous timely innovation applying with a focus on accountability to its targeted. Peredo and McLean (2006) argues additionally that these social entrepreneurs are willing to take above-average risks in generating and distributing social value

and are not discouraged by scarce resources in carrying out their objectives. Martin and Osberg (2007) argue that the emphasis should be on the value proposition, which is focused primarily on large-scale transformation of society. These attributes of a social entrepreneur may not be captured in any one individual or group. Hence individuals or groups may display various elements and thus, in some degree, be defined as social entrepreneurs. Seelos and Mair (2005) go further to show that social entrepreneurs not only create social value, but also develop models to do so. Increasingly research have agreed that this is a core function of social entrepreneurs and social enterprises, with an emphasis on measurability (Clark et.al 2012, Leviner 2006, Tuan 2008, Kushner 2002) and sustainability (Brooks 2008, Tuan 2008, Kushner 2002)

Social Value Creation

Ever since Ashoka began assessing how their partners measure their impact on the constituency, interest has grown in the operations of these entities and their potential to be change agents. This is done within the context of them operating as social entrepreneurship driven entities. Nichols and Cho (2006) examines these organisations as distinct entities engaged in activities mapped across three dimensions; sociality, market orientation and innovation. The authors highlight that these activities can be linked to sociological theories, which can help unearth conceptual issues relevant for social entrepreneur. Other researchers (Caffagi and Iamiceli 2008 and Alvord et.al. 2004) highlight the need for core innovation for capacity building and building movements as recurring elements in successful ventures.

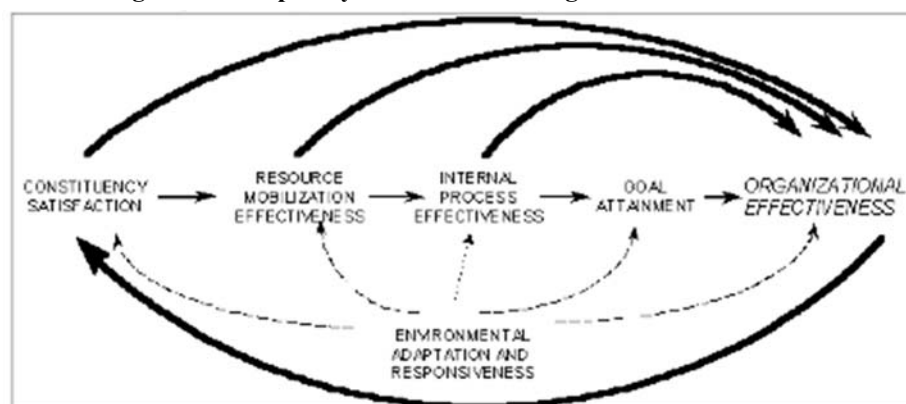
Other researchers however speak more directly to resource access, use and measure of returns on the investment (Brest et. al 2009, M. Martin 2008 and M. Chertok et al. 2008,). Anderson and Dees (2006) argue the imperative of sound and diversified earned income strategies within these organizations to bolster sustainability. Austin (2006) speaks to the practice of these organizations of employing smart management techniques to support these income strategies. Applying these management practices is important, as organisations must account for the resources they receive and evidence how do they use these resources to create social value (Tapsell and Woods 2010, Rangan et.al 2009 referenced in Weissman 2009 and Schorr 2006).

There are several operational models which organisations adopt in their efforts to create social value. Alter (2006) argues that all social enterprise models fall into three 'archetypal categories...according to the level of integration between their social programmes and business activity: embedded, integrated and external. He further argues that there are at least seven operational models for social enterprises, all with some enterprise component, which helps to sustain the interventions. These interventions are expected to generate measurable social value according to Tuan (2008). Tuan (2008) identifies eight integrated cost approaches to measuring and/or estimating social value creation.

The estimated social value creation gives insight to the effectiveness of the organization in doing so. For over 15 years Kushner (1996 and 2002) has employed a model which successfully examines the effectiveness of social enterprises in creating social value.

Kushner (2002) model 'An Open Systems Model of Organisational Effectiveness' highlights the following five components as essential in understanding how effective social enterprises are in generating social value; Satisfaction of constituents, Resource Adequacy, efficiency of operation, Attainment of enterprise goals and ability to adapt to a changing environment. His research revealed that there is a positive feedback loop among elements of organisational effectiveness; which depends on the organisations' ability to adapt and its resource adequacy as outlined in the diagram below.

Figure I: An Open Systems Model of Organisational Effectiveness



Sourced from: Kushner 2002, p.7, Action Research Inventory of effectiveness measures

Thousands of organizations receive funding to undertake projects geared at improving the social well being of their beneficiaries. Many questions has been raised especially in developing countries as to whether or not this has been achieved, the effectiveness of this process and the justification for continued support for this sector. Research is sparse on this area, especially in developing countries and in particular Latin America and the Caribbean. These social sector actors are not like a regular enterprise where its effectiveness can be measured via traditional 'profits and/or return on investment', the social enterprise's primary aim is not to make profit but to add social value in a sustainable way.

Study Context – Jamaica

Jamaica presents itself as a paradox ranked 79 in the world on the Human Development Index HDI (UNDP Human Development Report 2011), yet having a third of its population (total population approximately 3 million) living below the poverty line (Thompson 2012). Jamaica also ranks in the top three countries in the world in annual violent death (2011, Geneva

Declaration on Armed Violence and Development Report) in addition to having a corruption index suggesting that corruption is the norm. However, Jamaica is ranked number 1 in the Caribbean and in the top 40 countries in the world in terms of happiness index, according to the UN 2012 World Happiness Report, (UN 2012) and number 6 in the world based on the Happy Planet Index 2012 (NEF 2012) among 152 countries. Jamaica is also ranked in the top ten countries in the world in terms of entrepreneurial start-ups (Williams and Knife 2012, GEM 2010) but has one of the worst ranks in terms of macro economic stability, ranking 129 out of 132 countries (World Economic Competitiveness Index Forum, 2010). Jamaica presents a scenario with seemingly many problems, however these represent significant opportunities to, in many cases, transform these undeveloped resources (Beckford 1972) within the country, in particular the human resource. Opportunities abound especially in areas of the Creative Industries, Neutraceuticals and functional foods (UNEP 2009 and Clayton et.al 2011)

Within this paradoxical context, many organizations, state (Jamaica Constabulary Force (JCF) and other state led social development agencies) and non-state actors (including, Endowments, Foundations, Religious organisations, Community Based Organisations and other groups) have developed various programmes to engage ‘at risk youths’ and support sustainable community development (UNDP 2012, USAID COMET 2011a, USAID COMET 2011b, USAID 2011c and USAID COMET 2010). Billions of dollars have been spent over the past decades, however there has been no meaningful change in the reality of many of the targeted beneficiaries. On an annual basis, Jamaica receives in excess of (Ja\$9 billion) in Official Development Assistance. Additionally, local foundations and endowments spend millions every year, yet the situation remains the same, with sparse successes, but in most cases worse. The fundamental concern has been the lack of consistency, continuity and sustainability of the intervention strategy (Williams and Knife 2012, UNDP 2009). Ultimately, this raises the question of effectiveness of these service providers in generating sustained social value.

This is increasingly a cause for concern when viewed within the context of institutions that play a significant part in service provision; the church, politicians and the local police (Jamaica Constabulary Force), are the three least trusted institutions in the country (LAPOP 2010). These groups are key players in the intervention process of increasing citizens’ security and quality of life. Research done on the Jamaica Constabulary Force (JCF) in particular has highlighted the need for a strategic alliance among all stakeholders if there is to be success in building community safety and security (USAID COMET 2011a, USAID COMET 2011b, USAID 2011c and USAID COMET 2010). Failure to do so provides an opportunity for others to seize the opportunity to further their own intent, which in some cases can be illegal and/or criminal (Williams and Knife 2012, USAID COMET 2011a, Knife and Haughton 2012).

The lack of trust among key stakeholders places the responsibility of leading the process in the hands of non-state actors (NGOs, CBOs, foundations and endowments as well as other groups). As such their sustainability and effectiveness is crucial. Failure of these non-state actors will result in increasing frustration and ‘consultation fatigue’ among the targeted beneficiaries.

Additionally it will serve to further erode the trust between the targeted population and these organisations. This would result in a worsening situation of limited social, economic and political capital (Knife and Haughton 2012) among already disenfranchised and isolated sections of the population.

DATA AND METHODOLOGY

The instrument assesses the following components:

1. The organisations vulnerability/sustainability and
2. The organisations effectiveness in creating social value

In ascertaining the organisations' effectiveness in creating social value three areas were considered:

- a. How does the organisation measures value, the technique applied
- b. The organisation's perception of its effectiveness in generating social value
- c. The significant variables that impacts the organisations' effectiveness in creating social value.

From this analysis social sector actors can evaluate their performance in this respect and unearth strategies of becoming more effective in carrying out this function. The assessment of each organization was carried out in September 2011 in a variety of organisational types such as; churches, foundations, endowments, social enterprises, etc.

The data was collected from a total of 82 organisations in Jamaica, comprising of NGOs, foundations, endowments and faith-based organisation, all of which consented that one of their primary objectives is to support the creation of social value among their beneficiaries.

Variables used in the study

The variables employed in the model are derived from Brooks (2008) and Kushner (2002) on organisational vulnerability and effectiveness respectively. These are as follows:

1) Sustainability/Vulnerability

The equations outlined below (adopted verbatim from Brooks 2008) were used to ascertain the level of vulnerability of the organization. It captures four key pieces of information regarding:

- a. **Equity Balance** – total assets (A) minus its liabilities (L) divided by total revenue (TR).

- b. **Equity balance** = $(A - L)/TR$ Higher equity generally lowers financial vulnerability.
- c. **Revenue Concentration** – financial vulnerability is high when organizations receive their revenues from relatively few sources. A common measure of revenue concentration sums the square of each revenue sources I , where s_i is a proportion of total annual revenues so, $(s_1 + s_2 + \dots = 1)$

$$\text{Revenue concentration} = (s_1^2 + s_2^2 + \dots)$$

A lower number for this measurement is better, indicating more revenue diversification

- d. **Administrative Cost** – are measured as a ratio of administration ADMIN to total cost (TC). That is: **Administrative costs** = $ADMIN/TC$. A high proportion of administrative costs lowers financial vulnerability because higher administration costs provides a ‘buffer’ against revenue shocks, in that these costs can be cut back without sacrificing the core mission.
- e. **Operating Margin** – the difference between total annual revenues and costs, as a percentage of annual revenues. That is: **Operating margin** = $(TR - TC)/TR$. A higher operating margin corresponds to a lower level of financial vulnerability

How does the organization measures value

In ascertaining how the organization measures social value, respondents were ask to indicate which measuring scale their organization uses in evaluating outcomes and impacts as outlined below:

1. Continuous (e.g. exactly how much revenue was received in the first year or the number of people served by the organization)
2. Rating scale (e.g. your organization might ask its beneficiaries to rate effectiveness on a five point scale, ranging from ‘very effective’ to ‘very ineffective’)
3. Binary (these are yes no measures, e.g. did your organization meet its funding raising goal for a targeted time period)

Organization’s perception of its effectiveness in generating social value

In ascertaining the thinking on how effective the organisations’ were in developing social value the following Yes or No questions were asked; wherein respondents circled Y (for Yes and coded as 1 in SPSS) and N (for No and coded as 0 in SPSS) where applicable.

1. Are the beneficiaries in your constituents satisfied (clients, donors, staff and volunteers)

2. Does your organization receive adequate funding to implement its programmes
3. Is your organization efficient in its operations
4. Is your organization attaining its stated goals and objectives
5. Is your organization able to adapt to the changing environment so as to attain its mission and vision during changing circumstances.

Indexes were created for all independent variables by summing all the questions under their respective columns. The results are also presented in table 1 below. The following is the list of descriptive statistics for each independent variable, and the questions, which were compounded to create them (A table with all questions can be found in Annex I at the end of the paper). All questions, which were written 'in the negative' were recorded in Statistical Package for Social Sciences (SPSS) to read in the positive:

Significant variables that determine organizational Effectiveness in Social value creation

Adopting the model from Krushner (2002) in conducting the empirical analysis in particular the econometric analysis; a Recoded Organisational Effectiveness was used as the Dependent Variable; with Constituency Satisfaction; Resource Adequacy; Efficiency; Goal Attainment and Ability to Adopt being the explanatory variables. This was used to generate as outlined below.

ECONOMETRIC APPROACH

To fully analyse the factors that contribute to the ability of social enterprises to create social value we corroborate our analysis with empirical evidence. The model recodes the dependent variable is "recoded organizational effectiveness" by summing horizontally the response to each question under organizational effectiveness and, recoding each response with 1-3 becoming zero (or not creating social value) and 4-5 becoming 1 (creating social value). The research essentially created a binary linear dependent variable, where in if an organization scores 3 or less it is deemed as not creating significant social value, and therefore these are recorded as zero. By so doing the Linear probability model the Multinomial logit and probit models, which correct for any disadvantages of the former can now be employed.

Consider the following specification:

$$OE = \alpha_0 + \alpha_1 CS + \alpha_2 RA + \alpha_3 E + \alpha_4 GA + \alpha_5 AA + \varepsilon \quad (1),$$

Where OE is organizational effectiveness, CS is Constituency Satisfaction, RA is Resource Adequacy, E is Efficiency, GA is Goal Attainment and AA is the Ability to Adapt.

The dependent variable OE is a binary variable equation (1) above is the linear probability model, the most basic model employed to analyze limited dependent variables. Given its disadvantages, see Wooldridge (2009), we also employ the logit and the probit models which increase robustness of the results.

The logit specification is as follows;

$$E(Y = 1) = \frac{1}{1 + e^{-(OE = \alpha_0 + \alpha_1 CS + \alpha_2 RA + \alpha_3 E + \alpha_4 GA + \alpha_5 AA + \varepsilon)}} \quad (2)$$

The logit is developed from the cumulative logistics function while the probit model is derived from the normal cumulative distribution. The probit is just the normal cumulative distribution function of equation (2) above.

All three models are expected to provide similar results with the linear probability model being least reliable. Using all three models in our analysis however, will make our results more robust.

FINDINGS AND RESULTS

Organisational Sustainability/Vulnerability.

This section of the instrument was used to assess the organisations' risk and sustainability vulnerability. None of the 82 respondents opted to respond to this section of the instrument. As such no concrete statements can be made on the vulnerability of these organisations. One can infer however that given that less than half of the respondents acknowledged that they have adequate resources; and that vulnerability fundamentally questions adequacy of resources (administrative cost, equity, revenue concentration and operations margin), the majority of these organizations are vulnerable and might not be sustainable or effective in creating social value.

Organizational Effectiveness

How the organization measures social value; the scale use

The output reveals that the organisations employs more than one measuring instruments in measuring social value creation. Among the 70 respondents who indicated to the use of a Continuous approach 90% (63) says yes while 10% (7) said no. Among the 53 respondents who indicated that they use a Rating Scale 62.3% (33) says yes while 37.5% (20) said no. Among the 50 respondents who indicated that they use a Binary approach 58% (29) said yes, while 42% (21) said no. Of note, only 4 respondents indicated that they did not use any measuring scale, while 15 indicated that they use all the listed measuring scale.

The organization's perception of its effectiveness in generating social value

The table below represents the results. 56 of the organizations responding were listed as “effective” in creating social values, of the 82 respondents.

Recoded Organizational Effectiveness					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Effective	26	31.7	31.7	31.7
	Effective	56	68.3	68.3	100.0
	Total	82	100.0	100.0	

The descriptive statistics for the dependent and the predictor variables are show in the table below.

Statistics							
		Recoded Organizational Effectiveness	Constituency Satisfaction	Resource Adequacy	Efficiency	Goal Attainment	Ability to adapt
N	Valid	82	82	82	82	82	82
	Missing	0	0	0	0	0	0
Mean		.68	40.60	29.79	37.33	22.96	21.99
Median		1.00	40.00	30.00	36.00	20.00	22.00
Mode		1	40	29 ^a	36	18	22
Std. Deviation		.468	5.199	5.120	4.386	9.812	3.137
Minimum		0	26	17	26	9	11
Maximum		1	50	44	50	45	29
a. Multiple modes exist. The smallest value is shown							

- For **Constituency Satisfaction** the mean was 40.60 with a standard deviation of 5.2, a minimum score of 26 and a maximum score of 50.
- For **Resource Adequacy** the mean was 29.79 with a standard deviation of 5.1, a minimum score of 17 and a maximum score of 44.
- For **Efficiency** the mean was 37.33 with a standard deviation of 4.4, a minimum score of 26 and a maximum score of 50.
- For **Goal Attainment** the mean was 22.96 with a standard deviation of 9.8, a minimum score of 9 and a maximum score of 45.
- For **Ability to Adapt** the mean was 29.99 with a standard deviation of 3.14, a minimum score of 11 and a maximum score of 29.

From the descriptive statistics, the mean value for organizational effectiveness is 68%. This reveals that on average 68% of the organisations consider themselves effective in creating social value. A little more than 50% also indicated that they think that they are effective in satisfying the constituency needs. A little less than 50% indicated that they think the resources available to them are adequate to make their organization effective in creating social value.

Approximately 50% of the organisations reveal that they consider themselves efficient in creating social value. Likewise less than half of the organisations indicated that they are effective in creating social value (that is attaining their goal). Finally more than 50% of the respondents also acknowledge that they are effective in adapting to the changes in generating social value.

The significant variables that impacts the organizations effectiveness in creating social value.

The correlation matrix shown below of all variables suggests significant levels of correlation among some of the variable. Constituency satisfaction is significantly correlated to Resource Adequacy, Efficiency and Ability to Adapt.

Table 1: Correlations							
		Recoded Organizational Effectiveness	Constituency Satisfaction	Resource Adequacy	Efficiency	Goal Attainment	Ability to adapt
Recoded Organisational Effectiveness	Pearson Correlation	1	.175	.518**	.226*	-.126	.342**
	Sig. (2-tailed)		.116	.000	.041	.259	.002
	N	82	82	82	82	82	82
Constituency Satisfaction	Pearson Correlation	.175	1	.306**	.485**	-.050	.301**
	Sig. (2-tailed)	.116		.005	.000	.656	.006
	N	82	82	82	82	82	82
Resource Adequacy	Pearson Correlation	.518**	.306**	1	.598**	-.002	.151
	Sig. (2-tailed)	.000	.005		.000	.987	.177
	N	82	82	82	82	82	82
Efficiency	Pearson Correlation	.226*	.485**	.598**	1	.145	.227*
	Sig. (2-tailed)	.041	.000	.000		.192	.040
	N	82	82	82	82	82	82
Goal Attainment	Pearson Correlation	-.126	-.050	-.002	.145	1	-.006
	Sig. (2-tailed)	.259	.656	.987	.192		.960
	N	82	82	82	82	82	82
Ability to adapt	Pearson Correlation	.342**	.301**	.151	.227*	-.006	1
	Sig. (2-tailed)	.002	.006	.177	.040	.960	
	N	82	82	82	82	82	82
**. Correlation is significant at the 0.01 level (2-tailed).							
*. Correlation is significant at the 0.05 level (2-tailed).							

Resource Adequacy is also significantly correlated to Efficiency while Goal Attainment is not significantly related to any variable. This is consistent with the findings of Kushner, which outlines that there is a positive feedback loop among the variable identified.

All three tables below, the Linear Probability model, the Probit and Logit Models all reveal that across all models, Resource Adequacy and Ability to Adapt are the two significant

variables at the 95% confidence in explaining organizational effectiveness in creating social value.

Table 2: Results from the Linear Probability model						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.039	.455		-2.285	.025
	Constituency Satisfaction	-.001	.010	-.016	-.145	.885
	Resource Adequacy	.053	.010	.577*	5.052	.000*
	Efficiency	-.018	.014	-.165	-1.296	.199
	Goal Attainment	-.005	.004	-.100	-1.075	.286
	Ability to adapt	.044	.014	.297*	3.100	.003*
*Means significance at the five percent level						

Table 3: Results from the Probit Model							
	Parameter	Estimate	Std. Error	Z	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
PROBIT ^a	Constituency Satisfaction	.016	.015	1.054	.292	-.014	.045
	Resource Adequacy	.034	.015	2.270*	.023*	.005	.064
	Goal Attainment	-.001	.006	-.191	.849	-.013	.010
	Ability to adapt	.062	.023	2.682*	.007*	.017	.107
	Efficiency	-.037	.019	-1.963	.050	-.075	.000
	Intercept	-3.765	.633	-5.948	.000	-4.398	-3.132
*Means significance at the five percent level							

Table 4: Results from the logit Model							
	Parameter	Estimate	Std. Error	Z	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
LOGIT ^a	Constituency Satisfaction	.038	.039	.982	.326	-.038	.114
	Resource Adequacy	.082	.038	2.131	.033*	.007	.157
	Goal Attainment	-.003	.015	-.203	.839	-.032	.026
	Ability to adapt	.164	.061	2.669	.008*	.043	.284
	Efficiency	-.095	.049	-1.955	.051	-.190	.000
	Intercept	-8.122	1.570	-5.172	.000	-9.692	-6.551
*Means significance at the five percent level							

DISCUSSION

Organisational Sustainability/Vulnerability

Effectiveness in creating social value is inextricably linked to organisations vulnerability vis-a-vis sustainability. It was anticipated by the researchers that many organisations would be reluctant in completing this form as it questioned their financial stewardship. Generally it has been found that organizations generally do not willingly divulge this kind of information.

Especially when they suspect that their operations might need better financial stewardship. However vulnerability was included as the willingness to respond is used as a proxy indicator of how financially organized the entity is. It also speaks to accountability and transparency of these service providers, two critical elements in good governance practice in organisations.

The outcomes were worse than anticipated; none of the 82 organisations completed this section of the instrument. As such, there can be no definitive statement made on the sustainability/vulnerability of these institutions. However implicitly this suggests that the organisations are not comfortable in disclosing this kind of information. One can fairly infer that an organization which is certain of its financial stewardship and accountability should be willing to make public this kind of information; especially when such organisations receive grants and exemptions from various sources. Note however that this might also be on account of the competitive nature of the environment within which the organisations work and the possibility that it might inhibit additional funding or be used by external actors.

The frequency indicated that less than half of the organisations think that they have adequate resources to deliver their services. These resources would include financial resources, which constitutes the elements of vulnerability. This finding will support the argument that the majority of these organisations are indeed vulnerable. They do not have access to adequate resources and therefore are compromised in their ability to adapt, efficiently deliver their services to attain their goal of satisfying the constituency needs. A sound financial platform provides room for these organisations to leverage for additional resources including financial support. The reluctance to disclose information, does not speak well to their operations and further suggests that many of these organisations might indeed be unsustainable and are vulnerable.

In assessing how the organisation measures social value and which scale it uses, the findings are instructive in a number of ways. Firstly the majority of respondents have indicated that they use some measuring scale; some indicating that they use multiple measuring scales. This suggests that these organisations should have data available to guide their internal analysis and evidence how they measure social value. This then raises the question surrounding reluctance in completing components which speaks to organizational vulnerability.

The majority of respondents also indicated that they perceive themselves to be effective in generating social value. This is within the context where the majority also thinks that the resources they have access to are inadequate. The positive here is that the attitude is right as these organizations seem not to be deterred by inadequate resources. However it reveals the need for dialogue with these organizations as to how evidence of social value creation, as revealed by their accounts, can be used as leverage to access more resources.

An acknowledgement that there is a measuring scale and that organisations are creating social value is inconsistent with being reluctant to share this information. This can raise questions about the honesty of the indication on the former two. This results in a 'lose-lose' situation for the organization, as it cast doubt on the forthrightness of the information share and it

loses the opportunity to generate evidence that the organization is sustainable. Essentially what could be transformed into a 'win-win' for the organization becomes a lost opportunity, with a potentially high cost.

The results from all three models; the linear probability model, the logit model and the probit model show that resource adequacy and ability to adapt are the factors that significantly affect organizational effectiveness. All three models report a significant positive relationship between an organization level of resources, their ability to adapt and their overall effectiveness. Our results support the claim that the more access to resources and adapted firms are the more effective the organization will be in creating social value. On the contrary the results from all three models show that Constituency Satisfaction, Efficiency and Goal Attainment has no significant impact on ones perception of organizational effectiveness.

The overall findings supports that 'Adequate Resources' currently is the precondition for effective social value creation among the social sector entities. This access to resource will impact positively the organisations ability to adapt. These two being the significant drivers thus provides a more solid platform upon which the organisations can become more efficient in attaining their goals of satisfying the constituency needs.

IMPLICATIONS

Several stakeholders serve to benefit from the findings of this result. These results provide them with empirical evidence to support the development of their strategies.

International funding agencies, which provide grant funding will benefit in several ways. The instrument can be employed to assess how their social sector actors (NGOs and CBOs and other registered groups) are effective in creating social value. It also provides clear ways in which social sector actors can measure how they create social value using any of the scales listed. It allows for the creation of an effectiveness index using the output as baseline data. This can be used to conduct consistent evaluations over time; facilitating time series and comparative analysis within and among organisations. It can be used to employ panel data and pooled cross sectional data techniques. As such it is strongly advised that international donor agencies adopt this technique as it provides a platform upon which they can justify the funds they receive from their donors. These agencies can use information to identify gaps in the social sector actors and what capacity building programmes should be funded. This therefore allows their funding strategies to be more focused and targeted.

At the national level, this can be used to inform policy surrounding developing incentive schemes to support Social Sector Actors. Therefore if an organisation is found to be consistently ineffective, then the gaps can be identified and strategies developed to strengthen their capacity to deliver. Additionally the information generated can be used to determine whether the organisation should continue receiving incentives from the State depending on their effectiveness in generating value. This provides a more transparent and objective approach for funding

decisions. This is critical especially among developing nations in which many decisions are suspected of corruption and political inconsistencies.

Social Sector Actors (Foundations, Endowment)

These organisations are charged with the primary responsibility of interfacing with the key beneficiaries, the community. This relationship generally tends to be one for the long run as many of the problems they seek to address are systemic in nature. As such consistency and sustainability are key considerations, as the focus is on the impact being self-sustaining. Within this context the research findings are key for these organisations. Applying this combined methodology to their organisation, it would unearth areas to address so as to make their organizations more sustainable; less vulnerable to shock factors. The findings will also guide these organisations on what key areas they should focus in order to be more effective in creating social value. Applying this approach to monitoring and evaluating their performance provides the organisation with information that can be used to leverage for further support. From the findings it would be evident as to how effective they are creating social value.

Communities

Many communities suffer from ‘consultation fatigue’ after decades of consultation with little sustained interventions. While the communities will not benefit directly from organisations adopting this form of model, the benefits and impact to be accrued should increase. These organisations should become more efficient in their operations. They would also be more responsive to the changing environs within the communities. Their financing portfolio should be stronger as they are better able to leverage for greater support given evidence of their impact. As the service providers become more effective in creating social value, the quality of lives of the beneficiaries should improve. In keeping with Kushner’s model a positive feedback loop is established, which is self-sustaining. The community therefore benefits significantly as the impact is not temporary and can be replicated in other communities once contextualized.

CONCLUDING THOUGHTS

For many developing nations, the not-for-profit sector is a key player in the transformation process. However, this process requires sustained intervention for strategies that are themselves self-sustaining. Two of the critical elements for consideration regarding the sustainability are that of vulnerability of the organizations to shock factors and their effectiveness in creating social value. These components, among others, could form a part of the criteria upon which social sector actors leverage continued funding support and other forms of incentives.

The paper accepts the counterfactual, which argues, ‘what would have been happening if these organisations were not doing what they were doing?’ The obvious response is that things might have been worse. Within this context, the findings present ways to strengthen efforts of these organisations, providing guidance on the organisations sustainability and effectiveness.

The findings reveal that resource adequacy and the organisations ability to adapt are the significant factors that explain organisational effectiveness. While there is evidence that many organisations have access to resources, more than half of them think that the resources are inadequate. Reflecting on Kushner’s model suggests therefore that if the components that are critical are not supported then the model is unsustainable. Inadequate resources impede the organisations ability to adapt to changes within the environment. This results in a less than suboptimal service delivery.

The message is clear from the data that the focus for policy support and capacity building within these service providers should focus on two areas; resource adequacy and adaptability. Addressing these two areas will also render the organisations less vulnerable. This evidence of sustainability will generate positive multiplier effects among all stakeholders, which will support the long-term impact of the intervention. Essentially these social sector actors will transform into Social enterprises; organisations that implement intervention strategies that are self-sustaining; usually supported by enterprise, directly, indirectly or not related to the intervention strategy itself.

ENDNOTES

1. All of these organisations from this point will be referred to as social sector actors (adopted from Tuan 2008)
2. See Section on Data and Methodology for more detail description of the elements use to formulate the model.
3. The situation in Jamaica mirrors that which exist in the English speaking Caribbean and other develop countries in the Commonwealth; which generally tends to have the similar historical experiences and outcomes.
4. Given that social sector actors can be classified as a form of ‘Social Enterprises’ (SE) they will be referred to as such from this point onwards in the paper.

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APPENDIX I: QUESTIONS ASKED

Adequacy of Resource	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
Your organization have diversified financial resources and resource development programs					
There is adequate human resources to deliver service, attract resources, and promote mission					
Your organization have adequate Intellectual capital: knowledge, judgment, unique skills, and/or individuals					
There is adequate diversity in gender, age, location, and ethnicity consistent with local setting					
Your organization does not have adequate leadership resources that provide vision and strategic direction					
Your organization have adequate physical resources and infrastructure in headquarters, branches and sites					
Your organization does not have adequate purchasing and procurement skills to optimize the use of financial resources					
Your organization have adequate technology and infrastructure resources: IT, logistics, telecom, MIS					
There is adequate ability to exploit interactions between resources					

Efficiency of Operations	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
Your organization has efficient recognizable systems of decision making, team development and conflict resolution					
Your organization has efficient and effective internal communications					
In your organization there is efficient logistical capability appropriate to provide services					
Your organization does not have efficient means to develop staff, volunteer, management, and leadership resources					
Your organization has efficient control and reporting tools for budgeting, planning, reporting and audits					
Your organization does not have efficient processes for organisational learning and development					
Your organization has efficient guidance and reviewing processes by a governing board					
Your organization has efficient systems in place for strategic planning and service evaluation					
There is evidence of growing productivity with appropriate capacity					
There is evidence of resources used in an ethical and just manner					

Attainment of goal	Strongly Agree	Agree	Neither agree or disagree	Disagree	Strongly disagree
Your organization uses long-term, strategic planning to achieve the mission					
Achieves its long-term, strategic goals					
Your organization has a program development strategy to respond to vulnerability					
Your organization achieves its program goals					
There are effective administrative plans (operations, structure, budget, resource use)					
Your organization adequately achieves its administrative goals					
Your organization has effective operational planning to deliver services according to strategy					
Your organization has achieve its operational goals					
Your organization evaluates outcomes against goals at strategic, program, administrative, operational levels					

Evidence of constituent satisfaction	Strongly Disagree (1)	Disagree (2)	Neither Agree Nor Disagree (3)	Agree (4)	Strongly Agree (5)
Your legal status and statutory base meets the enterprise's needs					
Your mission statement is current, applied, and helps you to guide action					
There is evidence of responsiveness to beneficiary needs					
There is accountability to the community via a governing board					
There is involvement of beneficiaries and other stakeholders in program decisions					
There is dissemination and communication of results and its needs					
The intervention has helped you to build coalitions, partnership and networks					
There is excellent relationships with principal government departments					
There is excellent relationships with principal sources of funds					
There is a public image of integrity, cooperation and capability					

Ability to adapt	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
Your organization effectively adapts to constituency change					
Your organization effectively adapts to changes in resources availability					
Your organization does not effectively adapts to changing managerial practices					
Updates goals when appropriate					
Your organization does not responds to evaluations					

Your organization effectively adapts and implements new knowledge and practices					
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PREDICTORS OF ENTREPRENEURIAL VENTURE EXPLOITATION TENDENCIES: ROLE OF GENDER, EMOTION, MOTIVATION AND ROLE MODEL ACCESSIBILITY

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ABSTRACT

This study examines the indirect relationship between entrepreneurial emotions and venture exploitation tendencies. The study conceptualizes a gender based framework that looks at the mediating effect of motivation and the additional moderating effect of entrepreneur's role models. General positive and negative emotional states are considered plus motivation to start a venture, role model accessibility and their venture exploitation tendencies.

INTRODUCTION

With an economy slowly emerging from a recession, entrepreneurship is an important factor for many countries. Therefore, entrepreneurial venture exploitation tendencies are a researched issue that has importance in the economic realm (Shane, 2000). Due to high unemployment levels (Bureau of Labor Statistics, 2012), there is an increasing number of entrepreneurs and as a result, the business world, regulatory agents and researchers in the entrepreneurial field are taking notice. One area with limited and fragmented theoretical and empirical research surrounds the impact of gender on entrepreneurial cognition and emotions (Brundin, Patzelt, & Shepherd, 2008; Cardon, Wincent, Singh, & Drnovsek, 2009; Corbett, 2007; Corbett & Hmieleski, 2007); hence an increasing interest for research regarding this topic. Welp et al. (2012) called for more research examining the influence of positive emotions on genders' entrepreneurial activity. Foo (2009), on the other hand, called on an investigation of how other emotion-related concepts influence entrepreneurial motivation. To understand entrepreneurial decision making, Breugst, Domurath, Patzelt, and Klaukien (2012) called for more studies that look at the impact of entrepreneurial passion on venture success. In addition, in the field of motivation, studies are advocating for a new process regarding the ways in which individuals manage themselves, as well as their thoughts, emotions, social interactions and time (O'Shea, 2011). The feeling-as-information theory depicts this cognitive functionality as sources of information that influence judgment (Schwarz, 2011). Moreover, the entrepreneurship process requires personal dedication and effort, and as a result, the cognitive and psychological push that leads individuals into pursuing entrepreneurial ventures is viewed as central to the explanation of

entrepreneurship since time immemorial by some of the classical researchers such as Knight (1921) and Schumpeter (1934).

In their 2010 study, Bonte & Jarosch highlighted psychological factors' importance by arguing that a cluster of psychological characteristics related to the tasks of an entrepreneur in an early stage of the entrepreneurial process is conducive to the business creation activities of employees. Using data sets from multiple countries, the study found that individuals' entrepreneurial aptitude (a cluster of psychological characteristics such as proactiveness, competitiveness, general self-efficacy, general optimism, and internal locus of control) positively affects employees' preference for being self-employed as well as employees' entrepreneurial intentions. Furthermore, the study found that the cognitive and psychological factor differences between men and women in entrepreneurship were clear and would affect either gender differently. All these cognitive and psychological variables contribute to the inner working of entrepreneurs which influences their emotions and motivation and as a result their judgment in exploiting ventures.

According to the feeling as information theory, our inner emotions and feelings inform us about our current external situation (Schwarz, 2011). Therefore, even though internal factors such as emotions and motivation have a role to play in entrepreneurship, the importance of their interaction with other external experiential factors cannot be undermined. One such factor is role modeling. Since emotions are influenced by situational factors surrounding individuals, a role model as an external factor elicits positive or negative emotions that may have implications on an individual's goals (Schwarz, 2011). Earlier scholars such as Mitchell and Krumboltz (1984) proposed role models as an important experiential factor in forming career preferences and making a career path salient to the observer. The subjective impact of role models is noted to be a strong predictor of future entrepreneurial activities (Scott & Twomey, 1988; Krueger, Reilly, & Carsrud, 2000). This is because role models may act as mentors and may be seen as exemplars that are worthy of emulation. Additionally, role models affect entrepreneurial intentions primarily if they affect attitudes such as self-efficacy, emotions and motivation (Krueger, 1993; Scherer, Adams, Carley, & Wiebe, 1989). As research gradually increases on how cognitive emotions, role modeling and motivation interplay to affect people's decision to exploit entrepreneurial opportunities, understanding the significant connections between these three factors will contribute greatly to the current body of literature. Therefore, many authors (Baron, 1998; Baron & Ward, 2004; Mitchell et al., 2007; Grichnika, Smejaj, & Welpec, 2010) are emphasizing the importance of cognition within the entrepreneurial context.

The individual-opportunity nexus paradigm (Shane, 2003) exemplifies that entrepreneurship is primarily about opportunity characteristics and an individual's opportunity evaluation and exploitation (Shane & Venkataraman, 2000). As a result, situational differences that people encounter differentially affect their inner functioning when analyzing opportunities (Schwarz, 2011). In addition, once an entrepreneur exploits an opportunity and creates a business, his/her personality and other attitudinal characteristics are visible on the organization's

culture throughout its life span (Hofstede, 1980; Denison, Lief, & Ward, 2004). Therefore, understanding the inner emotional and motivational characteristics of these entrepreneurs before and after setting up their businesses may assist researchers in understanding business personalities (Denison, Lief, & Ward, 2004) and venture exploitation tendencies (Hofstede, 1980). Both extrinsic and intrinsic entrepreneurial characteristics are important in predicting entrepreneurial exploitation tendencies and therefore, research on the cognitive and emotional process of individuals should be considered to give a clearer picture (Welpel et al., 2012). As empirical research grows on the role of emotions in entrepreneurial decisions (Chen, Yao, & Kotha, 2009; Foo, 2009), our study attempts to build on the existing theories by creating a theoretical framework on the indirect influence of emotions on entrepreneurial opportunity exploitation tendencies.

GENDER AND VENTURE EXPLOITATION

Different studies found disparities with respect to business ownership among men and women. For example, it has been found that men are more prone to starting businesses in manufacturing, construction and technology (Olsen, 1993; Manolova et al., 2008) while women start more businesses in the service and retail sector (Hisrich & Brush, 1983). Additionally, women are more likely to pursue both economic and social goals, which affect the performance and growth potential of a business (Bird & Brush, 2002). Looking at gender, self-efficacy and career intention, Wilson, Kickul and Marlino (2007) found that especially in the realm of entrepreneurship, females showed significantly lower entrepreneurial self-efficacy than males in both middle/high school and in MBA programs. While gender stereotypes and expectations were not directly measured in Wilson's et al. (2007) study, a premise was made that expectations imposed by society influence self-efficacy at an early age, long before actual experiences take place that may further shape or solidify one's self-confidence in different domains (Eddleston, Veiga, & Powell, 2006; Wilson, et al., 2007).

Another study by Kepler and Shane (2007) found no differences between gender and performance. However, variations between men and women in terms of expectations, motivation, business types and opportunities sought were found. Women entrepreneurs have fewer role models available to them than men (Mattis, 2004). Nevertheless, the push/pull model (Brush, 1990) reflects the major categories of entrepreneurial motivation in women (Orhan & Scott, 2001). The pull factors such as independence, self-fulfillment and entrepreneurial drive (Ducheneaut, 1997) are related to the importance of a role model in encouraging and mentoring women to be better managers as well as entrepreneurs. Some other extrinsic variables that are found to influence women entrepreneurs include family structure, literacy, education, socio-economic environment, labor force, employment, and organizational forms (Minniti & Arenius, 2003). Even though these differences are noted, no gender disparities were observed when looking at the entrepreneur's education and the necessary qualifications required when starting or

growing a business (Fischer, Reuber, & Dyke, 1993). Therefore, research provides evidence that both external factors (e.g. education, family structure) as well as inner emotional and motivational dispensations (entrepreneurial drive, self-fulfillment) are an important factor for research in entrepreneurship.

The Feeling-as-Information theory depicts emotions as a direct influencing factor of judgment. These emotions serve as information regarding how an individual feels about the object of judgment (Schwarz & Clore, 2007). Using this theory, the study proposes that entrepreneurs' emotions (positively or negatively) have an indirect influence on entrepreneurial exploitation tendencies. Hence, the cognitive and situational experiences of an entrepreneur, that elicit positive and negative emotions, influence their judgment (Schwarz, 2011) when they choose a venture. Also, how an individual exploits entrepreneurial ideas is affected by their entrepreneurial motivational levels and partly by the availability of role models.

THEORY AND PROPOSITION DEVELOPMENT

Entrepreneurial Emotions and New Venture Exploitation Tendencies

To understand the benefits of innate characteristics of entrepreneurs, we review the work that has guided the entrepreneurial field with regards to the connection between emotions and venture exploitation tendencies. The Feeling-as-Information theory suggests that emotions provide stimulating signals (Martin, 2001; Schwarz, 2001; Bless, 2001) that offer additional information for deducing actions or reactions to a specific event or stimulus (Schwarz & Clore, 2003). The premise of the theory is based on a number of research studies. According to Wyer and Carlston (1979), people pay attention to their momentary feelings as a source of information as they form judgments. That is, they confer with their inner feelings before making a decision. People are said to use their feelings like any other source of information. Through the years, Positive Affect (PA) and Negative Affect (NA) have emerged as the two major dimensions of emotional experience (Watson, Clark, & Tellegen, 1988). In entrepreneurial literature, positive emotions are said to trigger a looser, less systematic, and more generalized and divergent thinking (Isen, 2001). On the other hand, negative emotions depict an environment that is faced with challenges, and this pushes people to find solutions and address the problem (Schwarz & Clore, 2003). Therefore, both are important factors in evoking entrepreneurial activities. Even though researchers agree on the fact that both positive and negative emotions have a role to play in the entrepreneurial exploitation process, fragmented research does exist in this area (Foo, Uy, & Baron, 2009). Cardon et al. (2009) proposed a theoretical model on the influence of entrepreneurial passion which identified intense positive emotions experienced by engagement in entrepreneurial activities as tied to venture growth. The positive emotions which individuals relate to positive goals, according to Cardon et al. (2009), enhance the willingness of

entrepreneurs to take the risks involved in venture creation, and they increase the willingness to allocate more resources to the venture.

The emotion maintenance theory also suggests that people self-regulate their behavior to reduce discrepancies between actual states and desired states (Carver, 2003). Therefore, negative emotions may increase the focus to attain a certain goal and may give a boost to the individual to work harder in order to achieve it (Schwarz, 2001). Conversely, positive emotions may indicate that goal attainment is going well and therefore, increase aversion towards actions that involve risk (Schwarz & Clore, 2003; Grichnika et al., 2010). The Grichnika et al. (2010) study also examined the impact of positive (joy) and negative (fear) emotions on distinct phases of the entrepreneurial process, and found that entrepreneurs who were induced into a positive emotional state were less willing to exploit new business opportunities than those that have not been induced into a positive emotion. However, the assumption that entrepreneurs who are induced into a negative emotional state are more willing to exploit new business opportunities than those that have not been induced into a negative emotional state was not supported. The theory also hypothesizes that negative emotions increase negative evaluation of a situation, therefore increasing discrepancies; while positive emotions influence the evaluation of a situation more positively, therefore decreasing the perceived discrepancies (Bower & Forgas, 2001). Due to the inconsistency of the results found in the literature, we hypothesize that emotions may not necessarily be directly associated with new venture exploitation tendencies and there may be other intermediaries that may affect this relationship. Therefore, the study proposes that there is an indirect relationship between entrepreneurial emotions and venture exploitation tendencies.

Proposition 1: An entrepreneur's emotions indirectly relate to venture exploitation tendencies.

Mediating Effect of Entrepreneur Motivation

According to the affective events theory work events or general individual activities produce positive or negative emotions for all individuals; which in turn directly shape work attitudes and judgment-driven behavior (Ashkanasy & Daus, 2002). Collins (1990) also argued that the interaction of these negative and positive emotions with socially constituted meanings helps individuals make sense of them. This interaction in turn expends an emotional energy, which when combined with symbolic and discursive resources, is used to motivate individuals (Collins, 2004). However, emotions are dynamic in nature and the emotional energy found within entrepreneurs is no different. Emotions generate entrepreneur self-efficacy to start a business. Nevertheless, for the emotional state to be effective other external factors that are rewarding or punishing to the emanating emotional behavior are involved (Jacoby, 1996; Goss, 2008). External rewards, for instance, in the form of respect from other people, result in entrepreneurs experiencing pride, which acts as a positive reinforcement to their business venture

behavior. On the other hand, punishment can be manifested by lack of respect from other people, which results in shame on an entrepreneur, which may in turn affect their subsequent behavior (Jacoby, 1996; Goss, 2008; Tangney & Dearing, 2002).

Different researchers have identified entrepreneurial motivational factors. Bartol and Martin (1998) classified motivation into three factors: personal characteristics, life-path circumstances and environmental factors. Alternatively, Hisrich and Brush (1986) came up with two motivational factors: push factors (e.g. frustration, job dissatisfaction, deployment, and divorce) and pull factors (e.g. independence, autonomy, education and family security). These factors, even though external, interconnect with the inner cognitive workings that push or pull individuals to become entrepreneurs. Internal factors such as job dissatisfaction and the need to be autonomous lead to entrepreneurial tendencies. They elicit a feeling that results in a decision to become an entrepreneur. Researchers such as Boyd and Vozikis (1994) recognized this while looking at the motivation of entrepreneurs, and included the concept of internal self-efficacy as an explanatory variable in determining both the strengths of entrepreneur intentions and the likelihood that they will be actionable. Self-efficacy was argued to provide insight into efficacy judgments which impacts one's behavior (Boyd & Vozikis, 1994).

In line with this argument, the dynamic nature of positive and negative emotions increases or decreases the motivational push and pull of women entrepreneurs. Therefore, we predict that emotions will influence a downward or upward effect on motivation to exploit new ventures. Entrepreneurs' motivational tendencies will in turn be associated with new venture exploitation tendencies. Motivation encapsulates the psychological processes that in turn directs and sustains human behavior (Mitchell & Daniels, 2003). Vroom's (1964) expectancy framework provides an explanation for an individual's motivation to start a new business. The framework suggests that an individual will choose among alternatives of available behaviors and pick the one that leads to the most desirable outcome. Motivation, therefore, is framed as the product of expectancy. Expectancy on the other hand equates to measures such as perceived feasibility and self-efficacy used to predict entrepreneurial intentions (Segal, Borgia, & Schoenfeld, 2005).

Self-efficacy is measured as a process (people's confidence to successfully perform a task), and an outcome (people's confidence to achieve results) (Segal et al., 2005). Given this inner emotional motivational mechanism that stirs action, the study proposes a direct relational connection between motivation and venture exploitation. Using the feeling-as-information theory we can deduce that emotions that lead to high motivation within entrepreneurs stimulates increased action on new venture exploitation tendencies, while emotions that lead to low motivation stimulates lesser action on new venture exploitation tendencies. Summarizing these arguments, we conceptualize that positive or negative emotions evoke differing levels of entrepreneurial motivation which in turn is related to entrepreneurial action in the form of new venture exploitation tendencies. In other words, entrepreneurial motivation tendencies mediate the effect of positive and negative emotions on new venture exploitation tendencies.

Proposition 2: An entrepreneur's positive emotions will be positively related to lower levels of motivation to exploit a venture.

Proposition 3: An entrepreneur's negative emotions will be positively related to higher levels of motivation to exploit a venture.

Proposition 4: An entrepreneur's motivation tendencies mediate the relationship between their positive and negative emotions and their actions aimed at exploiting new ventures.

Moderating Effect of Role Models

When people strive to achieve individual goals, they use their internal push factors such as motivation, as well as information cues from their external surroundings that is similar to what they are striving to accomplish. They usually notice and recall information relating to the pursuit of success by other individuals who they see as role models (Higgins & Tykocinski, 1992). People are motivated by both positive and negative role models (Lockwood, Jordan, & Kunda, 2002). For example, successful entrepreneurs and CEO's of organizations can be said to be positive role models. However, individuals experiencing misfortunes, such as an entrepreneur who was once successful and then lost everything due to bad decision making, may motivate people to take steps that avoid similar unpleasant outcomes. In addition, a role model can be made up of an informal relationship between two individuals where one person with more experience acts as a mentor in starting a business (Noe, 1988). Bandura (1965) argued that the influence of a role model occurs mainly through mastery of experiences, observational learning (imitation), and social persuasion. In an entrepreneurial context, Scherer et al. (1989) also suggested that through observation of entrepreneurial role models, individuals create perceptions that in turn affect expectations and self-efficacy, thus showing the effect of modeling on entrepreneurial intentions.

As earlier noted, women have fewer role models available to them than men (Mattis, 2004). However, the importance of a role model cannot be diminished. BarNir, Watson, and Hutchins (2011) looked at the effects of exposure to role models on preference for career choice. Using entrepreneurship as a career choice, they sought to find if the relationship between exposure to role models and entrepreneurial career intention is different for men and women. Their analysis did not support this relationship. However, due to fewer women role models, their analysis showed that role models affect women's entrepreneurial self-efficacy more than they affect men's entrepreneurial self-efficacy. Since the results also showed that entrepreneurial self-efficacy positively predicted career intention, the findings suggested that exposure to role models have both direct and indirect effects on career choice.

Based on the study's conceptual framework, we argue that entrepreneurs' access to role models maintains or boosts higher levels of motivation. This dynamic, in turn, is associated with

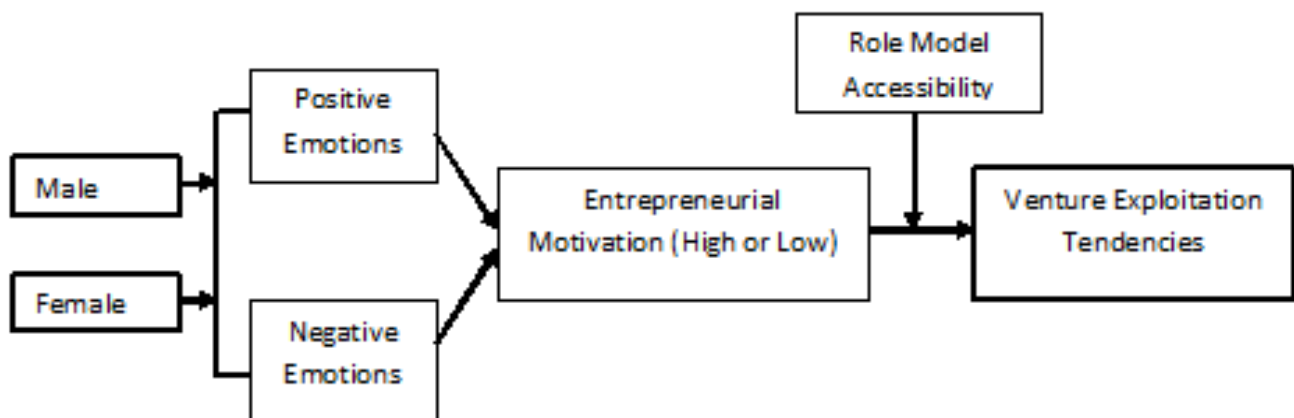
a higher tendency to exploit new ventures. We further qualify this proposition by proposing that the presence of a role model provides useful experiential information while exploiting new ventures. Specifically, we argue that even though positive and negative emotions may prompt different degrees of motivation in an entrepreneur, the presence of a role model positively affects this motivation (either low or high), and increases the tendency to exploit new ventures more than those without a role model. The mediated effect captured in proposition four varies when a nascent entrepreneur is exposed to a role model. The proposed positive relationship between nascent entrepreneur motivation and new venture exploitation tendencies is stronger when an entrepreneur is exposed to a role model.

Proposition 5: An entrepreneur's exposure to a role model moderates the effect of entrepreneurial motivation on venture exploitation tendencies. Thus, the effect is stronger when a nascent entrepreneur has access to a role model.

Figure 1 below illustrates the conceptualized framework. It displays 1) The indirect relationship between entrepreneurial emotions (positive or negative) and venture exploitation tendencies through entrepreneur motivation, and 2) The relationship between entrepreneur motivation and venture exploitation tendencies that is moderated by the accessibility to a role model.

Figure 1

Conceptual Framework



DISCUSSION

The study conceptualizes the role of gender, emotions, motivation, and role models on venture exploitation tendencies. Growing research in cognitive functioning shows that entrepreneurial behavior is highly unpredictable (Grichnika et al., 2010). Researchers, therefore, advocate for further research considering emotions and venture making decisions (Cohen, 2005). In the entrepreneurship field, studies on emotions enhance models of the psychology of the entrepreneur (Baron, 1998, 2008). However, studies examining emotions and business venturing primarily focus on the direct relationship between the two (e.g. Grichnika, et al., 2010; Welpe, et al., 2012; and Hayton & Cholakova, 2011).

Our model shifts the focus and looks at nascent entrepreneurs and argues that there is an indirect relationship between the exhibited entrepreneur's emotions and venture exploitation tendencies. The study suggests entrepreneurial behavior is indirectly affected by emotions through motivational phenomena. Based on existing literature on cognition and emotion, we propose that nascent entrepreneurs' positive emotions will be positively related to lower levels of motivation to exploit a venture while the negative emotions will be positively related to higher levels of motivation to exploit a venture. In addition, the study postulates that an entrepreneur's motivation tendencies mediate the relationship between their positive and negative emotions and their actions aimed at exploiting new ventures. The relationship between motivation and venture exploitation tendencies is moderated by the presence of a role model, and hence, the relationship was said to be stronger when a nascent entrepreneur had a role model.

IMPLICATIONS FOR THEORY AND PRACTICE

As an initial framework that focuses on the mediating effect of motivation and the additional moderating effect of entrepreneur's role models, this study has both a practical and theoretical contribution. In line with the feeling as information theory, this model captures the role of inner emotions in providing motivating signals affecting entrepreneurs' judgment and hence their behavior to exploit new ventures. In addition, the proposed relationship between entrepreneur motivation and venture exploitation, although consistent with the feeling-as-information theory, is also consistent with the entrepreneur motivational literature. Apart from the push and pull motivational factors that most entrepreneur motivation literature documents, this paper goes beyond this and looks at emotions as antecedent to entrepreneur motivation. Other theories such as the arousal theory of motivation literature suggest that people take certain actions to either decrease or increase levels of arousal (After, 1976). Therefore, positive and negative emotions ignite different arousal levels. The framework contributes to the theory by recognizing these arousal levels as behavioral tendencies that emanate from different states of

emotions which in turn affects entrepreneur motivation to start a business. The priming theory literature also supports the relationship between emotions and how individuals evaluate opportunities which leads to exploitation of the same. With the proposed framework, emotions are considered to be a major factor that affects entrepreneur decisions to exploit ventures. The focus on emotion and business further contributes to the priming theory literature.

Moreover, in leadership theories, research shows a connection between organizational culture and the business founders and how the founding principles continue to influence this culture (Schein, 1985). The proposed framework in the study gives insight into some of the inner emotional functioning that motivate business founders and thus enriches the historical connection to organizational culture literature. Looking at the practical implications of the study, entrepreneurs should be able to understand the cognitive and emotional facets that influence their decisions and choices. Therefore, inclusion of such information in learning materials through our institutions is beneficial.

CONCLUSION AND FUTURE RESEARCH

To build on the research, future studies should examine the antecedents of emotions. Entrepreneurial emotions are affected by different intrinsic and extrinsic factors (Gatewood, Shaver, & Gartner, 1995). Therefore, understanding the issues leading up to certain emotions and how they affect judgment on business venturing decision is an area that should be investigated further. In addition, the model should be quantitatively tested and the differences between genders as it relates to emotions and venture exploitation tendencies highlighted. Further work should also build on the framework by exploring differences in business venturing habits between respondents that had high motivation but no role model and those that had low motivation but had a role model. As entrepreneurship research expands, inquiry into factors other than the pull and push factors is important to further understand the entrepreneur. This study begins a conversation that relates emotion, behavior and venture exploitation tendencies.

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WOMEN LEADERS AND ENTREPRENEURS: EXPLORING THE INTERPERSONAL BEHAVIORS OF DEVELOPING, MAINTAINING, AND LEVERAGING “SOCIAL CAPITAL”

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ABSTRACT

The differences in interpersonal behaviors between women entrepreneurs and leaders in developing, managing, and leveraging social capital, were explored. The qualitative research study was inclusive of female participants spanning a broad spectrum of ages and educational attainment within the United States. Though both groups developed social capital for their professional and personal benefit, significant differences were found in how each defined social capital and how they created, sustained, and used it. Entrepreneurs focused on the “I” factor and valued the capital as a personal means to an end within a short-term scenario. Conversely, leaders were more inclusive and centered their efforts around “we,” with reciprocity being instrumental in achieving their long-term network-building objectives.

Keywords: social capital, women, entrepreneurs, leaders, relationship-building, connections, networking, interpersonal behaviors

INTRODUCTION

The best leadership is found by choosing leaders from the largest pool of talent, and that includes women. Opening doors for women fosters equal opportunity and can help a society to allocate its human resources optimally. With excellence in leadership in short supply, no group, organization, or nation should tolerate the losses that follow from unfairly restricting women’s access to leadership roles (Eagly & Carli, 2007, p. 11).

“In the present ever-changing world, the importance of innovation can hardly be overestimated” (Nijhof, Krabbendam, & Looise, 2002, p. 675). However, it has been noted that “one of the most critical needs for women entrepreneurs lies in a non-technical area: the development of networks and mentors” (Kickul, Gundry, & Sampson, 2007, p. 169). How do innovative women, who often find themselves sandwiched somewhere in the middle both

professionally and personally learn to make use of their relationships for purposes of bringing the best of their ideas to fruition?

Historically, women have fallen short of men in career advancement opportunities. Barriers have been coined as: the “concrete wall,” “glass ceiling,” and labyrinth,” all contributing to gender-based discrimination in the areas of hiring, wages, and job promotion. Longitudinal research has attributed the phenomenon of the “old boys network” (an informal male network with a significant masculine support system, based on gender) as a lingering factor in restricting women’s progression in the workplace. The *concrete wall* prohibited women from entering the business workplace due to biological reasons (“women must assume the role of homemaker”). The *glass ceiling* was the invisible barrier that prevented women from advancing in their careers to higher levels occupied by male colleagues (“women are not capable of positions of leadership authority”), and the less obvious *labyrinth* describes the circuitous path that inhibits women from reaching the leadership pinnacle in business (“despite expanding opportunities, women’s access is bound by challenges of maneuvering the maze and dead ends which restrict her progress). Eagly and Carli offer advice to women professionals for coping in the workplace, “First, women should demonstrate that they are both agentic and communal, and second, they should create social capital” (2007, p. 11).

Two qualitative research papers, written by the researchers of this current study in 2008 and 2010, explored differences between females who were considered entrepreneurial and those who exhibited traits attributable to leaders. Observations arising from the 2008 study led the researchers to conclude that entrepreneurs in the study tended to focus on themselves and customers, with no mention of the team (i.e., employees). This “does not mean that entrepreneurs do not struggle to build a support team...it is just that it is not as important to entrepreneurs that everyone be committed to the vision, only that the work gets done well” (p. 148). “Leadership isn’t about the leader...it’s about the relationships between the leader and all of the people around him or her” (Knopik & Moerer) and “a shared sense of purpose” (p. 147). The research paper published in 2010 focused on validating a method for identifying the participants as entrepreneurs or leaders for purposes of examining behaviors and attitudes of each group; a process which was used for the current research.

Comments made by respondents in the 2010 study were intriguing as there were significant differences in how the two groups of professional women (i.e., entrepreneurs and leaders) leveraged social capital. Responses from the entrepreneurial group overwhelmingly focused on “I,” whether they referred to using friends to broaden personal professional experiences, using their networks for new business and employee recruitment or indicating availability if a friend needed a sounding board (Knopik & Moerer, 2010, p. 400). Conversely, the leaders spoke about reciprocity, building relationships, and sharing knowledge and information and were aware that time and know-how (or lack thereof) were obstacles to building and using social capital effectively (p. 400).

According to Lin (1999), “The premise behind the notion of social capital is rather simple and straightforward: investment in social relations with expected returns” (p. 30). In his book, “Bowling Alone,” Putnam continued this explanation, “social capital refers to connections among individuals—social networks and the norms of reciprocity that arise from them” (2000, p. 19). Likewise, Bezanson (2006) expanded this observation:

The idea behind the concept of social capital is straightforward enough: having good networks of family, friends, and acquaintances is essential to quality of life. These networks increase people’s capacities to manage their lives, from getting paid employment, surviving crises, to living well. Without good networks, people have a harder time managing day to day and getting ahead in the labour market or in their communities (p. 427).

The focus, then, of this current study became an examination of the perceptions, building, and use of social capital from the perspectives of a random sample of professional women across the United States. While it is recognized that researchers in the fields of organizational research and public policy have developed some important and interesting data about social capital being a commodity that, perhaps, can be developed and exploited for the benefit of the United States, the observation made by Seibert, Kraimer, and Liden (2001) that the role of informal interpersonal behaviors as determinants of career outcomes has not been fully explored (p. 3). This gap in the body of knowledge became the focus for this research, continuing a line of research begun by the authors in 2007. One of the findings of the earlier research was the identification of a method which enabled the researchers to place participants into one of two groups (entrepreneurs or leaders).

LIMITATIONS

The limitations identified by researchers in this qualitative study included (1) the responses were grouped based on participant responses which forced a choice for categorization; (2) the population for the survey was purposefully selected by the researchers, including a large number of professionals who had attained masters degrees; and, (3) the population was small and located generally in the midwestern United States. Thus, findings are not intended to be generalized to a larger population.

LITERATURE REVIEW

Understanding Social Capital

Defining “social capital” or placing it in context is challenging, as the literature documents a plethora of approaches. For example, as discussed by Seibert, Kraimer, and Liden (2001), there are three different theoretical approaches, each of which focus on different network properties as representations of social capital: *weak tie theory* (describes how acquaintances--as

opposed to friends--can be surprisingly powerful in influencing others), *structural holes theory* (which asserts that people benefit from acting as bridges between groups of people), and *social resource theory* (resources embedded in social connections). However, all of these theories propose that the key explanatory variables for the effect of social capital on career mobility are greater access to information, resources, and sponsorship or social credentialing (p. 221).

According to Bezanson's interpretation of the literature (2006), there are three types of networks: 1) *bonding* (typically associated with family and women and characterized by strong ties among closely-related people), which is associated with survival; 2) *bridging* (connects people from different social groups), which is associated with mobility and getting ahead; and 3) *linking* (proactively tying people together in a formal relationship) which is effective for leveraging "resources, ideas, and information from formal institutions beyond the community" (p. 429).

"Social capital refers to connections with outside parties providing access to resources and includes structural, relational, and cognitive dimensions" (Kickul, Grundy, & Sampson, 2007, p. 172) and is yet another way of organizing the different dimensions of social capital: *structural* (social interaction and the location of a person within a social structure); *relational* (relationships such as trust and trustworthiness leading to productive resource exchange); and *cognitive* (a degree of shared vision among group members) (Tsai & Ghoshal, 1998, p. 464).

Eagly and Carli (2007) shared the critical nature of social capital with an illustration of managers who actively advance their careers:

Fast track managers spent relatively more time and effort socializing, politicking, and interacting with outsiders than did their less successful counterparts... [and] did not give much time or attention to the traditional management activities of planning, decision making, and controlling, staffing, training/developing, and managing conflict. It thus appears that social capital can be even more essential to managers' advancement than skillful performance of traditional managerial task" (p. 144).

When considering whether gender is a factor in valuing and using social capital, Schlichtemeier-Nutzman, Moerer, Ewing, and Hill (2011) reported from their research interviews that the concept of possessing social capital *awareness* was described by their participants as "intentional interactions and intentional relationship building for one's own benefit." And, this was not seen as inherent to women, as one subject explained,

Women often do not recognize the impact social capital has on their career or they view those relationships as personal versus professional. This gender-role barrier for women is a skill that men seem to use almost effortlessly and subconsciously in the professional dealings. Successful women leaders tend to be *naturals* at this exchange (p. 506).

Sally Helgesen, in "The Female Advantage: Women's Ways of Leadership," provides an appropriate synopsis,

Women, when describing their roles in organizations, usually referred to themselves as being in the middle of things: not at the top, but in the center; not reaching down, but reaching out....inseparable from their sense of themselves as being in the middle was the women's notions of being connected to those around them, bound as if by invisible strands or threads. This image is of an interrelated structure, built around a strong central point and constructed of radials and orbs, ...a spider's web –that delicate tracery, compounded of the need for survival and the impulse of art, whose purpose is to draw other creatures to it (1995, pp. 45-46).

According to Michel (2007), networking is the single most important life skill in obtaining both personal and professional success. She focused on the role “human temperament” played in creating the human networks and cited Berens as categorizing human temperaments into four distinct groups: improviser, stabilizer, theorist, and catalyst. She concluded that social capital networks must not consist of just “transactional” connections that no longer exist when a transaction is complete, but rather, “connectional” networks that grow into important interpersonal relationships, sincere and mutually beneficial.

There was also a large body of research focused on the processes for developing social capital as well as the description(s) of who is most apt to actively create and benefit from social capital. These articles proved to raise a number of questions as the data in this study was analyzed. For example, one article noted,

We found that it is not group membership based on biological sex, but identification with masculine characteristics that is positively associated with entrepreneurial intentions. Our findings indicate that men and women's entry into entrepreneurship may be enhanced or limited by their perceived similarity to masculine characteristics (Gupta, Sikdar, Turban, & Wasti, 2009, p. 413).

An important element of effective use of social capital is the gendered context in which professionals operate. As indicated earlier, much of the entrepreneurial literature defined entrepreneurs as new business owners and the most successful entrepreneurs were those exhibiting “male traits” (Gupta, et al., 2009). Results found through the National Entrepreneurship Assessment project, begun in 1999, suggest that “women are influenced by many of the same factors that affect men when making entrepreneurial decisions...[however] the systematically lower rate of female participation indicates that some differences also exist” (Minniti & Arenius, 2003, p. 1).

Likewise, from the leader perspective, gender has a strong influence on social capital, and according to Eagly and Carli, women “have less of it and men excel at strategically building crucial professional relationships” (2007, p. 144). They refer to this as the “*get it*” factor. Women focus on “competence, and underestimate the ‘dynamics of relationships’” (p. 144). In a research study conducted in Boston with senior professional women, 78% considered informal networking as very helpful in their leadership development. Eagly and Carli added that women

can benefit from other females by “gaining social support, role modeling, and information about overcoming discriminatory obstacles” (p. 146).

Two additional demographic factors that influenced entrepreneurial success were workplace experience and educational attainment. Bergeron and LeSavoy (2011) found that as the women (in their study) got older and more experienced in their environments, their decisions became more purposeful. An example used was, “While ambiguity seeded these beginning excerpts, stories remembered as more purposeful lacked prospective scope...even with (a) more pronounced intentionality, [one woman] qualified her educational journey as “indiscriminant” and “random...” (p. 148). Likewise, Kariv (2011) observed that “Education and prior experience are the critical human capital components in entrepreneurship, in that they reflect the degree to which managerial know-how and capability have been developed,” (p. 403).

Several studies have found a direct correlation between the relationships developed between education and networking (Stone & Hughes, 2001; Ajrouch, Blandon, & Antonicci, 2005; Parks-Yancy, 2006). Leaders who have earned higher levels of education have larger non-family networks and more organizational ties. According to Parks-Yancy, individuals may have a greater number of social ties (acquired from relationships built throughout their educational experiences) from which to draw for employment opportunities and influence, in general. Another research study reported the importance for women to invest in their human capital; the need to “actively seek out and obtain knowledge through formal education,” is necessary to build their credentials (Reimers-Hild, Fritz, & King, 2007, p. 1).

Two studies discussed strategies for enhancing social capital. The first was a personality study conducted by Krueger (2008) in the Kansas City metropolitan area in 2007 which revealed four distinct personality patterns among professional men and women and which also referred to respective uses of networking (i.e., social capital): dominant, influential, steady-relationship, and compliant. Two of the types, *dominant* and *influential*, appeared to correspond to the traits that emerged in this current study. According to Krueger, the women exhibiting a dominant personality tended to gravitate toward starting their own businesses compared to the other types. On the other hand, the influential personality represented the largest number of respondents and preferred an existing structured organization. They exhibited stronger behaviors based on extroversion, relationship skills, and communication skills and focused on networks and relationships more so than the other personality categories. This group also ranked high on extroversion, indicating a propensity toward optimism, confidence, agreeableness, conscientiousness, emotional stability, and openness to experience. All of these descriptors appeared to reflect those found by the researchers among the participants of this study.

Likewise, as discussed earlier, Seibert, Kraimer, and Liden (2001) revealed the importance of social capital to career success.

Specifically, our results demonstrated that two measures of network structure: weak ties and structural holes, positively related to the level of social resources embedded in a person’s network, measured as the number of developmental contacts in other functional areas and at

higher levels in the organization. Social resources were in turn positively related to current salary, number of promotions over one's career, and career satisfaction through their positive relationships with three measures of network benefits; access to information, access to resources, and career sponsorship...support for the mediated rather than direct paths from social network variables to career outcomes suggests that mere 'schmoozing' with individuals outside of one's work unit will not affect career outcomes unless one is able to reap resources and sponsorship from these contacts (p. 232).

However, while Seibert, Kraimer, and Liden (2001) also suggested that "the value of social capital may vary with respect to the nature of the contacts that comprise one's social network," they documented only the relationships, not the specific nature of the interactions (p. 232).

PURPOSE AND METHODOLOGY

One of the questions, included in the qualitative survey from the 2008 study, asked the participants to describe how they leveraged relationships, which led to this current research exploring the usage of social capital by professional women. The broad scope of responses heightened the researchers' interest in this "community" phenomenon. For example, one participant shared, "I believe the best way to leverage social capital is not to try. No one wants to feel that she is being pursued just as a means to an end." On the other end of the spectrum, another commented, "I leverage social capital to form new relationships with others....I've 'brokered' relationships with others in order to help people form new partnerships." Another professional female stated that her network was her most valuable asset utilized daily for the benefit of herself and others. And finally, another shared this dichotomy,

....I do very well at staying in touch with people, being helpful and supportive of them and having them remember who I am. I have a great deal of social capital, but I am not always astute as to how to best capitalize on it in a strategic way.

Purpose of Study and Guiding Questions

Findings in the 2008 paper implied that female leaders had an opposite orientation in terms of purpose and interaction with their environments from that of female entrepreneurs. This was especially evident regarding communications (sharing their purpose) with others and led the researchers to question, for purposes of this current study, whether there is a difference between the two groups in terms of creation, maintenance, and use of social capital. This became the guiding question for the proposed study.

Secondly, if the two groups exhibited different approaches to leveraging social capital, and assuming social capital is an important component of professional success, can women learn

from each other to make themselves individually more successful, regardless of whether they exhibit a leadership orientation or are more entrepreneurial?

Qualitative Research Strategy

The objective of all three studies conducted by the researchers, was to discover similarities and differences between two groups of women—entrepreneurs and leaders—to better understand how each group focused their abilities to obtain a goal. As Creswell (1998) noted,

Qualitative research is an inquiry process of understanding based on distinct methodological traditions of inquiry that explore a social or human problem. The researcher builds a complex, holistic picture; analyzes words; reports detailed views of informants; and conducts the study in a natural setting (p. 15).

Roles of the Researchers

“Clarifying researcher bias from the outset of the study is important so that the reader understands the researcher’s position and any biases or assumptions that impact the inquiry” (Creswell, 1998, p. 202). Here, the researcher comments on past experiences, biases, prejudices, and orientations that have likely shaped the interpretation and approach to the study.

Therefore, to fully disclose, both researchers are professional women with more than a combined 70 years of business experiences in male-dominated industries. While both have developed rich social capital networks of their own, the way each uses and maintains her network is different. Their respective research interests are entrepreneurship and leadership and their differences acquiring and using social capital mirror the findings of entrepreneurs and leaders in the literature. However, even though each researcher brings a different perspective to this project, each has developed skills in the other realm which has provided the ability for each to understand and communicate with the other.

Data Collection

The data collection began with demographic information (age, education attainment, geographic location, and employment status) and self-reported perceptions of their professional success. Using the “split question,” the researchers were able to examine responses from the entrepreneurial group and the leader group separately.

Consistent with their earlier studies, the researchers designed an electronic survey that could be taken anonymously, but also enabled respondents to explain their answers in their own words. In addition to the original population sample of 46 women from the 2008 study, another 210 participants were purposefully invited to complete the survey which was composed of four demographic questions, the “split” question, and 14 inquiries consisting of both closed- and

open-ended options. A total of 118 responses from women across the United States were received over the course of one month (July) during the summer of 2010.

As a group, 46% worked in business, 27% in non-profits, 22% were employed in higher education, and 5% were unemployed at the time of the survey.

Table 1a: Age Distributions of Participants

Age	Entrepreneurs	Leaders
25-35	15%	23%
36-45	18%	18%
46-55	34%	34%
56-65	30%	24%
66+	3%	1%

Table 1b: Education Distributions of Participants

Education	Entrepreneurs	Leaders
HS Diploma	3%	5%
AA Degree	3%	2%
BS/BA	30%	14%
Masters	37%	61%
Doctoral	27%	18%

DATA ANALYSIS AND STRATEGY FOR VALIDATING FINDINGS

Upon receipt of the completed surveys, the authors divided them into an “entrepreneurial” group (28%) and a “leader” group (72%) based on a forced choice between two answers to one question. Prior research by the researchers had identified this question as a dependable indicator of whether a person was more of an entrepreneur or a leader and it became known as the “split” question.

In analyzing the qualitative content, pattern codes were used to discern emergent patterns in the relationships and behaviors described and words assigned reflected the inferred themes, a process explained by Miles and Huberman (1994, p. 57).

As Creswell (1998) noted regarding the validation process, “In triangulation...typically this process involves corroborating evidence from different sources to shed light on a theme or perspective” (p. 202). This study drew from both entrepreneurship and leadership bodies of literature as well as past interviews and observations included in earlier studies conducted by the researchers. An external party, a former university professor of management, who shares an interest in this subject matter, also reviewed the manuscript and provided additional insight.

This current research project depended on comparing and contrasting results from the surveys to entrepreneurship and leadership literature. Therefore, before describing findings from the literature, it was important to clarify the meanings of concepts used in this research. Using

the data collected by the authors in 2008 and further validated in 2010, the following definitions of entrepreneurs and leaders emerged (Knopik & Moerer, 2010, pp. 397-398). See Table 2.

Table 2. Traits of Entrepreneurs and Leaders		
	Entrepreneurs	Leaders
Teamwork	Situational	Collaborative and synergistic
Traits	Short-term strategists Optimistic Self-reliant Risk takers Doers	Long-term strategists Inspiring Supportive Courageous Fair-minded
Team Choices	1. Prefer to work independently and alone 2. Need to utilize skills of team (contingent)	1. Embrace creative ideas from team members 2. Believe skills can be found elsewhere; insights (from team) result in best solutions
Vision	Ability to recognize a unique opportunity (innovative); visualize steps in the process; see how parts fit together; see the 'big picture'	Ability to inspire others to 'come along'
Motivations/Priorities	(I/me) 1. Private vision 2. Team skills 3. Clear goals (short-term)	(Team/we) 1. Shared vision (long-term) 2. Engaged team 3. Intrinsic satisfaction

Having clarified the profiles of female entrepreneurs and leaders, the researchers of this study focused on discovering if and/or how the two groups of women developed, maintained, and used social capital to enhance their professional success. Please note that the entrepreneurs were not necessarily business owners and that the leaders were not necessarily owners or managers within a formal organization. In fact, those questions were not asked, as the authors believed that being entrepreneurial or being a leader were behaviors (both intrinsic and learned) applicable to any and all aspects of life.

Note: Research has proven that gender plays a significant role in social networking behaviors and discussions of the manner in which women leaders and entrepreneurs network cannot be separated from gender. However, the scope of this study precluded an in-depth analysis of gendering, as the focus was on interpersonal behaviors of women rather than on the impact of social capital on their respective careers.

FINDINGS

Please note: the findings of this study refer to two distinct groups: Entrepreneurs and Leaders. The researchers have capitalized the first letter of each group in order to set them apart from entrepreneurs and leaders, in general.

Defining Social Capital

Throughout the data analysis process, distinctions emerged between the groups – even when providing definitions of social capital. Nearly every Entrepreneurial response mentioned the value of knowing people who could help them; that social capital represented a “bank” of contacts. The Entrepreneurs described the phenomenon of social capital as a centralizing effort with “me” being the core. The Leaders, being more inclusive, focused on the “we” factor.

One entrepreneur shared that social capital was, “my social/professional net worth.” Two others stated, “It’s making friends that stick and using them” and “the use of other people to achieve your goals.” Conversely, one Leader asserted, “It represents the currency of trust, camaraderie, moral support, and fractals of interconnectedness within the whole of humanity.” Another Leader added, “This is the cumulative value of social and professional relationships which can be leveraged to help others.”

Phrases and words that resonated throughout Leader responses included, “valuable relationships that contribute to professional successes,” “connections,” “a resource,” “beneficial interactions,” and “networks of people.” With one exception, the implication from more than 100 responses generally concluded that social capital was about building positive connections that benefitted those giving and receiving—personally and professionally. One Entrepreneurial participant also expressed the concept by writing, “Social capital is the sum of relationships—social and professional—acquired during a life time.”

Three themes emerged from the responses: how these two groups of women professionals uniquely developed, maintained, and leveraged social capital.

Developing (Creating and Acquiring) Social Capital

Entrepreneurs.

The question asking whether the participants were purposeful in terms of developing social capital revealed that 62% of the Entrepreneurs indicated that they had, indeed, been intentional. In examining the open-ended responses submitted by the Entrepreneurs, three findings emerged: development of social capital was (1) accidental (no planning whatsoever, but that they took advantage in the moment); (2) aided by their belonging to and dependence on relevant organizations; and (3) deliberate in terms of personal dependability and constant

contact, but always within the context of “me,” not “us.” Examples of statements from Entrepreneurs were, “...I haven’t consciously managed my acquaintances,” and “I have not devoted the time to actually devising a plan to take the needed steps to network myself.” Another strongly stated, “I MAKE CONNECTIONS BY CHANCE MORE THAN BY PURPOSE. I DO NOT SEEK OUT CONNECTIONS.” Even those who purposefully joined organizations did so to enhance their own agenda. For example, one Entrepreneur stated, “I make it a point to be active in a minimum of two ... organizations... to get my name/reputation out into the community.”

Leaders

For 85% of the Leaders, the development of social capital was a means to an end leading to the following four opportunities: (1) formal network expansion focused on building relationships with professional women; (2) employment and professional advancements; (3) increased visibility (in the workplace, community, industry); and (4) professional development. One explained, “I transitioned into my current position through a personal/professional relationship. She recommended me for the position and I was hired without a formal interview, based on my previous professional relationships. All of these relationships were primarily with women.” Another Leader also commented about the value of relationship-building, “I network within my organization with the deliberate purpose of making myself more visible.” And from another, “The focus of my own work could be characterized as improving the efficiency of society by facilitating coordinated actions; building personal and professional relationships; and this is the product of the presumption that social context matters for individuals, beliefs, and behaviors.” Threaded throughout the qualitative responses provided by the Leaders was the concept of the “building of trust,” which several stated was a necessary component to maintaining and sustaining the opportunities for substantive networking.

Maintaining (Sustaining) Social Capital

Seibert, Kraimer, and Liden (2001) noted “intrinsic career success refers to the individual’s subjective feelings of accomplishment and satisfaction with his or her career” (p. 220) and, thus, the participants were asked questions relating to (1) what their personal perceptions of their own career and professional success were, (2) who, if anyone, significantly helped them achieve success, (3) whether they were comfortable meeting new people, (4) how they remembered new people they met, (5) how they ensured new people remembered them, and (6) how resulting relationships were managed.

What are the perceptions of career success?

The responses from the Entrepreneurs revealed a lesser percentage who considered themselves successful than reported by the Leaders (63% versus 85%). While the participants were not asked to speculate on why they perceived personal success the way they did, they were asked to indicate whether or not relationships with other people, regardless of affiliation, had played a role in their achievement.

Who comprised “significant” relationships?

The Entrepreneurs viewed relationships as significant, but less so than did Leaders. Of the Entrepreneurs, 19% indicated they would not have succeeded without relationships (versus 31% of the Leaders). A follow-up question attempted to ascertain who the people were who had assisted their career development. As indicated in the chart below, the results revealed very different patterns of interactions in terms of perceptions of career development assistance (see Table 3). While Leaders appeared to have a balanced network spanning a number of years (as indicated by recognition of past colleagues), Entrepreneurs appeared to have relied more on those around them at the moment or people who knew them well, regardless of industry affiliation. They did, however, rely more heavily than the Leaders on industry and professional group contacts.

Table 3. Distribution of relationships in terms of career support		
	% Entrepreneurs	% Leaders
Friends	100	69
Family	81	68
Current Colleagues	97	89
Industry/professional group	87	81
Past Colleagues	65	77
Random Acquaintances	48	35

What is the comfort level with meeting new people?

Fully 97% of Entrepreneurs indicated a comfort level with meeting new people. Of those respondents, 60% reported they proactively introduced themselves and another 27%, while more selective, were also proactive in terms of approaching others. Ninety percent of the Leaders indicated being comfortable meeting new people with 63% proactively approaching, 24% approaching more selectively, and 12% making general, non-personal comments to initiate a conversation.

How are new contacts remembered?

When asked what strategies were used for remembering who they met, overwhelmingly, the Entrepreneurs reported using some type of association (word, visual picture, or work affiliation). Many remembered some feature or appearance (dress or physical feature). Many indicated they needed to see written names (name tags, business cards) in order to remember others, but those respondents also made a note about the person and the event. Predictably, a number of the Entrepreneurs indicated that unless the person interested them or could help them, they did not bother trying to remember their names. One wrote, “If they’ve caught my interest somehow [I’ll remember who they are]. If not, I don’t.”

Several within the Leader group sought a personal connection and made an effort to recall specifics of a one-on-one conversation. In an effort to remember the person, the majority would write notes on the back of the acquired business card, with one valuing this information enough to capture the name and association later on a growing, continuous computer spreadsheet. Another noted that she looks for the “authenticity” of the individual and how that might hold potential for “impacting the common good.”

How did participants ensure they would be remembered by new contacts?

When asked how the participants attempted to ensure those they met remembered them, interestingly, few of the Entrepreneurs exhibited any planning at all beyond handing out business cards (if they remembered to bring their cards to the meeting). Many mentioned they depended on their smile, eye contact, handshake, or appearance and a number indicated they had an odd name, which should help make them memorable. Only one person actively followed up with an email or phone call following a meeting.

In the Leader group, several spoke of “engagement” and “finding commonalities.” A few indicated that they reached out to that individual after the initial meeting with an email follow-up. One said, “I make sure I am totally engaged with the person, find a common interest, and leave the conversation letting them know they can call on me if they should need my help and I would be happy to do so.”

How are relationships managed?

A secondary question asked how the participants stayed in touch with people with whom they did have ongoing relationships. The Entrepreneurs had three primary methods on which they depended: 66% indicated they initiated communications via email, texts, phone, or a visit; 17% responded immediately when someone contacted them; and 14% reported they occasionally set up meetings for lunch or an event after work with others. Seventy-three percent of the

Leaders initiated communication with only 3 percent setting up follow-up meetings via lunch or dinner.

The researchers next explored the willingness to help others when called upon. Entrepreneurs reported they were “happy to help, but depends on time/schedule” (41%) and “will help if I can” (41%). These were ironic, considering 100% of the participants earlier reported that friends and a significant number of family members had helped them achieve career success. Leaders were more divided with the first part reflecting a 54% response with “will help if time is available” and only 20% with “will help if I can.”

However, in response to acknowledging others’ assistance, every Entrepreneur indicated they made certain they thanked others by sending notes and gifts. Tellingly, though, fewer than 10% volunteered a willingness to reciprocate if that person ever needed them.

Leaders overwhelming indicated that a follow-up “message of appreciation” was conveyed through personal contact, a mailed note or email message, or gift. Several indicated that they would extend their professional appreciation by a third-party notice (to the new contact’s supervisor or some mutual contact within her organization). One Leader shared her approach to meeting someone new, “Before I have an interaction, I try to say to myself, ‘*Namaste*,’ which has been translated to me as ‘the divine in me recognizes the divine in you.’ This helps me focus on the individual rather than the millions of other things on my mind.”

Leveraging (Using) Social Capital

It has been established that the participants were willing to assist others, though to varying degrees. However, the researchers inquired whether reciprocity (both giving and receiving) was significant to leveraging social capital. A second question asked the participants to indicate which roles they assumed or for which they requested assistance from others. The list of roles included: career advice, moral support, introductions to others, problem solving, technical support, role modeling, mentoring, or other. See Table 4 for results from each group (Entrepreneurs and Leaders).

Entrepreneurs. On a 5-point Likert Scale ranging from “not important at all” to “very important” assessing the importance and/or significance of reciprocity to social capital efforts, 7% felt reciprocity was not important at all and 14% of the Entrepreneurs indicated “very important.” For the remaining Entrepreneurs, the concept of reciprocity ranged from “somewhat important” to “important.” From the open-ended comments, three findings emerged: (1) Most said they help without thought of reciprocity; (2) many said it would be nice to get back and believed that if they did help, they would get something back in future; and (3) some said they would help, but would hesitate to continue if nothing came back or if they “were doing all of the work.” Interestingly, two mentioned “it’s just good karma to give,” which may imply that everything balances out in the end.

Leaders. Similarly, 8% of the Leader group believed that reciprocity is not important; however, a significant 65% indicated “important” or “very important.” One Leader explained, “Reciprocity shows mutual respect and trust.” Another agreed, “It is important to keep the networks vital through give and take; through expansion. Being able to depend on the network is critical...it is two-way.”

Table 4. Roles assumed in maintaining social capital

	Help given to others		Help requested of others	
	Entrepreneurs	Leaders	Entrepreneurs	Leaders
Career advice	14%	23%	10%	23%
Moral support	45%	60%	52%	54%
Introductions	35%	20%	24%	31%
Problem-solving	52%	52%	52%	43%
Technical support	10%	7%	35%	15%
Role modeling	24%	16%	17%	14%
Mentoring	38%	42%	14%	31%
Other	0%	1%	3%	5%

Though both the Entrepreneurs and the Leaders appeared to develop social capital for professional utilization, the groups VALUED the maintenance and leveraging of their relationships differently.

The guiding question for this research was “*Is there a difference between the two groups in terms of development, maintenance and use of social capital?*”

Clearly, the Entrepreneurs and Leaders were engaged in networking evidenced by a high degree of comfort in meeting new people reported by both groups. However, the Entrepreneurs, having a very narrow personal focus (“I,” “me”), tended to interact with people who were close by or easy to reach (family, friends, professional organizations) and, as a group, they exhibited very little planning in terms of proactively developing their contacts into long-term relationships. The Entrepreneurs self-reported a lower level of career success than did the Leaders. This, perhaps, can be explained by the high incidence of strong ties they cultivated (i.e., with family and close friends), behaviors more associated with survival than with career mobility. This majority of the Entrepreneurs also viewed reciprocity as ‘at least somewhat important’ but valued it from the perspective of what they got in return (versus the perception of reciprocity as an indication of mutual respect cited by the Leaders).

The behaviors selected by the participants shown in Table 4 also underscore and explain the Entrepreneurs’ less developed social capital. Only 10% of the respondents in this group indicated they asked for career advice and only 14% possessed mentoring relationships. Interestingly, 35% reported that they introduced people (clearly a bridging behavior essential to mature social networking), but a much lower 24% requested introductions. The Entrepreneurs

clearly had no problem asking for technical support (35%), but few appeared to use those opportunities to build relationships.

Conversely, Leaders overwhelmingly stated that they developed more formalized networks with the focus on mutual benefit of reciprocity (“you and me”). This group actively pursued and developed these networks to advance their careers, enhanced professional visibility (theirs and their organizations), and developed professional skills. As evidenced by the long-term relationships maintained with former colleagues, the Leaders invested significant time, energy, and efforts in longitudinal relationship-building and utilization (as illustrated in Table 2). Unlike their Entrepreneurial counterparts, 23% of the Leaders requested (and provided) career advice, which implied a dialogue and 31% actively capitalized on mentoring opportunities. Thirty-one percent of Leaders requested introductions, which indicated they were drawing on resources embedded in existing connections (social resource theory).

The second overarching question was “*If the two groups exhibited different approaches to leveraging social capital and, assuming social capital is an important component of professional success, can women learn from each other to make themselves individually more successful regardless of whether they exhibit a leadership orientation or are more entrepreneurial one?*”

Given the findings from the initial question, the answer is “yes,” particularly for the Entrepreneurs. This will, perhaps, become the next focus for future research efforts.

As Helgesen noted, women are centered in their ‘web’ of relationships which are necessary to their own survival. While this research implied that each ‘web’ is unique, the authors believe that, by sharing the strengths of Entrepreneurs and Leaders, as well as helping women become aware of their weaknesses, their ‘webs’ can be made more encompassing and resilient.

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ACHIEIVING ENTREPRENEURIAL SUCCESS THROUGH PASSION, VISION & COURAGE: A COGNITIVE MODEL FOR DEVELOPING ENTREPRENEURIAL INTELLIGENCE

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ABSTRACT

This paper presents an intentions-based cognitive approach to entrepreneurship by introducing the Entrepreneurial Intelligence Model. This model includes three cognitive qualities, eight psychological states, and five action-steps that an entrepreneur can choose to hone and condition in order to engage a systematic and logical approach to entrepreneurship. Over the years, research has demonstrated that there is no consistent pattern of psychological traits or behaviors that clearly distinguish entrepreneurs from the non-entrepreneurs, and using a cognitive approach may be a more suitable way for those who want to develop entrepreneurial competencies and exploit opportunities in the marketplace. The Entrepreneurial Intelligence Model was developed over a 20-year period by studying 234 entrepreneurs in both their natural environments and in controlled environments. Passion, Vision, and Courage are the three overriding cognitive qualities in the model presented, each of which provides the framework for learnable psychological states and action-steps. This paper furthers the notion in current research that cognitive processing and frame-working is a viable way to pursue entrepreneurial endeavors to achieve success.

INTRODUCTION

This paper is based on a 20-year study of 234 successful entrepreneurs to develop the Entrepreneurial Intelligence Model. The science behind the three cognitive qualities of Passion, Vision and Courage, along with eight essential psychological states is based on the systematic, direct, and structured observation of successful entrepreneurs in both their natural work environment (an idiographic approach) and also through observation and discussions in controlled environmental contexts (nomothetic approach).

This paper introduces the concept of developing *entrepreneurial intelligence*, which is the ability to understand and utilize the three cognitive qualities of Passion, Vision and Courage in order to achieve dynamic success. Once an entrepreneur understands and begins to learn and condition each of the eight psychological states behind the three cognitive qualities: ambition, work ethic, continuous learning, innovation, using people as an asset, taking informed-risk, integrity and resilience, he or she can engage in specific action-steps to pursue their entrepreneurial endeavors. The five action-steps include: generating a business idea, creating

value propositions and a competitive advantage, conducting an idea merit survey, completing a feasibility analysis, and then developing a business plan.

One hundred and thirty-two entrepreneurs were used to obtain information from an idiographic approach, which is characterized by individual-centered and naturalistic environmental contexts, and by qualitatively-based direct observation data gathering techniques. After the idiographic phase of study findings, 102 additional entrepreneurs were observed from a nomothetic approach. The nomothetic approach is characterized by controlled and sometimes group-centered contexts. The entrepreneurs in this phase of the study were observed in contexts such as classroom settings, seminars, workshops, and networking functions.

It is important to note that, all of the entrepreneurs observed are extremely diverse. But despite their diversities, and while they all have unique stories, what they do have in common are the three cognitive qualities and eight psychological states introduced by of The Entrepreneurial Intelligence Model presented in this paper.

LITERATURE REVIEW

Identifying traits and behaviors of successful entrepreneurs is not new and fills much of the entrepreneurship literature. Mill (1848) is often credited with being the first to distinguish the entrepreneur from the manager, claiming that the main difference was the disposition of the entrepreneur to take risks. Schumpeter (1934) was also one of the first researchers to recognize that entrepreneurs were distinct individuals worthy of study, through their innovation and ability to take initiative.

Trait & Behavioral Approaches to Entrepreneurship

Many researchers throughout the years have identified psychological traits they believed separated entrepreneurs from everyone else such as a desire for independence (Collins & More, 1964), tolerance for uncertainty (Glennon, Albright & Owens, 1966), internal locus of control (Borland, 1974; Brockhaus, 1975; & Timmons 1978; Hornaday & Aboud, 1971), need for power (Winter, 1973), personal value-orientation (Gasse, 1977), self-confidence (Timmons, 1978), aggressiveness (Sexton 1980), creativity (Glennon, 1966; Timmons, 1978; Wilken, 1979), growth-orientation (Dunkelberg & Cooper, 1982), disposition of control (Envick, 2000), self-esteem, (Robinson, Stimpson, Huefner & Hunt, 1991), and masculine attributes (Fagensen & Marcus, 1991). Unfortunately, no consistent pattern of traits has been found that clearly distinguishes entrepreneurs from non-entrepreneurs (Gartner, 1988).

The behaviors of entrepreneurs have also been studied through observation, interviews, and questionnaires. Birch focused on the creation of jobs as a central behavior of an entrepreneur (1979). Leibenstein (1968) stated that the basic behavior of the entrepreneur was to destroy pockets of inefficiency in the system. McHugh (1985) discussed how entrepreneurs formulate strategies in the entrepreneurial firm. A study on the difference between the genders of entrepreneurs and their behaviors was examined by Envick and Langford (1998). Chandler and Hanks (1994) contend that entrepreneurs expend time and energy looking for products and services that provide benefits to customers. Gartner, Bird, & Star (1992) focused on creative

behavioral efforts of entrepreneurs in their study, while Mullen (1990) studied how decision-making and skills impacted how entrepreneurs started their ventures. And Envick (1996) provided empirical results on how the behaviors of entrepreneurs differ from the behaviors of managers. However, much like the trait-approach, there has been no consistent set of behaviors that clearly distinguishes entrepreneurs from non-entrepreneurs.

The Cognitive State Approach to Entrepreneurship

The Entrepreneurial Intelligence Model is based on intentions-based cognitive approach that focuses on psychological states and action-items. It is very important to understand the difference between a psychological state and a psychological trait. A state is a mental or emotional condition, while a trait is a distinguishing feature or characteristic. States can be modified, while traits remain relatively fixed. For example, being hopeful is a state while being introverted is a trait. Someone who is very introverted is shy and primarily concerned with his or her own thoughts and feelings. It is a fixed trait, and a part of one's own unique personality. Because of the fixed nature of this type of trait, that personality type would rarely be attracted to a profession that requires assertiveness and human interaction, such as sales.

The Entrepreneurial Intelligence Model focuses on psychological states, which are cognitive qualities that can be learned. An example of a psychological state is hope, which is a state of desire accompanied by an expectation of fulfillment. Hope can come and go and is not tied to one's distinguishable personality. This means that you have a great deal more control over your psychological states. Some may simply be a matter of choice, while others may take further conditioning. The eight psychological states in the model are discussed as cognitions that an entrepreneur can learn and hone.

While some of the psychological states presented in the model have previously been deemed psychological traits, some research illustrates that this may not be the case. For example, the propensity to take risks, internal locus of control, and achievement are "traits" often found in the literature that separate entrepreneurs from non-entrepreneurs. But, more recent research supports the fact that risk-taking, among others, is not a necessarily a trait, but instead a psychological state. For example, Shaver and Scott (1991) offer insight on social cognition as a way to provide useful frameworks for entrepreneurs to make decisions related to risk-taking, locus of control, and achievement. They state that behavior is influenced by the way the external world is represented in the mind, and by the individual's exercise of choice. They go on to state that social cognitive processes may impact behavior more than enduring attributes as the trait-approach suggests. Baron (2000) indicates growing evidence that shows cognitive factors play an important role in why some entrepreneurs are more successful than others.

Palich and Bagley (1995) discuss risk-taking as "frame of reference training", where it can be learned through a cognitive process rather than being tied to a fixed personality trait. Hmieleski and Baron's (2009) findings illustrate the benefits of applying social cognitive perspectives toward the efforts to understand the aspects of the venture creation and development process. Krueger (2007) asserts that an intentions-based model of the cognitive infrastructure either supports or inhibits how one perceives opportunities.

Further research contends that social cognitive theory advances the literature by suggesting that entrepreneurial behavior is the result of the interplay between the environment with certain cognitive biases (De Carolis & Saporito, 2007), and Shane and Venkatamaram (2000) suggest exploring cognition as a reason why some people and not others exploit opportunities. Mitchell, Busenitz, Bird, Gaglio, McMullen, Morse, and Smith (2007) discuss the usefulness of entrepreneurial cognition research to further this stream of research. Entrepreneurs are made, not born. They are made through a perception-driven enactive process that begins with forging the potential for entrepreneurship (Krueger & Brazeal, 1994).

The Entrepreneurial Intelligence Model presented in this paper furthers the cognitive, intentions-based approach to entrepreneurship research and new venture development by focusing on certain psychological states of successful entrepreneurs that can be learned by nascent entrepreneurs. And, it is duly noted that while some states may be a matter of choice, others will take further conditioning.

Different Forms of Intelligence

In general, intelligence refers to the capacity to acquire and apply knowledge, especially toward a purposeful goal. Not only is it important to possess intelligence, but one must also use his or her abilities to successfully collect and analyze information on current and future situations. Related terms include being clever, wise, smart, and being a good decision-maker. Entrepreneurs must be smart about what opportunities are pursued, how much risk to take, who they do business with, how they treat customers, and who they hire, to name a few. Developing *entrepreneurial intelligence* is a necessity for achieving *dynamic success*. Dynamic success is characterized by action. It relates to energy and motion as opposed to stagnation. Something dynamic is marked by continuous change, such as today's business environment as it becomes more complex due to more educated consumers, increasing competition, rapid globalization, and advancing technologies.

Intelligence is a fairly complex concept that deals not only with brainpower itself, but the application of that brainpower. It is not strictly limited to IQ, which only assesses "inert intelligence" and provides only a portion of the big picture regarding the elaborate concept of intelligence. Certain types of intelligence can be learned in several areas of application. A few examples are emotional intelligence, social intelligence, cultural intelligence, moral intelligence, and *entrepreneurial intelligence*, which is presented in this paper.

Emotional and social intelligence are increasingly important characteristics to possess in the business world. Emotional intelligence includes awareness of others' feelings as well as sensitivity to one's own emotions and the ability to control them. The five components of emotional intelligence include self-awareness, self-regulation, motivation, empathy, and social skill (Goleman, 2004). Social intelligence is more of an ability to read others and their intentions and adjust one's own behavior in response (Hitt, Black, & Porter, 2005). Some researchers believe that social and emotional intelligence are very much related in that emotional-social intelligence is a cross-section of interrelated emotional and social competencies, skills, and facilitators that determine how effectively we understand and express ourselves, understand others and relate with them, and cope with daily demands (Bar-On, 2005). Cultural intelligence

is the ability to recognize characteristics in others and differentiate those that are related to culture versus those related to an individual's personality. Further, it includes one's ability to adapt accordingly (Mosakowski & Earley, 2004). A person with high moral intelligence, on the other hand, possesses the mental capacity to determine how universal human principles such as integrity, responsibility, compassion and forgiveness should be applied to our personal values, goals, and actions (Lennick & Kiel, 2006).

This paper introduces the concept of developing *entrepreneurial intelligence*, by honing eight unique psychological states and engaging in five action-steps to achieve dynamic success. While much can be attributed to the efforts of finding specific psychological traits and behaviors that distinctly separate an entrepreneur from a non-entrepreneur, no such indisputable list exists in either category. This study takes a different approach by focusing on psychological states through intentional cognitive processing.

METHODOLOGY

One hundred and thirty-two entrepreneurs (n=132) were used to gather data for an idiographic approach, which is characterized by individual-centered and naturalistic environmental contexts, and by qualitatively-based direct observation data gathering techniques. The entrepreneurs were identified using the American Business Lists, which generated a sample of 500 business owners who operated their firms within a particular geographic and who had sustained their ventures for seven years or longer. This is how the term "success" was defined in this study, entrepreneurs who have sustained their businesses for seven years or longer. Thirty-seven entrepreneurs had been in business from 7-10 years, thirty-one from 11-15 years, twenty-three for 16-20 years, fifteen for 21-25 years, eleven for 26-30 years, and fifteen for 30 or more years.

It is important to note that, all of the entrepreneurs observed are extremely diverse representing over 80 different types of businesses in retail, manufacturing, services, distribution, non-profit, and agriculture. They are also very diverse in gender, age, and education-level, along with number of employees, sales volume, legal structure, and number of businesses owned.

During the idiographic portion of the study, four phases were used that included: unstructured observation of entrepreneurs (n=33), post-log interviews with the same entrepreneurs to ensure accuracy of data collection. The post-log interviews allowed the entrepreneurs to rate how well the logs captured their daily activities and provide any insight that was not captured. Then, a content analysis using the Delphi process was used to obtain consensus from a group of individuals by the use of anonymous feedback. The central goal was to take the observation logs and classify them into much fewer content categories. Consensus was reached from the five panel members about the observations of the target entrepreneurs. This led to more workable categories for the next phase. The results of the content analysis using the Delphi process was used for the structured observation phase, in which all the entrepreneurs (n=99) were observed in their natural environment by trained student observers (174) to record their observations in a log book.

A multi-state multi-rater method was used that utilizes inter-correlations of the multiple states, which in this study included psychological states that were either verbally expressed or

demonstrated by behaviors, each measured during the idiographic data gathering phase. This method of gathering data was first introduced by Campbell and Fiske (1959) with the multi-trait multi-rater approach and has been used by Bescose and Lawshe (1959) to measure leadership behaviors and Lawler (1967) to measure managerial job performance. A multi-behavior multi-rater approach has also been used to observe managerial and entrepreneurial behaviors (Luthans & Lockwood, 1984; Envick; 1996).

The results from the idiographic phase were found to have statistical construct and discriminate validity. The trained observers converged between .922 and .974 on all psychological states; therefore it can be argued that validity exists to a great extent. Cohen's kappa (1960) was also used to represent the proportion of joint observations in which there is agreement, after chance agreement is excluded. It was determined that the overall agreement, excluding the proportion of units for which agreement is expected by chance was .865, which was highly significant ($P < .001$). Reliability correlations were determined by the same rater measuring the same quality. All reliability correlations equal 1.000.

After the idiographic phase of the study, over a hundred ($n=102$) additional entrepreneurs were observed from a nomothetic approach. The nomothetic approach is characterized by controlled and sometimes group-centered contexts. The entrepreneurs in this phase of the study were observed in contexts such as classroom settings, seminars, workshops, and networking functions. Approximately, one-third ($n=36$) of these entrepreneurs were observed using trained multiple observers or raters. All observers used the same categories that were found to have convergent and discriminate validity from the idiographic analysis. The rest ($n=66$) of the entrepreneurs were observed by one rater (the author) by using all of the prior categories and findings from the previous idiographic and nomothetic results.

While the entrepreneurs studied are quite diverse, and all have unique stories about their pathway to success, what they do have in common are the three cognitive qualities of Passion, Vision and Courage, as well as the eight psychological states of ambition, work ethic, continuous learning, innovation, using people as assets, informed risk-taking, integrity, and resilience presented in The Entrepreneurial Intelligence Model, which is believed to have significantly contributed to their success.

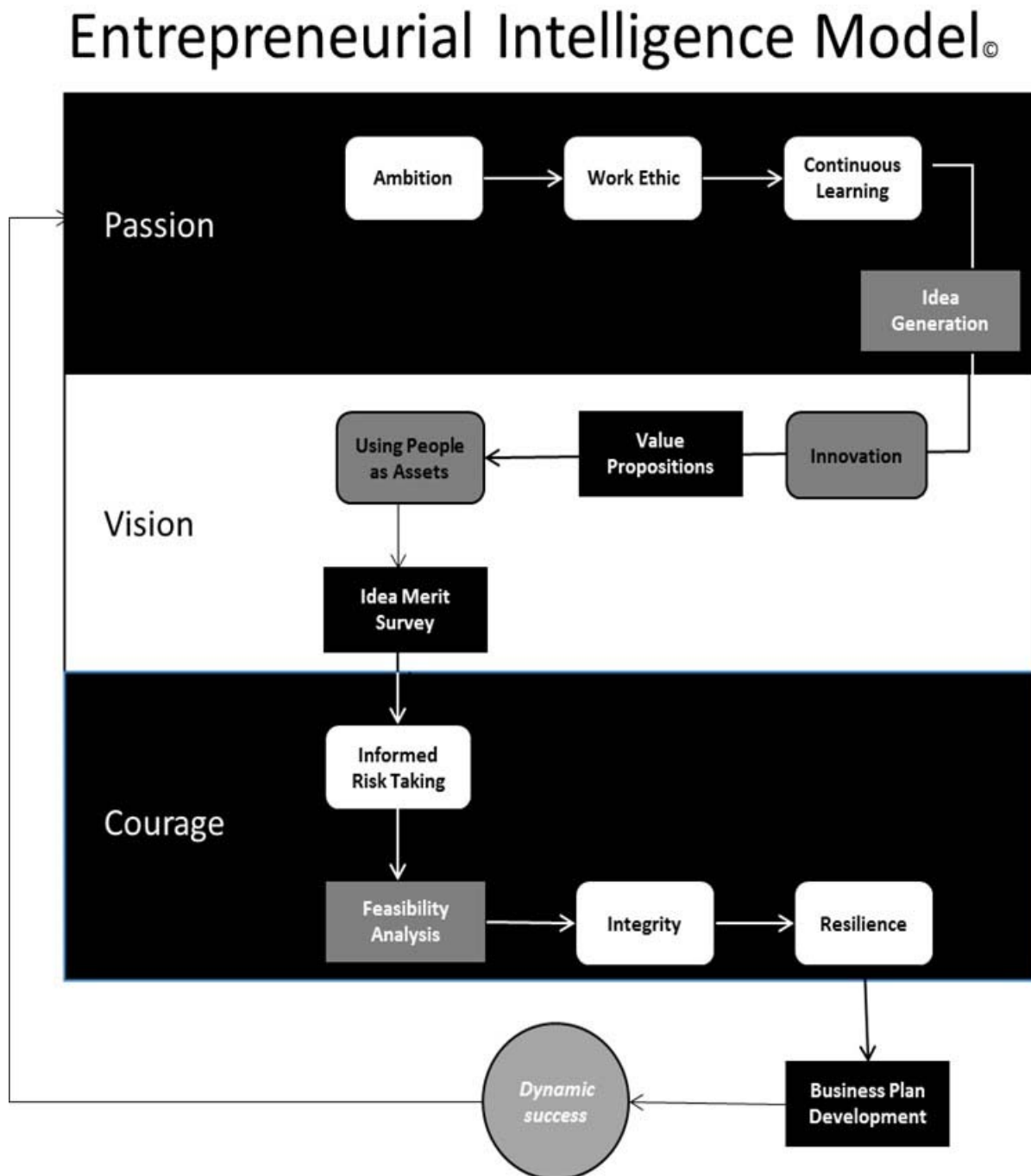
RESULTS

Figure 1 depicts the Entrepreneurial Intelligence Model. It includes the three cognitive qualities of Passion, Vision, and Courage, the eight psychological states, along with the five action-steps inserted sequentially as entrepreneurs begin to understand and hone the EIM cognitions. Each cognitive quality, psychological state, and action-step of the EIM is discussed throughout the rest the paper.

The Cognitive Quality of Passion

Passion is a very strong and boundless enthusiasm for something. For the entrepreneur, this includes the three psychological states of *ambition*, *work ethic*, and *continuous learning*.

Figure 1: Entrepreneurial Intelligence Model



Ambition is defined as an eagerness or strong desire to achieve something. It is an outward expression of who you are, because others can see what your values are through the goals you pursue. Synonyms include drive, initiative, persistence, and determination. Ambition has been linked to successful leadership as early as the 1920s, where this quality was found to be more predominant in leaders than in non-leaders (Hannawalt, Richard & Hannawalt, 1944; Bellingrath, 1930) and linked to performance (Cox, 1926). For example, the career advancement of managers is positively correlated with ambition (Cummin, 1967; Hall & Donnell, 1979), as well as company growth for entrepreneurs (Wainer & Rubin, 1969).

Perhaps the most notable research related to ambition is the work by David C. McClelland, a Harvard psychologist, on a construct called Need for Achievement (*n Ach*). Simply stated, *n Ach* can be expressed as a desire to perform in terms of a standard of excellence or to be successful in competitive situations. Some common desires include doing better than the competition, surpassing a difficult goal, and developing a better way to do something (McClelland, 1961).

While some people demonstrate a true lack of ambition, others may simply not be pursuing goals that are of any real value to themselves or others. For example, a parent of a teenager who plays video games several hours each day may describe their teen as lazy or lacking ambition. This judgment is incorrect, because the teen is demonstrating a strong desire to excel at the video games by surpassing different levels or by winning against friends. The problem is that the parent does not see the value in this particular ambition for their child, which is probably a valid judgment. The same philosophy holds true in the workplace.

A supervisor may describe an employee as lacking ambition. In some cases this statement may be true, but in other cases, it may be that the supervisor values different things than what the employee is pursuing at work. For example, an employee may be trying to complete tasks as quickly as possible, while the supervisor places more value on quality. Thus, the supervisor sees the employee as being sloppy and may assess that he or she lacks ambition. This makes it critical for managers to make their values and priorities well-known. The alignment of values is crucial for ambition to work. And as an employee, it is important to work for a company that has values similar to your own.

In a similar vein, an entrepreneur may devote an enormous amount of time, energy, and money in a new product. But, if there is no market for the product and your intended customer sees no value in it, and your pursuits will end up being fruitless. Entrepreneurs must be able to foresee the direction in which ambition is taking them, and use it as a tool to reach their goals.

We now live in time of unlimited opportunities as globalization and technology are reshaping today's industries. Entrepreneurs must find new and innovative ways to be successful. However, despite all the changes, one thing that remains constant is the need for good leadership. Every good leader is characterized by a strong desire to succeed. The underlying ambition of the organization's leader has a tremendous impact on the success of any action in a business. Ambition motivates an individual to strive for his or her dream and it provides energy and direction to employees. Winners are those leaders who aggressively pursue their ambitions with tenacity. This is a crucial factor for success in business world, because it leads to better performance and stimulates your efforts towards the main goal (Kluger, Cray, Fertehoff, Isackson & Whitacker, 2005; Hymowitz, 2007).

It is also very important to cultivate ambition in organizations. The only way to create something new is to have an essential ambition. It can be developed in an organization, but it must be held first by the organization's founder.

Work ethic is the belief in work as a moral good, and the view that a person's duty and responsibility is to achieve success through hard work. It is something that can be taught but is easier to instill at an early age (Hill & Petty, 1995). There are three components of work ethic: interpersonal skills, initiative, and dependability (Rogelberg, 2007).

Interpersonal skills include your attitude, behaviors, gestures, manners, words, and tone of voice used around other people such as customers and employees. It directly affects their perception of you and how you get along with them. An entrepreneur must have excellent interpersonal skills in dealing with customers, suppliers, lenders, partners, and employees. Entrepreneurs cannot afford to have a bad rapport with any of these groups, as they directly impact the success of the business.

Initiative includes the energy, thought, and care put forth towards completing a task or project. Direct supervision is not typically available to entrepreneurs, and they must act independently to reach their goals. Lacking initiative can lead to procrastination and even missed opportunities. Every success story starts with opportunity recognition, so if you miss the opportunities, you cannot achieve dynamic success.

Dependability includes being honest, reliable, and punctual. Lacking dependability wastes resources, such as time and money, which can easily lead to business failure. Entrepreneurs cannot be late paying lenders, suppliers, employees or bills. They cannot miss meetings with clients. Entrepreneurs cannot advertise good quality products and excellent customer service and then not follow through with those promises. Customers are depending on the words and actions of the entrepreneur.

What drives people to have a good work ethic can be extrinsic, intrinsic, relational or self-enhancement values (Rogelberg, 2007). Money and title are examples of extrinsic values. The satisfaction of achieving a difficult task and the pride of winning in competition are examples of intrinsic values. Working hard to please your boss and taking a particular job to make your parents proud are examples of relational values. Self-enhancement may include working hard for a promotion or getting your college education for better job opportunities. While fulfilling intrinsic needs is probably the most rewarding, many people develop a strong work ethic because of a combination of these values.

We are all born with natural talents and gifts, but success is only achieved through an enormous amount of hard work over many years. There is no evidence of high-level performance without experience or practice. In order to achieve greatness an entrepreneur must explicitly intend to improve performance and learn from experience. Tiger Woods is a great example. Regardless of his personal shortcomings, many would argue that Tiger Woods is the best golfer to ever play the game. There is no doubt he has been blessed with a natural talent for it.

However, he did not achieve greatness by relying on this talent alone. In fact, his work ethic is legendary. He is known for practicing his golf shot as many as 14 hours per day, hitting the ball off the tee, out of the sand, or on the green. He has a never-ending quest for perfection (Bradley, 2006). Nothing of great value can be accomplished without a solid work ethic. Hard

work and dedication are crucial to success that no amount of luck, fortune, or even natural talent can replace.

Continuous learning is a central and religiously practiced behavior of successful entrepreneurs. Learning is the act, process, or experience of gaining knowledge or skills. Entrepreneurs must continuously increase their knowledge-bases and hone skills through reflection and inquiry. Continuous learning is also a strategic process organizations use to stay ahead of the competition.

Reflection assumes a reactive response to your experiences, both positive and negative. Entrepreneurs encounter people and situations each day that they had not planned for, and it is important to reflect on those experiences at the end of the day, always learning from them. The ever-changing business landscape will oftentimes present certain opportunities, obstacles, or encounters with other people they did not plan for or foresee. But they are as imperative to learn from as those they had intended.

Inquiry assumes a proactive approach to learning, such as reading about the latest business trends, attending a seminar in a particular field, taking a certification class to improve skills, or seeking advice from experts. This is another critical component, because one must go beyond what the environment offers on a daily basis and take on a proactive role in learning.

We learn from the combination of positive and negative experiences. These experiences mold our knowledge-bases, which determine the sequence of our choices and ability to take informed and calculated risks (Minniti & Bygrave, 2001). It is this knowledge component that ultimately determines our selection of the most appropriate course of action in any specific uncertain environment (Bryson & Kelley 1978).

Early research describes the development of professionals as a logical progression over time (Becker, 1970). There is a clear linkage between lower-levels and upper-levels of management, each level requiring more complex cognitive maps (Jacobs & Jacques, 1987). One consideration is determining whose responsibility it is for an employee to learn. This taps into the topic of organizational learning.

Organizational learning is a culture where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning to see the whole together (Senge, 2001). It should permeate all levels of an organization. Moreover, it influences performance and growth and enables innovation: the more a company learns, the better it will be in establishing trends, reacting to markets and creating new business opportunities (Amerson, 2006).

When businesses promote learning as opposed to training, their motives are often less to do with broadening the horizons of their staff than with making the process more proactive on the employee's part (Mann, 2007). So, while an organization may create a culture for learning, it is still up to the individual to inquire and be proactive in learning and development.

The bottom line is to approach learning as a continuous self-improvement process, taking time to reflect on unplanned experiences and even more time for inquiry. Entrepreneurs must take advantage of all learning opportunities and always view them as their own responsibility for increasing their knowledge-base and honing their skills.

The Society of Organizational Learning, led by Peter Senge, is an intentional learning community composed of over 300 members. Those involved include organizations, individuals, and local communities around the world. Organizational members have included AT&T, Boeing, Ford, Nissan, and Shell among other prominent organizations. These names alone demonstrate the importance of continuous learning in today's business world and in successfully establishing one's business in this environment (www.saonline.org, accessed April 2013).

Idea Generation as Action-Step 1:

Once an entrepreneur has pinpointed his or her true passion(s) through *ambition*, *work ethic*, and *continuous learning*, they can begin generate ideas for starting a business that centers on their passion(s). Invention is the purest form of entrepreneurship, but only if it is pursued all the way to market. More often than not, however, the origins of entrepreneurial ideas are not inventions, but the recognition of change. There are seven key areas that serve as common origins for change and entrepreneurial ideas. They are the economy, political and legal issues, socio-cultural issues, technology, markets, industry structures, and product and/or service variations. Identifying a change in one of these key areas with the intersection of one's passion(s) is the key to idea generation. Some key questions a nascent entrepreneur can use to uncover his or her true passions may include:

Ambition: What am I ambitious about? What are the things in life that inspire me and drive me?

Worth Ethic: In what areas do I demonstrate a good work ethic? What can I work on all day that does not feel like "work"? What do I wish I had more time to do?

Continuous Learning: What do I want to learn more about? If I had to attend a day-long seminar on any topic, what would it be? What kind of books and magazines do I like to read?

The Cognitive Quality of Vision

Vision is the intelligent foresight or the competence to see future developments. For entrepreneurs this includes the two psychological states of *innovation* and *using people as an asset*.

Innovation is the introduction of something new. It can refer to something tangible such as a new product or manufacturing device. It can also be intangible such as a new business concept or a process. Similar terms include creativity and inventiveness. Early research reveals that education is tied to innovation, and when senior managers are more educated innovation is more likely to occur in an organization (Becker, 1970). Other research shows that general intelligence (IQ) is more important for success in lower-level management, whereas creative intelligence is more important for success in higher-level management (Rushmore, 1984).

Innovation is the key to a successful business as it determines a business' distinctive competencies and competitive advantage, which provides stability for the company in a dynamic environment. An early example of innovation leading to competitive advantage is the improved assembly line introduced by American car manufacturer, Henry Ford. He installed the first

conveyor belt-based assembly line in his Michigan factory in the early 1900s. The assembly line reduced production costs for cars by decreasing assembly time. Ford's famous Model T was assembled in ninety-three minutes (www.inventors.about.com, accessed June 2006). This innovation led other types of manufacturers to consider using this process on their products to reduce production costs and time.

Some companies fear innovation because they are risk-adverse. But today, with rapid globalization, increasing competition, advancing technologies, and customers who are continuing to become more sophisticated and demanding, innovation is necessary for survival.

Innovation is a mindset and behavior that is sought after in business, and innovative people shape the face of the modern business world. It can take on many forms and allow one firm or person to rise above competitors. Some companies, such as Deloitte Touche Tohmatsu, make fostering an innovative culture a huge priority. Their website states, "Constant innovation is a hallmark of successful growth companies. Staying ahead of the competition requires a certain threshold of inventiveness at individual, group, and company levels." (www.deloitte.com, accessed June 2006).

Sometimes an entrepreneur's innovative insight is actually ahead of consumers' needs and requires patience on the part of the entrepreneur. In summary, innovation can occur in any business no matter its size or type, and it is necessary to establish distinctive competencies and provide a competitive advantage. Success in a dynamic environment hinges on embracing innovation.

Developing Value Propositions as Action-Step 2:

Innovation is the key to developing value propositions as the basis for establishing a competitive advantage in the market place. Entrepreneurs must consider what their product/service will provide to customers in terms of value. Common value propositions include: saving time, saving money, providing flexibility, customization, easier access, perks or loyalty programs, superior service, ease of use, quality assurance, and innovative design, among others. There should be a clear and compelling competitive advantage or value created by the product or service idea for the primary target market or customer segment.

Using people as an asset means utilizing the value provided by the people who you know and work with in regard to their capabilities, experience, motivation, knowledge, and skills. This is known as social capital.

An asset is something of value, and many experts agree that people within a business are the most valuable asset because they drive performance. Hiring the right people is the first critical step. Research shows that the same characteristics that make good leaders also make good followers, which means those who are active, independent and critical thinkers, demonstrate credibility and are committed to the organization (Kelley, 1988). Once the right people are hired, it is important to empower them to do their jobs. A system that supports

empowerment allows employees to have a shared vision (Kouzes, & Posner, 1987) and achieve more (Cameron & Ulrich, 1986).

Knowing who the right people are is also essential for understanding social capital, which is defined as the value of actual or potential assets a person can acquire for an organization. These assets can be in one's access to certain knowledge-bases, financial resources, other people, or entry into desirable markets.

The valuation of companies has changed progressively since about 1990, putting a much higher value on intangible assets such as knowledge, competence, brands, and systems (Mayo, 2001). Jack Welch speaks at length about the importance of people to an organization and states that they are the core competency (Welch, 2001). However, measuring this kind of capital is not as easy as it is to measure financial capital, and the debate about how to measure and report human or social capital is one of the most important challenges facing organizations today (Grayton, 1999).

Organizations such as Saba Talent Management Systems exist to help other organizations manage people as an asset to help drive organizational excellence. In fact, 51% of the FORTUNE 100 relies on Saba. Some of their well-known global partners are include Hewlett-Packard, IBM, and Infosys (www.saba.com, accessed April 2013).

It is evident that using people as an asset requires a great deal of attention from the point of hiring employees or acquiring business partners to continually assessing and employing their strengths and skills as new projects arise and conditions change. People you know can be the key to getting the financial and other resources needed to start your own business. They can connect you to important people in your market or industry.

Conducting an Idea Merit Survey as Action-Step 3:

Entrepreneurs should also use people in their potential target market as a way to *use people as an asset*. This action-step requires entrepreneurs to develop a one-page business concept statement they can share with 10-15 people in their target market, along with a survey that asks them questions related to how the idea: adds value or helps solve a problem for them, provides immediate or delayed benefits, has limitations or disadvantages, appears to be modifiable and how, what they like most about the idea, what they like least about the idea, and purchase intent if the product/service was on the market.

The Cognitive Quality of Courage

Courage is a spirit that enables you to face danger or pain without showing fear. For the entrepreneur this includes the three psychological states of *taking informed-risks*, *integrity*, and *resilience*.

Taking informed-risk means having the knowledge, abilities, skills, and experience required for risk-taking. Risks may be financial, psychological, or even impact their long-term business reputation. It is through your *ambition, work ethic, continuous learning, innovation, and use of people as assets* (first five EIM qualities) that you gain all the necessary tools to take informed-risks. Entrepreneurs must become knowledgeable about external factors out of their control, and make adjustments or concessions in order to ensure their own success and survival. This is part of being an informed risk-taker.

Taking the risk is the first quality of being courageous. A change in perspective, attitude, philosophy or method that creates a shift away from the original direction can always be seen as a risk, because there is the possibility of loss or injury. Being informed means possessing important knowledge about a situation from investigation, study, or instruction. From a business perspective risk should not be avoided, rather it should be viewed as a positive influence and vital to organizational and personal success. Risk only becomes a negative factor when it is miscalculated, misunderstood or mismanaged, which is why it is essential to only take informed-risks.

Entrepreneurs must be willing to take risks. Risk-taking runs the spectrum from small transactions to gambling the entire business. Taking informed-risks requires a well-thought-out decision making process. By taking these informed risks, entrepreneurs can grow, learn, and achieve their personal dreams, goals, and ambitions. One can create new possibilities and change lives through a positive risk experience.

Many businesses go to great lengths to avoid risk, yet in reality, it is through taking informed risks that one becomes successful and develops great leadership traits and keeps the company from turmoil. One of the most important things for an entrepreneur is to thoroughly know their business, so they are able to take informed-risks. Risk allows entrepreneurs to see new possibilities in themselves, in their businesses, and in their goals. If they learn to listen, research, and stay informed, they can take the business to new levels of success. Eventually, they will be able to make more innate decisions about risk from based on prior knowledge and experience.

Feasibility Analysis as Action-Step 4:

The word feasible means realistic and “doable”. In other words, is it possible for your business concept to succeed? This is where *taking informed-risk* becomes essential. If you determine that it is most likely not possible, then you should not spend the time and energy to develop a business plan for execution. The feasibility analysis is a way to evaluate three areas: (1) market potential; (2) management team capital; and (3) financial viability. Entrepreneurs should assess:

- 1) Market potential – determine market size, estimate potential market share, and evaluate the window of opportunity
- 2) Management team capital – determine the value of the human, social, and psychological capital of everyone on the top-management team

- 3) Financial viability – identify required start-up capital, determine profit per unit, assess the potential for repeat sales, and address the current and future health of the market and industry

Integrity is the steadfast adherence to strict moral and ethical principles and is characterized by the soundness of moral character and honesty. For products and services, integrity is a state of good quality, being complete and unimpaired. Some may ask why integrity falls under the realm of courage. It is because entrepreneurs, and many other business professionals, encounter decisions every day that test their ethics and values and force them to choose between right and wrong. And many times right versus wrong appears more gray than black and white. It takes courage to choose integrity each and every time, even though it may cost you a customer, money, other valuable assets, resources, or an opportunity. However, it is essential that entrepreneurs demonstrate integrity because it is critical to successful leadership and to the reputation of the company.

Integrity involves everything from obeying laws and industry regulations to taking care in setting your own company policies. Companies must only create rules they are able to honor. For example, if you have a first-come, first-serve policy for customer service then you cannot allow a larger customer who wants something immediately to be served before smaller ones who are ahead of them. To do this would diminish the company's integrity, and employees may also get the impression they can bend the policies (Goodson, 2005).

Beyond the entire organization, integrity falls on the shoulders of individuals. The integrity and reputation of the CEO, owner, and other leaders in the company directly impact the entire organization and its employees. Robert W. Lane, Chairman and CEO of John Deere, speaks about the importance of integrity in business practices. Lane defines integrity as “no smoke, no mirrors, no tricks, just straight down the middle. It means no exaggerations, no dissembling, just the real deal.” He further advises that integrity is fundamental to everything in business. Integrity comes first and sets the stage for everything that follows (Lane, 2006).

There have been numerous polls and surveys discussing the issue of trust and integrity in business. Many of these surveys have shown the clear-cut desire of employees who want to work in organizations where integrity in business is practiced. In fact, employees are six times more likely to stay in their jobs when they believe their company acts with integrity. Furthermore, if they mistrust their boss' decisions and feel ashamed of the company's behavior, 80% will likely leave (Bastone, 2003).

While the importance of some of the eight psychological states of entrepreneurial intelligence may fluctuate from time to time due to situational factors, integrity must be intact 100% of the time. It is always important to demonstrate, whether it relates to the work itself, how you treat your employees, or what role your business plays in the community.

Resilience is the ability to recover from misfortune or adapt easily to change. Some terms include overcoming obstacles, bouncing back from failure, and seeing an opportunity instead of a problem. Resilience has proven to be an essential trait in order to succeed in business, especially for entrepreneurs (Timmons, 1999), as it can be an important driving force (Gome, 2003).

Research has shown that higher performing executives tend to more readily admit to their mistakes compared to low performing executives, who tend to hide them or blame others (Bass, 1990). By taking ownership of your mistakes, shortcomings, and failures, you are in a better position to learn from them. This allows entrepreneurs to build the necessary knowledge-bases and skills to avoid similar situations in the future. In more recent research, resilience has been named as one of the four components of psychological capital, or PsyCap (Luthans, Luthans, & Luthans, 2004). Psychological capital is reflected in one's self-view or sense of self-esteem (Goldsmith & Darity, 1997). Part of that self-view is in the construct of resilience.

Resilient people have the best chance of succeeding in life because they stay positive and focused on achieving their goals and fulfilling their dreams and aspirations. It is one of the most important characteristics an entrepreneur can possess in today's dynamic business environment (Artz, 2004), as it allows them to adapt quickly to external market shifts. Leaders use their resilience to help them focus and become continuously adaptive as they respond to change (Spiegel, 2005).

IBM works to build resiliency into the services they offer their customers. They understand that with business becoming more complex and interconnected that the risk and cost of disruptions can affect every business process. They are going beyond traditional disaster relief and crisis management by helping clients build resilience into every layer of their business. Their plan includes risk management; regulatory compliance; knowledge, expertise, and skills; security, privacy and data protection; in addition to market readiness; and continuity of business operations (<http://www.20-935.events.ibm.com>, accessed June 2006).

Resilience is a central ingredient that allows entrepreneurs to reach their goals. There is no shortage of the number of uncertainties, obstacles, lean times, mistakes and even failures on anyone's rise to the top. It is how one deals with them that will separate some entrepreneurs from the rest of the pack and possibly prevent business failure. Resilient persons experience the same difficulties and stressors as everyone else; they are not immune or hardened to stress, but they have learned how to deal with life's inevitable difficulties and this ability sets them apart (Wagnild & Young, 1993).

For entrepreneurs to survive and prosper, resilience can be viewed as a sustainable, portable strategic plan. Resilient individuals, teams, and organizations consistently outlast, outmaneuver, and outperform their less resilient competitors, making resilience training one of the most important emerging trends in learning (Stoltz, 2004).

Business Plan Development as Action-Step 5:

At the end of all the psychological states in the Entrepreneurial Intelligence Model is business plan development. Once the business concept is deemed feasible to pursue, the entrepreneur can then develop the entire business plan, using all of the information gathered from the previous action-steps. The business plan should contain the common components including an executive summary, general business description, product/service plan, marketing plan, management plan, operations plan, financial plan, and an exit strategy.

CONCLUSIONS

Once the business plan is complete and the venture is launched, an entrepreneur should strive to attain *dynamic success* by continuing to hone the three cognitive qualities, eight psychological states, and at the right times, engage in the five action-steps presented in the Entrepreneurial Intelligence Model, to build on success. Each time an entrepreneur achieves a milestone in the business they must continue to sustain and grow the business through dynamic success, which is characterized by action. The more success an entrepreneur achieves, more energy is needed to propel them on to even greater goals and business success. Multiple goals may even become interactive or synergistic in nature.

While being an entrepreneur is not for everyone, for those who are seeking to start a new business, the Entrepreneurial Intelligence Model is learnable and actionable way to pursue entrepreneurial goals, however, it does take commitment, practice, and conditioning to hone the three cognitive qualities of Passion, Vision and Courage and the eight psychological states of ambition, work ethic, continuous learning, innovation, using people as an asset, taking informed-risks, integrity, and resilience to achieve the five action-steps presented in the model, which can ultimately lead an entrepreneur to experience dynamic success.

The cognitive development of each of the psychological states may be a matter of choice for some individuals, while others will take further conditioning. But, as entrepreneurship research progresses (Baron 2000; Shane & Venkatamaran, 2000; Shaver & Scott, 1991; Krueger & Brazael, 1994; Palich & Bagley, 1995; De Carolis & Saporito, 2007; Mitchell, et, al, 2007; Krueger, 2007; and Hmieleski and Baron, 2009), it is suggested that cognitive processing and frameworks are viable ways to pursue entrepreneurial goals and success. The Entrepreneurial Intelligence Model provides a cognitive framework and process model that can be utilized as an intentions-based, learnable way to hone the three cognitive qualities, eight psychological states, and five action-steps to achieve entrepreneurial success.

The Entrepreneurial Intelligence Model is a tool that can be used by nascent entrepreneurs themselves, mentors of entrepreneurs, or instructors of entrepreneurship seminars, workshops, or courses to help guide a budding entrepreneur from the idea creation stage to launching a new venture.

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DYNAMICS OF FAST MARKET ENTRANCE FOR YOUNG ENTREPRENEURIAL FIRMS PROVIDING PRODUCTS IN MARKETS: INNOVATION, ORGANIZATION AND ENTREPRENEURS

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ABSTRACT

How do young firms speed up the market entrance? The major goal of this study is to provide a comparative perspective on the speed of market entrance by presenting models for product-oriented and service-oriented firms. By employing a duration analysis modeling technique to test the hypotheses, this study finds that product-oriented firms should combine owned technology and external technology to create synergy. I would also like to stress the importance of conducting research and development via a large proportion of staffing in R&D: this maintains the technical capability to remain innovative.

Keywords: *entrepreneurship, fast market entry, speed of market entrance, speed of commercialization*

INTRODUCTION

How do young firms speed up the market entrance? For young firms extensively pursuing fast growth, fast market entrance is a significant milestone in their success. Slow market entrance, which means the delay of first revenue, is also one of the reasons for the high mortality rate of young entrepreneurial firms. Literatures of entrepreneurship found that there are other reasons fast market entrance is important for young firms. First, early cash flow generation is critical to gaining financial independence (Schoonhoven, Eisenhardt, & Lyman, 1990). For new technology-based firms (NTBF), they often experience a shortage of cash flow at the stage of research and development thus; their survival depends on an external source of financing during this time. Second, early entrance means faster visibility in the market. Therefore, a firm's brand reputation depends upon early entrance. Not to mention that the legitimacy of an organization appeals to investors, customers get to know the product and organization that enters the market at the beginning of an industry. Third, fast-moving organizations get to secure a large installed base. Impressing customers is critical, especially where direct network externality is crucial for the success of innovation. Therefore, early entrance to market increases the likelihood of a firm's survival (Schoonhoven et al., 1990). In short, accelerated commercialization is a critical basis of competition where rivals and competitors strive toward seeking new sources of knowledge to differentiate products and services (Porter, 1980).

To address the issue, literature of entrepreneurship research studies strategies to speed up market entrance with an aim to provide strategic implications for young firms at their early stages. One of the trends is to extend insights developed from the literature of new product development (NPD), which studies the speed of innovation (Nelson, 1991). NPD literatures have dedicated to research strategies to speed up NPD processes of high-tech businesses because fast innovation is a favorable harbinger especially for innovative organizations (Schoonhoven et al., 1990), since it indicates satisfaction of the initial milestone. Focusing on speed of innovation of *a project*, rather than speed of market entrance of *a business*, the NPD literature found that shorter development times are positively associated with increasing economic value for innovative organizations (Gilman, 1982). Moreover, keeping a fast pace is critical, especially for firms in the high-technology industries, where the industrial trend changes instantaneously (Brittain & Freeman, 1980; Eisenhardt, 1989).

Concerned with providing implications for innovation managers in large established firms (Heirman & Clarysse, 2007), most of NPD literatures were mainly contributes to understanding the dynamic process of innovation management. In this case, unit of analysis is a project, rather than a firm's stage. From a portfolio perspective, literature provides insights on how to allocate resources for internal and external R&D projects and programs (Gold, 1987; Wheelwright & Clark, 1992). Literatures approached the subject matter from the project-managements' viewpoints primarily concerns to provide different innovation steps and managerial tools to reduce time of the NPD (R. G. Cooper & Kleinschmidt, 1987; Hise, O'Neal, McNeal, & Parasuraman, 1989). From the communications perspective, the literatures highlight importance of team work and the role of communication to facilitate collaboration among different units of a firm, such as R&D and marketing. The implications of the existing literature are therefore beneficial for managers of large established organizations, who seek to find guidelines for optimized management of handling multiple projects simultaneously. On the contrary, entrepreneurs usually face less complicated processes of innovation due to their small and simple organizational structure in which less communication complexity is allowed due to relatively less people involved (Heirman & Clarysse, 2007).

While the line of research started by focusing on large established firms, there have recently been a growing number of studies that have extended the research to focus on NTBFs or research-based startups (RBSUs), because NPD is one of the critical missions for NTBFs. Despite the critical implications of "invention to commercialization," reducing development time is extremely difficult for young firms too, due to NTBFs' limited resources (Brush, Greene, Hart, & Haller, 2001). In addition, it is a daunting task, since developing new technology requires a relatively long-term commitment, which further increases the financial burden (Heirman & Clarysse, 2007). Therefore, reducing the commercialization time becomes a challenge for NTBFs when they have to compete on time with limited financial and technological resources (Brush et al., 2001). Thus, the ability to shorten the time itself is a source of competitive advantage (Kessler, Bierly, & Gopalakrishnan, 2000; Stalk, Evans, & Shulman, 1992). An

exceptional example, Markman et al. (Markman, Gianiodis, Phan, & Balkin, 2005), focusing on university technology transferring offices (UTTOs), used commercialization time as a surrogate for innovation speed by measuring time it takes to license university-based technology to industry and to new ventures.

Further research is needed to provide implications, especially, for the general population of entrepreneurial firms in regards to strategies for speeding up the market entrance, because they are different in the following ways from NTBFs or RBSUs. Most significantly, fast revenue generation is important for all entrepreneurial firms regardless of the level of technology of which their goods and services are involved. Second, not all entrepreneurial businesses are high-tech or use innovation as a strategy to differentiate their goods and products in the market. Not to mention that all entrepreneurial ventures involve an NPD process, using NTBFs based on industry code may not reflect the competition of the real world market, where businesses compete based on market choice regardless of the level of technologies. Finally, having a different organizational structure than that of technology-based ones due to different business activities they might focus, implications for small businesses might be different from those applicable for NTBFs.

Based on the importance of early revenue generation for the cross-sectional population of entrepreneurial businesses, the major goal of this study is to provide a better understanding about the dynamics of early market entrance for young entrepreneurial firms. For the purpose of this study, I have following objectives: first, I try to provide implications for different types of businesses, whether they provide a product or a service. Young firms tend to focus on product development in the early stages. Abernathy-Utterback states that it is because products are relatively easy to get patented, thereby leading to a monopolistic position (Abernathy & Utterback, 1978; Utterback, 1994). In addition, firms get ownership of technology with options of experimenting with it to find ways of improvement, or exploit it as it is, including abandoning it if it has no value (Griliches, 1990; Trigeorgis, 1993). As indicated in earlier studies, their business dynamics are significantly different, but little is known about which strategy to speed up the market entrance is effective for each type of business. Research into innovation and entrepreneurship has focused heavily on startups' attempts to develop innovative technology, because most innovative startups are pursuing product-market competition (Gans and Stern 2000). Product innovation usually requires firms to undergo an intensive process of technological innovation (Kollmer and Dowling 2004), which is likely to cause a delay in market entrance. However, little is known about the dynamics of fast market entrance based on the type of product or non-product market. So I try to provide a comparative perspective about the dynamics of fast market entrance. Second, I focus the roles of innovation for faster market entrance by including innovation strategies in the model, while assuming other strategies might be critical in speeding up market entrance. It is widely accepted that innovation plays a key role in leveraging firms' competitiveness, but little is known about its effect on speeding up market entrance. Third, I highlight the roles of the organizations and the entrepreneurs in speeding up

market entrance. Studies about large establishments are less motivated to focus on the availability of complementary assets such as marketing and manufacturing since they tend to be given within an existing structure, but this is not the case for entrepreneurs. For entrepreneurial ventures, organizational structure may facilitate or hamper the speed of market entrance. In an even worse scenario, for those organizations that are operated solely by founding entrepreneurs, entrepreneurs' personal backgrounds may play a critical role.

I try to achieve these objectives with the following approaches: Due to framework that focuses the speed of market entrance for young *business*, this study may therefore disregard when firms started conceiving *a project*. Rather, it focuses on how fast the first revenue is created from the beginning of the businesses, not from the beginning of projects. One justification for using this framework is that the duration of the project may not matter as much for entrepreneurs as for project managers of large established organizations which often require juggling multiple NPD projects simultaneously (Heirman & Clarysse, 2007). The time span of a project is of critical interest for managers in large established organizations because other complementary tasks are of relatively less concern. As mentioned, tasks relating to the post-developmental stage, such as producing and distributing activities, i.e., sales, marketing, and manufacturing are already given in large established firms. For entrepreneurs, staffing with those activities could be an additional burden. Additionally, what matters more for entrepreneurs is how fast first revenue is generated, since cash is blood and oxygen for new ventures. A commonality with the framework of existing NPD literature is that this study also assumes cost efficiency associated with the time variable as an important impediment to success. The critical difference is in the measurement scale on the definition of the baseline. Again, by using the first year of business as the baseline, the present study opens up the possibility of including those firms that may have already finished developing technology at the time of the organization's formal foundation.

Second, to study the mechanisms of fast market entrance, this study borrows the research framework that entrepreneurship research uses to study best practices. One of the usual approaches is to focus on the conditions of businesses in their starting point, as this is believed to have a strong influence on the future of the businesses. Finding a cofounder or staffing the founding team may require a higher level of understanding, since they are likely to determine the destination of young firms in their early stages. These literature mostly focused on resources, strategy, and industry environment (Brush et al., 2001; Heirman & Clarysse, 2007; Kaulio, 2003). Stinchcombe argued that firms' condition of its creation would have long lasting effects on following development of firms (Stinchcombe, 1965). RBV also explicitly asserts in concert that a firm's history may influence on the future capabilities of firms (Barney, 1991). However, not many studies linked initial condition and time to commercialization. A noticeable exception was Heirman and Clasysses study (2007). By linking research-based start-ups' (RBSUs) initial condition and the speed of innovation, they translated the insights of the product innovation shared among NPD literatures to discuss antecedents of innovation speed in start-ups.

The paper is organized in the following way. Next section discusses theories and hypotheses relevant to innovation strategy, organizational innovativeness and the importance of entrepreneurs' characteristics. Then, I discuss relevance of the methodology, data set and issues with measurement. A result section provides relevant tables contain result of empirical analysis. In the final section, I conclude with a discussion of the findings, limitations and future directions.

THEORIES AND HYPOTHESES

Innovation Strategy

According to the resource-based view (RBV), obtaining critical resources is likely to create competitive advantages for firms (Barney, 1991; Foss, Klein, Kor, & Mahoney, 2008; Penrose, 1959). IP provides strong leverage for growth and survival for the following reasons. RBV states that resources or associated capabilities are likely to translate into a source of sustainable competitive advantage (SCA) (Barney, 1991; Conceição, Fontes, & Calapez, 2012), when they are valuable, rare, inimitable and imperfectly substitutable. Having innovation patented means that firms could enjoy a monopoly in the market during a given period. It also means that firms with patented technology have great barriers to entry, built by the learning curve associated with the technology and the legal barrier afforded by patent enforcement (Levitas & Chi, 2010). Patents serves as a crucial source of competitive advantage especially in capital markets, because it creates a positive signal to external potential investors (Coleman & Robb, 2010). Subsequently, successful patenting would positively influence a firm's equity stock in that it constitutes a potential valuable resource. In short, patents can provide the basis for sustainable competitive advantages (Pisano & Wheelwright, 1995).

Compared to non-product oriented firms, product-oriented firms could use two strategies to secure technological resources. First, firms could undergo the research and development stage to develop their own new technologies at the firm's early stage (Kollmer & Dowling, 2004). Once the firms patent the technology, they develop a novel product get the technological innovation embedded in products and sell them in the product market (Kollmer & Dowling, 2004). Despite the advantage in terms of ownership, the product-oriented mode (Stankiewicz, 1994) requires further development efforts for commercial success (Levitas and Chi 2010, 212-233). Once a patented technology has been obtained, the owners of the technology face a series of concerns regarding commercializing the technology. If the technology has not matured enough to be commercialized, the owners may have to wait until the firm discovers supplementary information, or tries out different and more effective designs. The owners could abandon the technology if the perceived value is too slim compared to the cost of development. Processes for understanding user needs and developing a proper design are examples of those activities.

Second, when firms lack the capability to engage in research and development, they can secure technological resources by licensing those resources from external sources. This mode of innovation strategy has received comparatively little attention, despite its importance for NTBFs (Anand & Khanna, 2000). Research about innovation and entrepreneurship has focused heavily on the startup's endeavor toward developing innovative technology based on the assumption that innovative startups are pursuing product market competition (Gans & Stern, 2000). Among the few studies, several explored the forms of cooperation between research-oriented startups and incumbents (Katz & Shapiro, 1987; Salant, 1984). One study presented a case study about licensing agreements by collaborating with incumbents to investigate determinants of control rights (Lerner & Merges, 1998). The authors found a positive correlation between allocation of control rights to R&D firms and the firm's financial resources. On commercialization strategies of young biotechnology companies, Kasch and Dowling (2008) focused on intermediate forms of collaboration, such as hierarchical or bilateral cooperation, to investigate determinants affecting a commercialization strategy in the biotechnology industry in the United States. In this case, licensing-in technology seems to save time on research and development activities, not only allows NTBFs to overcome their resource limitations. Adopting technology from outside improves speed of commercialization, especially when there is strong competition based on timing of entry (Clarke, Ford, & Saren, 1989; Ford, 1988; Kessler et al., 2000). Selective borrowing of readily available sources of innovation is associated with faster product development, compared to developing one's own technology (Kessler et al., 2000). Research has shown that licensing-in university technology significantly reduces commercialization time (Markman et al., 2005). Licensing-in reduces uncertainty to a great extent as well. In these senses, licensing-in technology seems to save time on research and development activities, not only allows NTBFs to overcome their resource limitations.

Although a licensing-in strategy has proven benefits of time compression from the standpoint of cost and product quality (Gupta & Wilemon, 1990), further study is needed to investigate the effectiveness of the strategy in reducing time to market. In addition, reports have observed the opposite effects of a licensing-in strategy in terms of time reduction (Carmel, 1995; Crawford, 1992; Smith & Reinertsen, 1991). Based on the discussion on innovation strategy, I propose to test the effect of patent and licensing strategy by the type of market businesses pursue: product or service. My first major hypothesis is that innovation strategy in terms of the acquisition of a patent would be associated with the length of time to their first revenue for the firms pursuing a product market. My first sub-hypothesis is that owning a patented technology when starting a business provides an advantage for firms by reducing the length of time to their first revenue because it reduces research and development time. The second sub-hypothesis is whether licensing in a patent would speed up the first revenue in the sense that they do not have to go through the research and development process. Given the positive contribution of patents to general firm performance, the number of patents is considered to positively account for the magnitude of quantity as follows:

H1: For the firms pursuing a product market, innovation strategy will speed up the first revenue.

H1a: For the firms pursuing a product market, firms owning a patent might show faster revenue generation.

H1b: For the firms pursuing a product market, licensing-in strategy will speed up the first revenue.

H1c: The number of patents will reduce the length of time to market entrance.

Organizational Innovativeness

As stated earlier, while innovation is largely measured by whether patented technology is embedded, in reality, young firms might opt not to undergo the patenting process even if they pursue innovation. In such cases, patenting is not a preferable strategy due to its costly nature, and innovation still differentiates the product in the market, leading to faster market entrance. In that sense, my second hypothesis is that fast market entrance might still be achieved by firms' strategic emphasis on organizational innovativeness.

H2: Organizational innovativeness of firms would be positively associated with the speed of market entrance.

Speaking of strategic orientation, this study focuses on staffing in research and development as a growth strategy for firms. Based on the RBV, firms' technical capability is tied to human resources, because the latter is critical for their competitive advantage, in that human resources is rivalry, inimitable and irreplaceable resources (Barney, 1991). However, what is more important than availability of human resources is the relevant deployment of those human resources within the structure: human resources can be beneficial only when they are consistently structured within the firm's growth strategy (Mishina, Pollock, & Porac, 2004). Particularly for those firms developing a patentable technology, as opposed to those outsourcing it, their technology capability depends on the quality of human resources for R&D. Here, extending RBV (Barney 1991; Wright and McMahan 1992), I theorize that a competitive advantage is achieved when specific competencies enable firms to enter the market quickly. Such competencies may include organizational capabilities, knowledge, skills, being embedded in the organizational structure, processes, and culture (Markman et al. 2005). Innovation requires the capability to search for an existing knowledge base, synthesizing new technology to suit perceived demand, and developing a feasible product. In this sense, it is more likely that a strong correlation between more human resources in R&D tasks and faster market entrance via a high degree of innovation will be observed from firms pursuing product markets, rather than firms pursuing service markets. Therefore, I propose that for firms pursuing product markets, organizational emphasis on research and development will still be important and will speed up market entrance.

H2a: For firms pursuing product markets, a greater proportion of staff in R&D will be associated with faster market entrance.

Next, regardless of their orientation toward product or service markets, I focus on firm activity related to the nature of technology, hypothesizing that high-tech firms may show faster market entrance due to the significant differentiation embedded in the goods and services they provide, as compared to non-high-tech firms. Classifying firms in terms of high-tech versus low-tech is relevant for studying the NPD process (Balachandra and Friar 1997). Little is known about the major differences in the factors that affect a firm's performance (Heirman and Clarysse 2007). I hypothesize that firms dedicated to research and development (indicated as high-tech employers and technology generators) will show faster market entrance due to their greater differentiation in the market. Finally, I expect that more entrepreneurs with U.S. citizenship will increase the chance of formal funding due to a perceived sense of stability (investing consideration would result in faster market entrance).

H2b: High-tech firms would achieve faster market entrance.

H2c: More entrepreneurs with US citizenship would be positively associated with faster market entrance

Characteristics of Entrepreneurs

Firms' performance is largely affected by owners' characteristics in general for young entrepreneurial firms. In particular, entrepreneurs' skills obtained from experience have been found to positively relate to firm performance (Schoonhoven et al., 1990). Level of technology capability may be affected by the core competence of an organization due to the steep learning curve required for inexperienced organizations. For NTBFs, lacking a track record, the owners' previous experience in the same industry might be analogous to the case of established ones, presumably. Research found that core competencies are also a source of synergy within a range of similar products (Prahalad & Hamel, 1990), and activities in which companies specialize (Richardson, 1972.). Evidence supports positive relations between the overall success and survival of the new firm and an entrepreneur's experience (A. C. Cooper, Gimeno-Gascon, & Woo, 1994; A. C. Cooper & Bruno, 1977; Schoonhoven et al., 1990; Van de Ven, Andrew H., Hudson, & Schroeder, 1984). Entrepreneurs' long-term experience in the technology and market is also known to contribute to better performance (Maidique & Zirger, 1985). Based on the discussion, I hypothesize here that firms with owners having professional experience in the same industry will be positively related to fast growth. Additionally, startup experience is always considered an asset that contributes positively to firm performance (A. C. Cooper et al., 1994; Schoonhoven et al., 1990). In this study, startup experience in the same and other industries is considered.

H3: Entrepreneurs' characteristics will reduce the length of time to market entrance.

H3a: Entrepreneurs' startup experience will be positively associated with faster market entrance.

H3b: Entrepreneurs work experience in the same industry will be positively associated with faster market entrance.

Education is believed to have a strong correlation with better performance of entrepreneurship. Research found more education enhances income level (Mincer, 1974). Higher education typically provides individuals with multiple avenues in which to develop general reasoning and analytical skills (Rosa, 2003). Evidence suggests that education is the strongest factor determining wage level (Delmar & Davidsson, 2000; Rotefoss & Kolvereid, 2005; Van der Sluis, Van Praag, & Vijverberg, 2004). Higher education also gives individuals a psychological advantage given that repeated success in responding to academic challenges increases students' confidence in their performance (Rosa, 2003). In particular, evidence suggests that entrepreneurs' educational attainment has a positive effect on entrepreneurial performance (Dickson, Solomon, & Weave, 2008). For entrepreneurs, higher education enhances the ability to come up with new and better solutions for existing problems, which in turn is a critical skill in an entrepreneurial career where new opportunities and solutions are constantly and extensively sought. Aside from analytical skills that enable efficient processing of information and knowledge, opportunities to network with peers are another advantage offered by higher education. Education also influences business survival rates and venture success (Rosa, 2003). Higher education is positively related to a greater chance of getting external equity financing (Carter, Brush, Greene, Gatewood, & Hart, 2003). Finally, in the sense that technology innovation is more closely related to technical skills to handle codified knowledge, I propose faster market entrance would be associated with owner's formal education. Entrepreneurs' age is also included by taking the median value of all entrepreneurs. I hypothesize, though, age may have delaying effect with speed of market entrance in the sense that younger entrepreneurs tend to show better at coming up with better idea than old entrepreneurs. Considering these factors regarding education and age, the following hypotheses are proposed.

H3c: Entrepreneurs level of formal education would be positively associated with faster market entrance.

H3d: Age of entrepreneurs would be negatively associated with faster market entrance.

CONTROL VARIABLES

Considering the core premises of the liabilities of newness and smallness, one of the biggest hurdles and advantages of small business stems from its small size. While some studies found

size has nothing to do with best practice (Smallbone, Leig, & North, 1995), size plays as a major hindrance of innovation for its organizational complexity that hampers internal communication and collaboration rather than fosters them.

To control for influence of business size, I created three variables. First, firm size is assessed by measuring the number of owners *and* employees at the first year. It is obtained by adding the total number of owners and the total number of employees of the initial stage. Second, to control the fiscal size of businesses, I included variables indicating the total amount of capital. New ventures has to rely on investors for their operating capital when there is no revenue, thus initial size of capital is critical for their performance/survival during the early stage (Heirman & Clarysse, 2007). Assuming innovative activity might be sensitive to size of investment, which is again subject to change by whether venture capital is involved or not, I created another dummy variable to control for VC involvement. VC involvement is known as a factor that speed up market entrance for a first product (Hellmann & Puri, 2000), when compared to other non-VC backed start-ups relying on the sources of financing such as self-financing, business angels, corporations, banks or government (Roberts, 1991). VC involvement further helps young startups, which are notably small in terms of the number (Bhide, 1992; Sahlman, 1990), to receive more funds from other sources (Heirman & Clarysse, 2007).

I also included two variables to control for organizational difference in terms of human-resources configuration. First, the number of operating owners is included to control different degrees of owner's dedication to the operation of their businesses. Second, the proportions of full-time are taken to control staffing strategy.

Table 1. Variable Descriptions

Category	Name of Variables	Description/Interpretations		N	Mean	SD
	Dependent Variable					
	Timing of market entrance	Year of first revenue	Event Revenue = 1	4208	1.40	1.26
	Explanatory Variable					
Innovation Strategy	Number of patents	Number of total patent firms obtained, first year		4928	.188	2.72
	Owning patents	Whether firms own patent, first year		4928	.036	.187
	License-in patents	Whether business has licensed in patent, first year		135		
Organizational	Proportion staffs in R&D	Percentage of staffs primarily responsible for research and		4928	.23	.35

Table 1. Variable Descriptions

Category	Name of Variables	Description/Interpretations	N	Mean	SD
Characteristics		development, first year			
	Proportion staffs in Marketing	Percentage of staffs primarily responsible for sales and marketing, first year	4928	.27	.37
	Proportion staffs in Manufacturing	Percentage of staffs primarily responsible for manufacturing, first year	4928	.18	.34
	Product oriented	Whether business provides product, first year Yes=1	2539		
	Service oriented	Whether business provides service, first year Yes=1	1819		
	High-tech	Whether business high-tech employer or generator, first year	649		
	Proportion of US citizen	Percentage of owners with US citizenship, first year	4928	.08	.25
Entrepreneurs' Characteristics	Startup experience	Mean: number of other startups started by owners	4928	.17	.35
	Work experience in the same Industry	Maximum: owners' work experience in which the current business competes	4928	13.7	10.6
	Level of education	Maximum value: year of education	4928	15.6	2.3
	Age of owner	Median: age of owners at a firm's first year, first year	4928	44.2	11.3
	Control Variables				
	VC involved	Whether business obtain equity financing from venture capitalists, first year Yes=1	42		
	Total Capital	Total value of capital raised by business, first year	4928	489979.8	1200000
	Proportion full-time employee	Percentage of staffs at full time status, first year	4928	.16	.35
	Total number of staffs	Sum: number of employee and owners, first year	4928	3.05	4.00
	Number operating	Sum: Owners that helped to run	4928	1.40	.76

Table 1. Variable Descriptions

Category	Name of Variables	Description/Interpretations		N	Mean	SD
	owners	business, as of first year, first year				
	Location quotient	The location quotients for regional same industry	Exporting=1	2553		
	NAICS code	23	Construction	390		
		31-33	Manufacturing	72		
		42	Wholesale Trade	219		
		44-45	Retail Trade	526		
		48-49	Transportation and Warehousing	112		
		51	Information	164		
		52	Finance and Insurance	186		
		53	Real Estate and Rental and Leasing	177		
		54	Professional, Scientific, and Technical Services	1203		
		56	Administrative and Support and Waste Management and Remediation Services	360		
		61	Educational Services	29		
		62	Health Care and Social Assistance	121		
		71	Arts, Entertainment, and Recreation	105		
		72	Accommodation and Food Services	98		
		81	Other Services (except Public Administration)	454		
		999	Other	24		

Next, I included variables to control for unmeasured variance resulting from the different industrial contexts that come along with different environmental conditions. I used the location quotients to address the issue. Location quotient is frequently used as one of the economic base analysis methods, mostly identifying specializations in the local economy. It indicates that the local economy has a greater share of each industry than expected. If it indicates an industry is hiring more than expected, it means that such an industry exports their goods and services to

non-local areas. I analyzed the impact of the location quotient that indicates “exporting”; it is a fair assumption that a business will be more successful when it is located in a context in which it can take advantage of the positive externality of businesses in the surrounding area. Finally, I considered the potential difference in business characteristics resulting from different sectors. NPD literature argues that different NPD processes are better studied by controlling context; thus, the best result will be generated from studying a sample of firms within the same industry (Balachandra and Friar 1997). However, it may not be relevant to entrepreneurship research since the primary mission is to explain the growth and success of startups (Heirman and Clarysse 2007). Moreover, the growth theory of RVB does apply to firms over different sectors or different technologies (Barney 1991); therefore, this study includes industry codes (NAICS two-digits) to allow for the study of firms across sectors. Table 1 provides a correlation matrix with descriptive statistics of the variables in this study.

Table 2 Correlation matrix ^a														
		1	2	3	4	5	6	7	8	9	10	11	12	13
1	Number of patent													
2	Owning patent	.356												
3	Proportion staffs in R&D	.011	.065											
4	Proportion staffs in Marketing	.023	.001	.719										
5	Proportion staffs in Manufacturing	.012	.027	.643	.586									
6	Proportion of US citizens	-.001	.017	-.017	-.028	-.023								
7	Startup experience	.026	.027	.014	.021	.020	.025							
8	Work experience in the same Industry	.028	.041	.007	.009	.012	-.024	.240						
9	Level of education	.042	.111	.077	.062	.010	.088	.064	.069					
10	Age of owner	.024	.027	-.029	-.010	-.034	-.006	.060	.342	.144				
11	Total capital	.031	.011	-.001	.003	.009	-.005	.020	.027	.024	.021			
12	Proportion full-time employee	.015	.022	.012	.035	.048	.010	.081	.086	.043	-.025	.062		
13	Total number of staffs	.080	.092	-.042	-.024	.013	.028	.096	.093	.113	.011	.067	.227	
14	Number operating owners	.090	.136	.245	.232	.178	.004	.034	.138	.180	-.010	.074	.05	.391

^a dummies are not shown

EMPIRICAL ANALYSIS

My empirical investigation measures time to first revenue as a function of activities of innovation, focusing on strategies to acquire source of technology, organizational innovativeness and entrepreneurs' characteristics. Specifically, I expect to highlight the effect of a strategy to acquire a critical resource for innovation by licensing-in a patent, which is a way to utilize

external source of knowledge, as opposed to owning one by developing it on the fast market entry of firms.

One of the critical points about my approach, in compared to existing ones used in NPD literatures, is that I measured time elapsed to first revenue, which is time from firm's legal launch to time first revenue reported to measure how fast firms create revenue, as function of innovation strategy. One should note that it has little thing to do with speed of innovation in the sense that it measures time to first revenue, while innovation speed measures times taken to introduce a product, by observing a project. Following sections provide deeper discussion about the measurement issues and variables used in this study.

Data and Methodology

Data

Data for this study came from among the 4,928 sample firms, which started operations in 2004, collected by the first follow-up KFS since 2005, a longitudinal survey of new businesses in the United States. The 7th follow-up of the longitudinal data I used for this study provides the track records of 4,928 companies, from their birth in 2004 through 2011. I used the confidential, restricted-access version of the novel dataset, KFS. Thanks to Dr. Henry Renski of University of Massachusetts, I used the data for the location quotient that he personally matched by using KFS' NAICS code, incorporated it into KFS data, and shared the results with researchers using a KFS secured database. The location quotients are extracted from the County Business Patterns (CBP) database of the U.S. Census Bureau for 2003, the year prior to the start of the first KFS.

Methodology

To model the probability of fast market entry, this study employed a duration analysis modeling technique to test the hypotheses. Also known as event-history analysis technique, it has a comparative advantage to logistic regression technique, which is also used to model a dataset with a binary response variable. As indicated previously, the event of interest is the time that firms reported their first revenue. The model also accounts for time the firm exited the survey. All eligible firms started in 2004; thus, there is no issue of left censoring. This particular research however deals with two situations that may not able to show first revenue during the period of observation. First, some firms failed to generate revenue and exited. Second, some firms survived but failed to report the revenue. Both scenarios are all right censored because no event of interest is observed, instead of getting removed from the dataset to avoid unnecessary shrinking of the sample size, which would cause loss of the model's efficiency and power. However, the model accounts for the age of the firm to record the waiting period. Businesses that failed during the period of observation are censored in the model from the moment they ended because the business is no longer at risk of experiencing the event of interest. Businesses that failed to report revenue generation but survived during the period of

observation are still considered in the model because the censored observations have the same risk of experiencing the event of interest. The relapsed time, coded with zeros, indicates the lifetime of the businesses.

Another issue to address is its unique distribution. The KFS dataset reports whether firms generated revenue by year, thus normality assumption is violated. For the same issue, the distribution shows a great number of 'ties,' which refers to the events that occurred at exactly the same given point in time t . Techniques for dealing with the tied observation may work to resolve the issue. The problem is that because the information is aggregated in a year, there is no way of knowing the exact time the event of interest occurred. However, in this case, it is more appropriate to consider the distribution 'discrete,' all positive integers with many observations on one than using general technique of event history analysis assuming continuous response variable. All things considered, this study used the complementary log-log discrete model to estimate via ordinary likelihood techniques. One of the advantages of using the discrete-time model is that it allows for non-proportional hazards and time-varying covariates. The data is restructured to record a sequence of binary responses at each event time, accordingly.

RESULTS

Table 3 demonstrates the regression results of the complementary log-log discrete model for the length of time to market entry. First panel presents model 1 which are the results of the regression for businesses pursuing product market. Second panel presents another model for those providing service to markets, and the third panel follows with a model for all. Presenting coefficients of different industry sector for the three groups, I try to focus on organizational activities and structure across different sectors rather than focusing on the level of technology embedded in the goods or service the sample firms provide. The level of technology is controlled by including an indicator for 'high-tech', instead. This way I avoid the bias inherently resulted by solely relying on industry code, which classify high-tech only by the goods they provide. Coefficients are interpreted as the effect of one unit change in covariates on the log-odds of an event in interval t . Obtaining the multiplicative effect of x covariate is possible by exponentiating the coefficients. The given goal of this study is highlighting the factors reduce the time, and the expected association is negative.

Innovation Strategy

The findings show that licensing strategy would reduce the length of time to market entrance when businesses own patented technology, but the number of patents may not matter. Model 3 shows that licensing in patents is associated with faster market entrance when it is equated with ownership of the patent ($\beta = -.596, p < .05$). It is the same for firms providing products in markets, as presented in model 1. The same applies for owning a patent in both models.

Table 3 Complementary log-log model (DV: First year of revenue generation)				
		Model 1:	Model 2:	Model 3:
Innovation Strategy		Product	Service	All
	License-in patent	.003(.149)	.253(.169)	-.010(.134)
	Number of patent	.033(.020)	.015(.009)	.004(.007)
	Owning patent	-.423(.226)+	-.176(.277)	-.389(.132)**
	Licensing X Owning a patent	-.735(.345)*	-.704(.447)	-.596(.251)*
Organizational Innovativeness				
	Proportion staffs in R&D	-.194(.117)+	-.227(.138)	-.162(.087)+
	Proportion staffs in Marketing	.254(.102)*	.223(.118)+	.160(.075)**
	Proportion staffs in Manufacturing	.105(.106)	.068(.118)	.149(.080)**
	Product oriented	-		.145(.045)***
	Service oriented	-		.313(.061)***
	High-tech	-.139(.088)	-.014(.100)	-.068(.063)
	Proportion of US citizen	-.228(.111)*	-.023(.126)	-.176(.078)*
Characteristics of Entrepreneurs				
	Startup experience	-.045(.076)	-.134(.089)	-.033(.055)
	Work Experience in the same Industry	.000(.002)	.004(.003)	.001(.002)
	Level of education	.007(.012)	.202(.014)	.006(.008)
	Age of owner	-.000(.002)	-.000(.002)	.000(.001)
Controls				
	Total capital	1.82(3.81)	.571(4.80)	0.181(3.26)
	VC involved	-.333(.249)	-.675(.396)+	-.300(.232)
	Proportion full-time employee	.235(.109)*	.171(.12)6	.231(.081)**
	Total number of staffs	.031(.007)***	.023(.009)**	.029(.006)***
	Number operating owners	-.089(.038)*	-.081(.045)+	-.053(.029)+
	Location quotient: Employment-Exporting	-.095(.052)+	-.142(.061)**	-.012(.037)
	NAICS 23 Construction	.354(.300)	.808(.522)	-.125(.220)
	31-33 Manufacturing	.278(.287)	.782(.516)	-.053(.215)
	42 Wholesale Trade	.395(.296)	.827(.523)	.027(.215)
	44-45 Retail Trade	.451(.288)	.883(.516)+	.074(.217)
	48-49 Transportation and Warehousing	.316(.397)	.843(.581)	-.122(.245)
	51 Information	.374(.310)	.687(.530)	-.012(.233)
	52 Finance and Insurance	-.074(.332)	.397(.544)	-.408(.235)
	53 Real Estate and Rental and Leasing	.661(.338)+	1.01(.552)+	-.021(.233)
	54 Professional, Scientific, and Technical Services	.560(.289)+	.928(.516)+	.111(.214)
	56 Administrative and Support and Waste Management and Remediation Services	.311(.307)	.738(.528)	-.175(.222)
	61 Educational Services	-	-	-.136(.323)
	62 Health Care and Social Assistance	.189(.425)	.627(.603)	-.435(.248)+
	71 Arts, Entertainment, and Recreation	.480(.329)	.970(.554)+	-.148(.247)
	72 Accommodation and Food Services	.277(.326)	.712(.542)	-.085(.250)
	81 Other Services (except Public Administration)	.531(.300)+	.902(.521)+	.013(.219)
	999 Other	-.247(.576)	.056(.851)	-.789(.390)**
	Intercept	-.374(.346)	-.944(.558)+	-.423(.260)
N observation		2532	1819	4928
Wald Chi2		88.67	56.42	183.94
Log pseudolikelihood		-1569.77	-1083.31	-3102.6265
Df		34	34	37

Note. *** $p < .001$, ** $p < .01$, * $p < .05$, + $p < .10$, Robust Standard Errors are reported in parentheses

In model 3, owning a patent ($\beta = -.389, p < .01$) seems to speed up market entrance, and this is true for the firms in product markets as well ($\beta = -.423, p < .10$), but not for service-oriented firms. An interesting finding is that licensing strategy alone does not reduce the time in any model. This may indicate that the licensing strategy is efficient when firms undergo product development processes and use external technology as a way of innovating the product. The number of patents did not come out as significant in any model. To conclude, H1 is only partially proven and this suggests that it is contextual. H1a is proven and H1b is conditionally supported. I failed to prove H1c. Therefore, I conclude that the number of patents may have little to do with the speed of market entrance, while licensing strategy may speed up the market entrance if employed by product-oriented firms that also own patents.

Organizational Innovativeness

Model 3 presents evidence to support the importance of organizational innovativeness in the starting point, by showing significant association between percentages of R&D staff ($\beta = -.162, p < .10$). One should notice that roles of complementary assets, indicated by the percentage of staff in marketing ($\beta = .160, p < .01$) and manufacturing ($\beta = .149, p < .01$), seem to be slowing down rather than speeding up the market entrance. In model 2, the percentage of staff in marketing ($\beta = .223, p < .10$) only slows down for firms providing services. In model 1 for firms providing products, only staffing in marketing ($\beta = .254, p < .05$) seems to be slowing down at a statistically significant level. In model 1, the percentage of R&D staff stays significant ($\beta = -.194, p < .10$), meaning that research and development plays a critical role in speeding up the market entrance for firms providing products. Interestingly, staffing for manufacturing did not come out as significant. Therefore, I can generally confirm H2a. I failed to find evidence to support the effect of staffing for manufacturing for service-oriented firms. High-tech firms ($\beta = -.068$) seem to enter faster in general and both in model 1 and 2, but none of them are statistically significant. Thus, I failed to observe significant evidence to prove H2b.

Along with the findings, one should notice that in model 3, the percentage of entrepreneurs with U.S. citizenship is significant factor that will speed up the market entrance of the entire sample population ($\beta = -.176, p < .05$) and product-oriented firms ($\beta = -.228, p < .05$) in model 1, not in model 2. The percentage of U.S. citizens in the founding team may increase chances of getting formal sources of funding due to greater stability associated with the status. Given evidence in favor of product-oriented firms, I can suggest that having more entrepreneurs with U.S. citizenship helps product-oriented firms; hence, I can conclude that H2c is conditionally proven only for product-oriented firms.

Characteristics of Entrepreneurs and other variables

None of the variables about entrepreneurs' characteristics seem to be significant in any model, including capital size; I failed to support H3a, H3b, H3c and H3d. Generally, firm size is

known to be negatively associated with growth for young firms, and this is proven in this study too. The size measured by the total number of staff seems to be a delaying factor in every model. On the other hand, the number of operating owners, an indicator of the owner's dedication to their businesses, seems to be speeding up all ($\beta = -.053$, $p < .10$), product-oriented businesses ($\beta = -.089$, $p < .05$), and service-oriented firms ($\beta = -.081$, $p < .10$), meaning that more entrepreneurs with serious dedication would lead to fast market entrance in general. Finally, I found a significant association between external industry context, measured by the location quotient, and the speed of market entrance both in model 1 for product-oriented firms ($\beta = -.095$, $p < .10$) and in model 2 for service-oriented firms ($\beta = -.142$, $p < .01$).

DISCUSSION

The first important contribution of this study is that it presents the different results for different groups with market orientations. In general, young firms tend to take advantage of innovation strategy and organizational innovativeness. In particular, their effects differ with different market orientations. Businesses pursuing product markets showed significance reliance on technical assets. Owning patent is also effective strategy for product-oriented forms in speeding up market entrance, but has little thing to do with for service-oriented firms. Licensing-in patent seems to be effective when product-oriented firms own patents. Technical assets do not seem to matter for service-oriented businesses. For service-oriented firms, overstaffing in marketing might slow down organizational speed.

The general wisdom on the explanatory variables related to performance of entrepreneurship is confirmed: organization size, a factor that allegedly hampers organizational innovation, seems to slow down the speed of market entrance in all models. In general, firms are sensitive to external context for business. A reason might be that product-oriented businesses are sensitive to the costs associated with materials and delivery, which are sensitive to externalities generated from industrial agglomeration that reflects in the indicator, the location quotient. It is obvious that service-oriented firms largely rely on local customers. One may question whether this finding holds true for on-line business that provides service via website. Another interesting result is that I could not find the importance of entrepreneurs' traits (including startup experience, work experience, education, and age) on the speed of market entrance, which is one of the usual contributing factors among studies of entrepreneurship performance. It seems to reduce the length of time to market entrance in every model, but not at a statistically significant level. In a broad sense, this finding is inconsistent with existing studies (Heirman & Clarysse, 2007). A possible explanation is that fast market entrance is a team sport rather than the one for individuals.

The second contribution of this research is to entrepreneurship research as a whole. This study presents findings that confirm the importance of initial condition to the evolutionary development of entrepreneurial ventures by showing their influence over a fast market entrance.

This study found strong evidence towards stressing the importance of staffing in research and development as a starting point for later development of product-oriented firms. The findings show that R&D efforts during the starting point for new startups account for the speed of market entrance, which is consistent with existing literature. Heirman suggested that pre-founding R&D efforts at the beginning of a business would contribute to speeding up the commercialization of a new product (Heirman & Clarysse, 2007).

I have a point to make in regards to my findings about the roles of task force for complementary activities such as marketing and manufacturing. I found marketing to play a significant role in product-oriented firms as delaying. This finding suggests a strategy that product-oriented firms may avoid over-staffing for marketing, which is inconsistent with existing literature. Teece (1986) suggests collaborating with existing firms to take advantage of those complementary assets available in the partnering organizations (Kollmer and Dowling 2004). Further, a relatively recent study has found no strong support for the roles of cross-functional teams in startups (Heirman & Clarysse, 2007). Acknowledging that relatively old NPD literature suggests a positive association between cross-functional teams and the speed of innovation (Ancona & Caldwell, 1992), I suggest that this is another topic that requires closer investigation in future studies.

In regards to finding no evidence supporting the importance of capital size at the starting point, although this is inconsistent with the old studies that suggest more capital is likely to delay the market entrance (Hellmann & Puri, 2000; Schoonhoven et al., 1990), it is in line with newer studies that also failed to find the effect of starting capital on the time for first product market entry (Heirman & Clarysse, 2007).

The theoretical contribution of this study is that it confirms theories of NPD in general, provides some insight into the validity of RBV, and widens the application of the competency-based view on fast market entrance. Confirming the importance of owning a patent and licensing external knowledge is another validation for RBV. The findings of this study provide a confirmation for the competency-based view, advanced within RBV literature. According to the theory of organizational competency, input-based competencies including the physical resources, organizational capital, and human resources are all types of organizational competencies (Lado, Boyd, & Wright, 1992; Zhang & Lado, 2001). Another study defines a competence as consisting of four elements and their relations, which are technology, people, organizational structure, and organizational culture (Drejer & Riis, 1999). Using this framework, the findings of this study partially confirm the relevance of the competency-based view. First, as presented, this study finds strong evidence to support the importance of organizational structure by highlighting staffing in research and development as a contributing factor: this is clear evidence that fast entrance is a function of technical competency. Consistently, these assets are not as important for service-oriented businesses as they are for product-oriented businesses, since the service-oriented businesses' core competency has little to do with technical assets.

On the other hand, I have to point out that this study fails to support the importance of the number of patents, which is inconsistent with RBV. Licensing strategy is not significant in any model alone, and only becomes significant when the firms already own patents. When broken down into samples of service firms, licensing strategy becomes insignificant. The number of patents seems to be a contributing factor, but this is statistically insignificant in every model. This finding challenges the validity of RBV, at least in explaining the fast market entrance of new ventures. I conclude that resources might be important, but the capability to leverage the resource seems to be more important for fast market entrance to put this complex finding in line with RBV. In sum, I conclude that resource might be important but the capability of leveraging the source seems to be more important for fast market entrance.

NPD literature has studied innovation speed by focusing extensively on large firms. The speed of innovation for young firms has not been studied as much. This study adds to both entrepreneurship and NPD literature by linking the speed of innovation and the length of time to market entry. Despite departing from NPD literature, one should notice that this study differs in nature in the sense that it measures the time taken to report first revenue, not the completion of a project. In this way, another major contribution of this study is that it bridges strategic management literature and entrepreneurship literature. Studies on strategic management that rely on the RBV have sought to comprehend the relationship between obtained resources and strategic performance. They believe that the firm's resources exist in the value the firm imposes when formulating growth strategy. This study located the resources, in this case the patents, in the context of strategic choices regarding innovation by relating them to the length of time to market entrance.

CONCLUSION

In conclusion, from the study, I found that the magic of innovation is dynamism between a proper organizational structure and a proper deployment of resources with a team capable of coming up with better solutions. In general, innovation strategy, in terms of resource acquisition, seems to lead to faster market entrance for product-oriented firms. Fast market entrance also seems to be a game of organization rather than one of individual entrepreneurs. Entrepreneurs may play a significant role when they form founding teams, but may have little to do with speeding up market entrance. Business size in general delays the market entrance. Product-oriented businesses and service-oriented firms both seem to take advantage of the surrounding context. A general managerial guideline I suggest is focusing on innovating rather than management.

More importantly, this study showed a comparative perspective on the speed of market entrance by presenting models for product-oriented and service-oriented firms. The major difference is that licensing in a patent seems to be a contributing factor for product-oriented firms but is less important for service-oriented firms. Too much integration delays market

entrance, especially for service-oriented firms, but was insignificant for product-oriented firms. These are the major highlights that remained unobserved when the samples were not separated.

Therewith, I suggest in particular for product-oriented firms that they combine owned technology and external technology to create synergy. I would also like to stress the importance of conducting research and development via a large proportion of staffing in R&D: this maintains the technical capability to remain innovative.

LIMITATIONS

This study has its limitations: it would have been better if it considered the status of product development in the starting time of businesses. Recording the lengths of time taken to achieve first revenue would provide an important set of data because just finishing a project may not matter much for entrepreneurial business. Also, this is more relevant considering the reality that not all entrepreneurial businesses engage with NPD processes. As indicated by Heirman (2007), however, the speed of commercialization is largely affected by the stage of the NPD process; a future study might include the stages of the NPD process in order to achieve a more detailed measure.

DIRECTIONS FOR FUTURE RESEARCH

For future study, I propose comparing the effect of licensing strategy by the degree of integration in terms of diversity of staffing. As indicated by Kollmer (2004), the relative importance of licensing activities may differ by the degree of integration, though I admit that most young firms are not fully integrated.

Another direction would be presenting models that consider different locational externality. This could provide a strategy to successfully speed up the market entrance for firms located in poor industrial contexts. It is common for young firms to establish themselves in an area with relatively poor business conditions due to the cheaper real estate costs that are associated with poor locational externality. Given the importance of industrial context, there are not many studies that have focused on its role in young firms. One of the recent studies by Bradley et al. (2011) focuses on “tough environment,” defined by the magnitude of instability based on information asymmetries. It may include tough geographic context, but not directly (Bradley, Shepherd, & Wiklund, 2011). Further studies need to investigate the association between environmental context and the speed of market entrance. A potential approach is to highlight differences in the models by including relevant explanatory variables to provide strategic insights for young firms.

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INSPIRATION VERSUS PERSPIRATION: THE ROCK N BOWL STORY OF OPPORTUNITY RECOGNITION

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ABSTRACT

In this article we use a case history approach on a uniquely successful business in the New Orleans, LA area to show how an entrepreneur and opportunities interact. John Blancher is the owner of Rock N Bowl which is an extremely popular entertainment combination of bowling, drinking, eating, and dancing. John led the business from virtual bankruptcy to national recognition with a strong reliance on his spiritual faith and the Invisible Hand of God. He and the business are an interesting application of entrepreneurial opportunity recognition and action.

INTRODUCTION

The purpose of this article is to provide an example of an entrepreneur, John, who became very successful in what could be considered an atypical environment. Most of John's actions leading to his success didn't fall into the traditional opportunity recognition and proactive pursuit. Rather, John faced several significant environmental changes requiring reliance on his spiritual faith instead of detailed cost-benefit analysis. He was presented with several situations which turned into quite profitable opportunities without an obvious conscious effort to seek out the opportunities. Rather he refers to his inspiration as the Invisible Hand. However, John's story doesn't follow the inspiration vs. perspiration. Instead, his success resulted from the perspiration that followed the inspiration.

A good example of the perspiration vs. inspiration adage was evident in the days following Katrina flooding in New Orleans. There was a joke circulating about a devout man stranded on his rooftop amid the flooding. A Good Samaritan with a boat came by and offered the stranded man a lift; he declined claiming that the Good Lord would save him. So, the boat left to rescue others. Shortly thereafter, a Coast Guard helicopter flew overhead and lowered a rescue basket. Again, the stranded man declined the rescue claiming that the Good Lord would rescue him. So, the helicopter departed to save others. After some time, some people in a raft floated by and offered him a space on the raft; again, the man declined. Alas, too much time passed and the man died. Upon facing the Pearly Gates, the man asked why the Good Lord

hadn't saved him. The Lord responded that he had sent the man a boat, a helicopter, and, a raft; but, he had failed to take advantage of any of them. This story illustrates John's situation. He was faced with many dilemmas which presented opportunities. However, he was able to recognize the opportunity and then "work his butt off" (Blancher, interview March 2013) to take advantage of them.

John is not an atypical entrepreneur. He possesses many of those characteristics normally associated with entrepreneurs: tenacity, confidence, competitiveness, self-determination, and self-efficacy (Boyd and Vozikis, 1994; Goodman, 1994). He was schooled in Education, worked as a teacher, and wanted a better life for himself and his growing family. He pursued several money making opportunities before finding his calling in a combination bowling alley/bar/dance and reception venue called Rock N Bowl.

What follows is a case history of the Mid City Lanes Rock N Bowl establishment located in New Orleans, LA. We provide a series of examples where John was tested, presented with an opportunity, and then benefited from that opportunity to the betterment of the establishment. Oftentimes, he did not consciously seek out opportunities. Rather, his spiritual faith allowed him to recognize the opportunities and then doggedly pursue them resulting in a business which has become a national icon.

We believe this article is worthwhile to the readership because it illustrates examples of traditional opportunity recognition but in a rather non-traditional environment, at least at first glance. We will show how these seemingly non-traditional applications are, in fact, excellent examples of the application of entrepreneurial attitude. The examples here should also show that opportunities are not necessarily explicit. By knowing that opportunities may be presented in a somewhat tacit nature, entrepreneurs can be open to recognizing them for what they are. And, once recognized, these opportunities can be avenues for business and/or personal success.

Concurrently, we show examples of matching a unique company to a unique environment. For instance, the cultural environment of New Orleans is somewhat different from those found elsewhere. In fact, it's one of those environments that you can't describe and simply have to experience. We will make reference to the influence of music and food in particular during our discussion.

LITERATURE REVIEW

Entrepreneurship has been defined as a process activity generally involving; an opportunity; proactive individuals; risk; and, resources (Morris, Lewis & Sexton, 1994). More recently, Alvarez & Barney, (2007) have proposed a creation context where entrepreneurs decide iteratively, inductively, and use biases and heuristics. Strategies consistent with the creation context are emergent and changing with competitive advantages based on tacit learning.

Also similar to the creative context of entrepreneurship, Mintzberg (1994) has maintained that organizational strategies are mostly emergent rather than planned and they tend to be more

reactive than proactive in practice. Similarly, more recent extant research has supported the recognition rather than purposeful search of opportunities (e.g., Ardichvili and Cardozo, 2000; Baron 2006)

Therefore, instead of a conscious recognition of an opportunity, sometimes the changes in one's external environment simply occur without immediate notice. The entrepreneur becomes aware, or learns, of a change and then reacts appropriately to benefit his or her organization.

RESEARCH METHODOLOGY

Data were collected through a series of interviews between the authors and Mr. Blancher, owner of Rock N Bowl. An exploratory study format was used given the unique environments under consideration (Siggelkow, 2007). Such a method is applicable to the current situation because of the lack of significant studies and because it allows for richer data (Eisenhardt & Graebner, 2007; Eisenhardt, 1989, 1991).

RESULTS/DISCUSSION

As with most, John's story starts with his childhood. He developed strong values based on family, spiritual faith, self-reliance, and competitiveness. From an early age, John was competitive as well as personable. He came from a home environment where spiritual faith and self-reliance were central tenets. He won every boyhood contest he entered such as those for selling the most raffle tickets. He always wanted to win and often did. He was quite adept at convincing people to buy what he was selling. His competitiveness naturally led him into sports and he played baseball in high school. These characteristics are all invaluable to an entrepreneur (Goodman, 1994; McNerney, 1994).

John's athletic abilities resulted in a baseball scholarship at a local university. He earned a Bachelor Degree in Education and taught school after graduation. However, he soon recognized that he was not earning enough to support his growing family—consisting of a wife, son, and daughter. John therefore decided to pursue a Master Degree in School Administration. After earning his degree, he returned to teaching school and coaching baseball. Still, he was unsatisfied with the income available by working in education. John decided to pursue money earning avenues where he had been successful in the past.

TRANSITION FROM EMPLOYEE TO ENTREPRENEUR

Motivated by a need for more income than was available in the education field, John returned to his boyhood neighborhood. He recognized several opportunities where he could be

more proactive in affecting his level income. He would work in occupations where he was knowledgeable and where successful work would pay off in higher income (e.g., sales).

John's decision to leave his position as a salaried school teacher placed his financial security at risk. He relied on his personality and his spiritual faith that he could earn more under his own control than he could though working for someone else. He was building on his personal strengths of self-reliance, self-determination, extroversion, and competitiveness. He leveraged his strengths of outgoing personality, knowledge of neighborhood, and previous personal selling successes (e.g., the raffle sales). John's faith inspired him to then use his perspiration to earn more money.

Just to illustrate the magnitude of John's efforts, he worked with his wife's cousin's crawfish business, as a caterer for wedding and other receptions. There were times where John would be delivering crawfish in his tuxedo because he didn't have the time to change clothes between jobs. In his spare time, John was self-taught in the areas of real estate and insurance. He earned the requisite licenses and worked those areas in addition to the current jobs. A theme to all of these pursuits is the personal interactions necessary between the seller and the buyer. John excelled in such pursuits. He was able to match his personality traits to those necessary in his external environmental.

ECONOMIC ENVIRONMENTAL CHANGES

Although the work load may seem onerous, John considered himself in a fairly good position. He was making enough money to support his family which was his previous motivation. Furthermore, John knew that if he needed more money, he could simply work more and what his was doing because of the nature of the jobs he was working. However, changes in the world economy were about to make financial success more difficult.

In the 1980s, falling oil prices negatively affected many of the businesses in the New Orleans area. Much of the New Orleans economy relied on the oil and gas industries. Therefore, jobs were lost as many of the oil and gas companies consolidated their operations into their respective headquarters in the Houston area. During this economic downturn, John's father lost his job. Because of John's tight family, and his belief that as the eldest son, the onus was on him, he took on the financial responsibility for his extended family. John was finding that there were not enough hours in a day for him to work sufficiently to support everyone who was now depending on him. He was now open to the thought of other opportunities; but, wasn't yet consciously pursuing them.

SPIRITUAL FAITH REINFORCED

About this time when financial outlooks were looking pretty poor, John's spiritual faith and motivation received reinforcement. John had been hearing reports of apparitions of the

Virgin Mary in Medugorje, Yugoslavia (now Bosnia Herzegovina). It took John a couple years before he could arrange a visit. But, afterwards, John knew that a new opportunity would present itself for his and his family's financial security. John's faith opened his mind to recognize opportunities. In a casual passing a friend told him about a bowling alley that was for sale. John recognized this new knowledge for what it was, an opportunity. He then shifted from inspiration to perspiration and pursued this opportunities to ultimately find success with Rock N Bowl.

INITIAL OPPORTUNITY TO BUY BOWLING ALLEY

Shortly after John's return from Yugoslavia a friend, a CPA, informed him about a bowling alley for sale, The Mid-City Lanes. John knew of the business because he had played on the stairs leading to the business as a boy. This was an unusual location for a bowling alley. It was on the second floor of a strip mall shopping center. The only access was via stairs which presented logistical problems for deliveries and maintenance.

The business was currently owned by the Knights of Columbus who owned the equipment and leased the space. They were not really interested in running the bowling alley and therefore, were letting the lanes and equipment deteriorate.

John was able to see past the problems. He remembered the place as always being busy when he played in the area as a child. Furthermore, instead of a deteriorating bowling alley, he saw a catering hall with a bar and bowling alley instead of just a bowling alley albeit one in need of serious attention.

NO ONE ELSE SAW AN OPPORTUNITY

Even though John saw the opportunity in Mid-City Lanes, he could not convince anyone else that the business could be viable. In fact, all of his friends and family members thought John was crazy. The business was deteriorating as was the equipment. The equipment was dated and everything was on the second floor with access through stair only. It was located in a low income neighborhood with inadequate parking. However, John's faith opened him to the opportunity and belief that with lots of his own sweat equity, the Mid-City Lanes would be the answer to his prayers for financial security.

RECOGNIZING OPPORTUNITY

When John looked at the Mid-City Lanes, he didn't see a bowling alley. Instead, he accessed his earlier experience in catering and envisioned a reception venue for parties. However, instead of people just standing around in a big non-descript hall, they could have the opportunity to bowl should they desire. John's faith allowed him to open up to the tacit

recognition or vision for a new business venture (Brockmann, 2008; Brockmann and Anthony, 2002). But, first John had to purchase and then renovate the place sufficiently to attract customers and revenue.

John bought the business for almost nothing. He paid \$1,000 down and financed another \$9,000 for ten years. The Knights of Columbus constrained financially by the lease. The owners of the building required that the premises be returned in a “Broom Swept Clean” condition if the lease was broken or not renewed. This meant that all of the bowling alley equipment had to be removed at a cost of nearly \$50,000. Since the Knights of Columbus were not interested in the business at all, they were happy to sell the business to John for what appeared very favorable financial terms.

Even though John saw a catering hall that was also a bowling alley, he started out with trying to make money from the bowling business. This choice was mostly out of necessity because there wasn’t much else present and John lacked any capital for improvements. But, once again, John leveraged his personal attributes. As when he left teaching, John was going to “work his butt off” (Blancher, interview March 2013). He was also able to recruit family members to help, especially his father, because most were currently out of work. John mortgaged his house in order to install a kitchen—displaying another attribute of entrepreneurs. He got the place cleaned up and used his sociability to enhance every customer’s experience. He personally greeted every customer and shook his or her hand upon arrival. The problem was lack of customers and therefore revenue.

BRUSH WITH BANKRUPTCY

Even with the relatively friendly financing terms, John was having a trouble attracting enough customers to simply cover expenses. After only two months of operations, John was unsure if he would be able to make payroll. He had already tapped all the traditional sources of capital available to entrepreneurs (e.g., mortgaging his house to install the kitchen). Once again, in this time of despair, John returned to his faith and simply believed that something would turn up because it just had to. In actuality, John was opening his mind to allow the recognition of new opportunities.

EMERGENT OPPORTUNITIES

Akin to Mintzberg’s (1994) emergent strategies, a couple of opportunities presented themselves and then John’s tenacity kicked in and he pursued them. A local newspaper writer did a story on uniquely New Orleans businesses. John interested the writer because he was a local boy with a unique business—a bowling alley on the second floor of a strip mall. After the article was published, the next weekend, attendance went up by a factor of ten. The next month

a local television personality wanted to do a public interest show on the business. With little effort, more people were aware of John's business. But, it still wasn't enough for success. John had to leverage his new customers into more business. He did so through his personal drive and energy. He continued to personally greet everyone as they entered and thank them for coming. It was as if the customers developed a personal relationship with John and they told their friends about it.

About this same time, another environmental change was occurring, the holiday season. The holiday season in New Orleans varies somewhat from those in other geographic areas. People start having holiday parties before Thanksgiving and the parties continue through Mardi Gras/Ash Wednesday. Therefore, instead of a four to six week party season from Thanksgiving to New Year's Day, in New Orleans, the demand for party venues often lasts twice that long. Thus, John's personal attention to each customer was garnering him great positive publicity for his unique venue just as the demand for party venues was beginning to increase. These parties would become John's main source of income in the very near future. They were also fulfilling John's original vision for the business. That is, John knew from the time of purchase that the business wouldn't be a bowling alley. Rather, John envisioned a venue where people could have catered parties and bowl. After the party ended, these same people would remain and spend more of their own money bowling and drinking. The next, and ultimate, transformation of the business would be the addition of musical entertainment—another opportunity.

ANOTHER OPPORTUNITY AND ULTIMATE BUSINESS TRANSITION

Separate from the success from the parties he was now booking, John noticed a group of customers that regularly showed up after theater on Saturday nights. In his outgoing manner, John tried to take advantage of this opportunity by offering the group hors d'oeuvres. He expanded his offerings to include a juke box; this was the birth of the Rock N Bowl. When John noticed the interest in music, he decided to expand the offering to live music one night a week. As introduced earlier, a uniquely New Orleans environmental aspect is the prevalence of music. There are many more bands available than there are venues at which they can perform. Therefore, a lot of bands are looking for exposure and are willing to play for a percentage of the cover charge. This translates into little risk for the business because there is little out-of-pocket or up-front expense.

Thus, John began to offer live music on Friday nights and the party-bowling-drinking-dancing-music combination clicked and became an overnight sensation. And, because of John's personal efforts in greeting everyone coupled with the close knit nature of the music business in the New Orleans area, word of mouth advertising continued to spread. This impromptu communication became another source of publicity akin to that garnered earlier. Word soon spread that John's place was the "hot" place to be for movie stars and other celebrities.

Building on the success of the live music, John expanded the offering to feature a local style of music on Thursday nights—Zydeco. Zydeco is a combination of the local Louisiana cultures; it focuses on Cajun and Creole but incorporates aspects from many other genres. Again, John's decision proved successful because he had filled what had been a void in the music scene of New Orleans. John's emergent strategy had resulted in an ideal definition for his business. Customers would come for company sponsored parties where they could bowl in the early evening and then afterwards they could drink, dance and bowl late into the night. Mid-City Lanes had become Rock N Bowl.

ROCK N BOWL BECOMES A NATIONAL ICON THROUGH MORE PUBLICITY OPPORTUNITIES

Although his Rock N Bowl Mid City Lanes business was now viable, John wasn't where he wanted to be financially, yet. John was still much of a one man show as evidenced by his greeting everyone. If an employee didn't show up, John would often have to fill in. On one such night when John was tending bar, a customer ordered an Alligator sandwich. Even though the option was on the menu, John recognized that the selection was unusual and assumed the patron was not local. Once again, in his outgoing manner, John began talking to this customer about the Rock N Bowl business. The customer was in town researching New Orleans for an upcoming article in *The National Geographic Magazine*. When the article about New Orleans appeared in a 1995 issue in the magazine, John's Mid-City Lanes, Rock N Bowl figured predominately. From 1995 on the publicity became nationwide and was nearly nonstop with articles in *USA Today*, *CNN*, *Rolling Stone* magazine, and the *NBC Today Show* just to name a few. John's business was now a national phenomenon. Bands continued to pursue him for an opportunity to play, party planners called him such that advertising/marketing wasn't necessary, and the business was providing satisfactory employment for most of John's family members—both immediate and extended.

CONCLUSIONS

The uniqueness of Rock N Bowl is immediately recognized whenever one visits the establishment. Few places exist where one can find a bowling alley on the second floor of a strip mall. Fewer still are able to combine the bowling experience with the local food and music which further enhances the uniqueness of the business. Music and food are the soul of the New Orleans environment; they are the foundation of the Tourism industry (Shuler, 2013).

John has become very successful with his unique business being conducted in a unique environment. He has done so with a somewhat unique approach to business. John's spiritual faith is displayed clearly in his actions. Instead of a traditional approach of seeking out opportunities, John relies heavily on his spiritual faith. He often refers to the Invisible Hand of

God when explaining why opportunities happened or why he decided on a course of action. However, this is not blind faith and is congruent with the reactive approach (Mintzberg, 1994) and opportunity verification (Baron, 2004). For instance, John acknowledges that it was faith that led him to the Mid-City Lanes originally. However, it was his previous work experience in catering that allowed him to recognize the business potential of the venue from a holistic perspective.

John's model may not work in other cities lacking a similar food and music culture base. For instance, he benefited greatly by having bands wanting to play his venue. In New Orleans there are many more bands than there are venues. Therefore, once John started offering live music, he was able to book bands without much trouble or expense. Then, as the business became more popular and successful, the quality of the bands would also improve. Because of the tight knit community of musicians, John's venue quickly became very well-known through word of mouth.

John relied almost exclusively on word of mouth advertising; this was mostly because of lack of resources to afford commercial marketing. Such reliance started from his purchase when John would personally greet every customer and shake his or her hand. Afterwards, he rarely used traditional marketing venues. At first this is because he just didn't have the money necessary. As time progressed, he received so much publicity and he just didn't need any addition exposure. He did make one television commercial with virtually free music from the public domain. He then wrote the words himself and has never changed it. His commercial is currently the longest running unaltered commercial on television. Such business actions display John's balance between relying on his spiritual faith while making conscious and rational cost-benefit decisions. He seems to have found a formula that works—at least in the current environment.

FURTHER RESEARCH

There is still some disagreement in the definition of opportunity (e.g., Baron, 2004) and a lack of extant research in opportunity recognition by entrepreneurs (Ireland, 2007). Even the separation of entrepreneurs and small business proprietors lacks clarity and needs better delineation (e.g., Sonfield, 2008). Because of these lacks, there is an obvious need for any research into the relationship between opportunities and entrepreneurs.

Another avenue of future research could be on the fit between the business and special characteristics of the local environment. Obviously, New Orleans isn't the only city with a unique blend of factors; other cities have their own takes on music, food, or other characteristics. An obvious extension of this topic would be to see how or if John's model works in these other environments. This is something that John is currently struggling to decide for himself.

EPILOGUE:

While the Rock N Bowl business continued to grow, John knew that he needed something bigger to support three families. John purchased an iconic restaurant, Ye Olde College Inn, a few blocks away for his son and son-in-law to manage.

Based on a combination of factors, including Hurricane Katrina, John ended up moving the bowling alley into a structure next to the restaurant he just bought. He was able to retain much of the character of the original venue except for being on the second floor—he was now ground level. The change has not seemed to dampen the popularity of the business.

John continued to rely heavily on his faith in guiding his actions. He faced the ordeals of opening a new restaurant business, surviving Hurricane Katrina and the resultant flooding of the city, and moving the bowling business to the new location. One final observation is that John became more proactive in relying on his faith by placing a statue of St. Joseph on the wall of property he intended to buy—it worked.

The businesses are all successes. Currently, John is exploring the option of opening another Rock N Bowl type business or franchising. However, he is leery that the model will work in other environments without the unique aspects of New Orleans that have allowed him to be so successful.

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WHAT MATTERS, AND HOW: DOES PROCEDURAL UTILITY EXPLAIN SELF-EMPLOYMENT

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ABSTRACT

We find evidence that procedural utility is a useful explanatory variable of self-employment status among a sample of highly educated workers. We find no evidence indicating that procedural utility is useful in explaining the transition to self-employment. However, we do find that traditional employment attributes associated with outcome utility motivate the decision to move into paid-employment and are related to being in paid work generally. Our findings add to the literature examining the usefulness of procedural utility as an explanatory variable and motivate further examination of the relationship between procedural and outcome utility.

Keywords: occupational choice, job satisfaction

JEL Classifications: J24, J28

INTRODUCTION

Self-employed workers consistently report higher job satisfaction than paid workers despite evidence that self-employment requires more hours and pays less, on average. Previous research reveals that autonomy, the work itself, and opportunity for creativity drive the higher job satisfaction scores for the self-employed, and apparently compensate for lower pay and increased hours. Highly satisfied paid employees identify salary, benefits, opportunity for advancement, and responsibility as key factors. These distinct findings reveal that workers are not homogeneous. It reasons therefore that self-employed and paid workers likely specify utility functions with similar yet distinctly weighted arguments. Psychologists refer to *procedural utility* to distinguish benefits associated with the process of achieving utility linked to a particular outcome. Some economists have recently embraced the concept of procedural utility and have begun to evaluate the explanatory power of the concept.

This paper departs from the more common compensating wage approach. Rather than using employment status to explain job satisfaction, we model the effect of procedural and outcome utility on employment status. Empirically, our paper groups the attributes of job satisfaction using factor analysis to create explanatory variables conforming to procedural and

outcome utility. We then use employment status as our dependent variable to assess the explanatory power of outcome and procedural utility. We do not, in this model, include the impacts of income on the individual's choice. In part, because individuals in our sample choose either paid or self-employment, we do not know the income foregone by that choice. Our analysis also includes measures of both procedural and outcome utility which are missing from most other papers.

Using the National Survey of College Graduates (NSCG) of 2003, we investigate the relationship between familiar job attributes and employment status. The NSCG provides demographic information, employment status, and data regarding the importance of key job attributes. The NSCG also indicates whether a respondent changed jobs in the past two years. With this data we are able to construct variables comprised of key job attributes that are inputs to procedural utility and the more traditional outcome-based utility. We include the constructed variables in a probit regression model for the full sample and for a subsample comprised of respondents who changed jobs in the past two years. The organization of this paper proceeds as follows: section II briefly summarizes the existing literature, section III presents the economic and econometric models, section IV states the research question and presents hypotheses for testing, section V describes the data and analysis, and presents the results, and conclusions are presented in section VI.

LITERATURE REVIEW

Studies grounded in microeconomics employ a utility maximization framework emphasizing the earnings differential between paid- and self-employment (Rees and Shah 1986, Evans and Leighton 1989, Dolton and Makepeace 1990). An established literature suggests that self-employment is more satisfying than paid employment (Blanchflower and Oswald 1998, Taylor 2004, Kawaguchi 2008, Benz and Frey 2008a). To explore why self-employment is more satisfying, research has focused on attributes beyond income.

Taylor (1996) suggests that the decision to pursue and sustain self-employment rather than paid employment implies greater utility associated with self-employment. Using UK panel data, Taylor finds that expected higher earnings and autonomy contribute to greater utility. Blanchflower and Oswald (1998) use longitudinal data from Great Britain to find that self-employed workers report greater job and life satisfaction than paid employees. Job satisfaction numbers are higher for the self-employed despite evidence of lower average income (Hamilton 2000, Andersson 2008). Greater job satisfaction is somewhat surprising given disadvantages associated with self-employment, including: more hours, greater responsibility, less job security, and increased incidence of mental health problems (Blanchflower 2004, Taylor 2004, Andersson 2008, Georgellis et al. 2007, Turan and Kara 2007). Gavin Cassar (2007) examines the motivation of nascent entrepreneurs and finds that financial motives are important considerations of aspiring entrepreneurs, despite empirical evidence that the financial rewards,

on average, fail to surpass those of paid employment. Given the lower pay and abundance of undesirable attributes, what makes self-employment so satisfying compared to paid employment?

Empirical studies consistently identify autonomy and independence as important factors in higher job satisfaction among the self-employed (Blanchflower and Oswald 1991; Taylor 1996; Turan and Kara 2007; Andersson 2008). Attributes closely related to autonomy have also been identified as important factors. Mark Taylor (2004) finds that self-employed workers are generally more satisfied with the work itself. Georgellis et al. (2007) examine self-employment survival and exit and find that opportunity to use initiative contributed to job satisfaction. Scase and Goffee (1982) conclude that ideology contributes to a preference for autonomy and freedom, and the ideology finds expression through concepts like the *American Dream* that emphasize the potential for upward social mobility through self-employment as well as paid employment. It may also be useful to recall that Ely Chinoy (1955) reported in his classic ethnography that US auto workers viewed self-employment as an alternative to the alienation associated with the assembly line and as an opportunity to determine their work. Makenzie (1973) offers supporting evidence of the importance of self-determination in his study of craftsmen who sought self-employment to control the quality of their work.

Two recent threads have emerged in the literature. The first examines the influence of culture in the decision to pursue self-employment. Uhlaner et al. (2002) examine the relationship between self-employment and *post-materialism*. *Post-materialism* is a term coined by Inglehart (1977) describing the dominance of non-material goals over material goals in society. Inglehart (1996) observes diminishing returns to well-being and survival associated with income gains. He concludes that economic necessity dominates life style preferences at lower incomes but eventually yields to life style preferences once an income threshold is achieved. The transition to post-materialist values associated with lifestyle is observed across developed countries and is inversely correlated with age as older members of society retain materialist values and younger members of society increasingly report post-materialistic values.

The second new thread in the literature challenges the conception of utility as traditionally applied in microeconomics. *Procedural utility* refers to benefits generated in the process of attaining *outcome* utility. Utility is derived not only from outcomes but utility is derived independently from the process leading to the outcomes (Fry et al. 2003, Fuchs-Schundeln 2009). Frey, Benz and Stutzer (2003) suggest that procedural utility deviates from traditional outcome utility due to an emphasis on non-instrumental determinants of utility, well-being, and acknowledgement of a sense of self. Benz and Frey (2008a) find that self-employment produces procedural utility through a higher measure of self-determination and freedom. Using household level panel data from Germany, the UK, and Switzerland, Benz and Frey find that the independence associated with self-employment explains the variance in job satisfaction, which is used as a proxy for utility. Using a sample of 23 countries, Benz and Frey (2008b) find that higher job satisfaction is associated with more interesting jobs and autonomy,

two attributes of self-employment that contribute to procedural utility. Block and Koellinger (2009) find that nascent entrepreneurs are more satisfied with their start-up than necessity entrepreneurs. They emphasize the importance of procedural utility in their conclusion that greater satisfaction of nascent entrepreneurs is associated with the free will to pursue a start-up in contrast to the lower satisfaction of nascent entrepreneurs for whom a lack of labor market opportunities dictated the necessity of a start-up.

RESEARCH QUESTION AND HYPOTHESES

On average, highly educated individuals possess greater marginal productivity and, therefore, can be expected to confront a larger opportunity set of paid employment options featuring attributes consistent with higher job satisfaction. What motivates highly educated individuals to forego paid employment opportunities in favor of self-employment opportunities characterized by more working hours, greater stress, documented adverse health effects, and low monetary compensation? This paper will examine this research question by testing the following hypotheses:

H1 Highly educated workers assigning greater importance to attributes consistent with the concept of procedural utility are more likely to be self-employed.

H2 Highly educated workers assigning greater importance to attributes consistent with the concept of outcome utility are more likely to be paid workers.

The hypotheses emphasize the type of employment as an outcome (self- or paid employment) and not the transition from one to the other however, it seems reasonable to consider how procedural and objective utility inform the decision to switch from one type of employment to the other.

Studies reveal a link between procedural utility and the movement into self-employment. Blanchflower and Oswald (1998) present international survey data revealing a preference for self-employment regardless of the respondents' current employment status. Expectations of autonomy and greater flexibility make self-employment desirable. Moreover, expectation of large financial returns informs preferences for self-employment. However, studies reveal that, on average, financial rewards are less than paid employment. Accordingly, it seems reasonable to anticipate that individuals transitioning into self-employment from paid employment will possess a different mix of procedural and objective utility compared to self-employed individuals who continue with self-employment based on actual experience in contrast to expectations. We might, therefore, expect individuals transitioning from one self-employment situation to another self-employment to weight attributes consistent with the idea of procedural utility relatively highly compared to individuals transitioning from self-employment to paid employment. It is more difficult to anticipate the motivation to transition from paid employment to self-

employment. It is not clear whether attributes associated with procedural utility will dominate attributes associated with objective utility or vice versa.

Further confounding the challenge of connecting procedural utility to self- and paid employment is the nature of paid work typically associated with highly educated individuals. Indeed, it is entirely reasonable to anticipate that procedural utility is important to individuals transitioning from one paid employment opportunity to another or from self-employment to paid employment. Consider, for example, a medical doctor who chooses to work for a large research firm because of increased autonomy and an opportunity to pursue self-directed work compared to the alternative employment in a private practice in either a self-employed or paid capacity. Very clearly, this choice of paid employment may reflect relatively higher weighting applied to attributes consistent with procedural utility. Indeed, Johnson and Elder (2002) and Lacey, Bokemeier, and Shepard (1983) find that highly educated workers desire job attributes associated with procedural utility. Therefore, when examining transitions into self-employment and paid employment, it will be difficult to assign greater weighting of procedural utility to one employment status over the other, especially the transition into paid employment.

Based upon the aforementioned suppositions and reasoning, we consider the following hypotheses relating to job transitions:

- H3 Highly educated individuals transitioning from self-employment to self-employment will more heavily weight procedural utility.*
- H4 Highly educated individuals transitioning from paid employment to paid employment are more likely to heavily weight outcome utility.*
- H5 Highly educated individuals transitioning from self-employment to paid employment are more likely to weight outcome utility more heavily than procedural utility.*
- H6 Highly educated individuals transitioning from paid employment to self-employment are more likely to weight procedural utility more heavily than outcome utility.*

THE SELF-EMPLOYMENT AND JOB ATTRIBUTE MODEL

The primary question we address is the relationship between specific job attributes and self-employment. Job attributes will be related to the procedural and outcome utilities described in the previous section. We assume that the importance of each attribute is determined prior to self-employment. Accordingly, we look at the consumer as a utility maximizer with the job attributes as parameters in the model (We recognize that it is possible that the job attributes are outcomes of some base personality variables so that the attributes are jointly determined with the job selection. This is an issue we will try to address at some future point).

For the individual, employment status is the outcome of utility maximization subject to a budget. Suppose that each individual has two alternatives, paid work or self-employment. Each alternative generates an income and has particular job attributes. We assume that the value of each attribute is known to the individual who makes the decisions based on these values. We will use the subscript s for self-employment and p for paid employment. Thus the income alternatives are M_s and M_p . The j job attributes are A_{is} for self-employment and A_{ip} for paid, $i = 1, \dots, j$. Now the problem facing the consumer is the percent of time spent in self-employment and then the remainder of time spent in paid employment. We will use the letter s for the percent of time in self-employment. The problem can then be stated as follows. The consumer purchases a good X at price P from the income generated by employment. Thus the budget constraint will be $PX = sM_s + (1-s)M_p$. Utility depends on the consumption of X and the attributes of the employment choice. Thus we have the consumer choosing the value of s to maximize $U(X, sA_{1s} + (1-s)A_{1p}, sA_{2s} + (1-s)A_{2p}, \dots, sA_{js} + (1-s)A_{jp})$ subject to $sM_s + (1-s)M_p - PX = 0$. We will solve the constraint for X and use this value of X in the utility function before carrying out the maximization.

There is one first order condition, and we solve for the value of s . In this case, we will have an equation

$$s = f(P, M_s, M_p, A_{1s}, A_{1p}, A_{2s}, A_{2p}, \dots, A_{js}, A_{jp}) \quad (1)$$

Because our data are collected after employment status is determined and the value of s will be zero or one, the equation we estimate will be a bit simpler. Here only the attributes of the alternative choice will enter the equation where $i = s$ or p depending on the choice we observe.

$$s = f(P, M_i, A_{1i}, A_{2i}, \dots, A_{ji}) \quad (2)$$

To include the job attribute variables in our utility maximization problem means that we would have a significant number of variables, some of which may be strongly related to others, or may be measuring nearly similar attributes. One way to sort out how the variables interact is to use factor analysis. Once we have the relevant factors determined, we can use these factors as the A_i variables in the estimation of the equation above.

Additionally, because the variables in our analysis are really attitudes about the importance of certain attributes and not measures of the attribute itself and because the actual attributes may be unmeasured, latent variables, it makes sense for us to control for these unmeasured or latent variables using factor analysis. This empirical problem is found in the psychology and sociology literature, where attitudinal surveys are common (Factor analysis is also used by economists. For example, see Train et al. (1987) where factor analysis helps to determine consumer preferences in a demand model for electricity and Lankford and Wyckoff (2000) for a study on parental attitudes toward public and private schooling). Factor analysis estimates relationships among observed or “manifest” variables, which are used to determine a

small set of factors. Although some subjective interpretation is involved, the factor analysis is useful when the unobserved factors are undetectable otherwise.

As noted above, individuals face a binary choice of either becoming self-employed or working for someone else.¹

Let

$$s = \alpha x + \beta y + \varepsilon \quad (3)$$

be the latent variable model reflecting the value of self-employment, and the choice is made only if $s > 0$. If the individual is self-employed, let $s = 1$ or, $s = 0$ if the individual chooses paid work; x is a vector of observable variables that affect the self-employment choice such as demographic variables, number of small children, and educational attainment; y is a vector of unobserved job attribute variables. The α and β are vectors of parameters to be estimated and ε is the error term assumed to be $N(0, \sigma^2)$.

Even though the y are not observed, we do observe manifest variables z that are presumed to be indicators of the latent explanatory variables y . In our case, the z are the variables representing the importance of certain job attributes, for which we have data. In other words,

$$z = \Gamma y + u \quad (4)$$

where Γ is a set of $M \times K$ parameters and u is the error term, also normally distributed with mean 0 and a covariance matrix equal to Σ . We also assume that z and y are normally distributed with mean 0 and covariance matrices Ω and Ψ , respectively.

Because factor analysis uses the covariance matrices to determine common factors, we must consider the relationships between Σ , Ω and Ψ . The model includes the assumption that the off-diagonal elements of Ψ are zero and the diagonal elements of Ω are 1. Under the assumption that βy and u are independent, the relationship of the covariance matrices is $\Sigma = \Gamma \Omega \Gamma' + \Psi$. Factor analysis uses this relationship to estimate the elements of Γ , Ω , and Ψ . These estimates are then used to develop the underlying factors:

$$y | z \sim N(\Lambda z, \Omega - \Lambda \Gamma \Omega) \quad (5)$$

where Λ is the $K \times M$ matrix of factor score coefficients ($\Lambda = \Omega \Gamma' (\Gamma \Omega \Gamma' + \Psi)^{-1}$).

As Train et al. (1987) note, except under special circumstances, the factor score is not the true value of y for a particular observation. Rather, the score represents a consistent estimate of the conditional mean of the distribution of y , given the values of z . Without exact values for y , the conditional means of y are used to estimate the probability in equation (3). We use a probit model to estimate the probability that an individual is self-employed:

$$P(s=1) = P(\alpha x + \beta(\Lambda z) + \varepsilon > 0) = 1 - \Phi [(\alpha x + \beta(\Lambda z)) / \sigma_n] \quad (6)$$

where, as with convention using probit models, $\sigma_n = 1$ to make estimate of the parameters α and β feasible (See Lankford and Wyckoff (2000) for a full explanation of how the current model yields consistent parameter estimates).

DATA DESCRIPTION AND ANALYSIS

The National Survey of College Graduates (NSCG) is a “once in a decade opportunity” to examine the educational and career characteristics of the United States college-level individuals (sestat.nsf.gov/sestat/sestat.html). The National Science Foundation conducts this and others surveys to form the SESTAT system (Scientists and Engineers Statistical Data System). The NSCG was given in October 2003, to a random sample of individuals living in the United States, under the age of 76, who had received a bachelor’s degree or higher prior to the new millennium. The public-use sample includes data on 100,042 individuals. When we include only the observations of individuals currently working with all the information on the variables used in the analysis, we are left with 83,024 individuals, of which 16.5% (n=13,740) are self-employed.

It is important to note that the NSCG employs a sampling method that controls for stratification by groups and nonresponse bias. Thus, SESTAT includes a weighting factor that we use in this analysis. The weighting factor slightly changes the statistical results of the subsequent analysis, but by very little (For example, the unweighted percentage of self-employed is 16.5 percent; the weighted percentage is 17.5 percent. Results without the weighting factor are available from the authors). We use the weights provided by SESTAT for all statistical analyses. Based on the literature regarding the factors that influence one’s decision to be self-employed, the control variables include: information on individual characteristics (age, gender, race, foreign or domestic-born status, retirement status) and family characteristics (marital status, number of small children, and whether the spouse works). To capture the human capital, we include *Years Since Highest Degree* as a proxy for overall work experience. In addition, three binary variables capture the level of educational attainment: whether one has completed a Masters level degree, a doctoral degree, or a professional degree (e.g. MD, JD, DDS).²

Table 1 presents the descriptive statistics of the variables used in the analysis for the full sample, paid, and self-employed workers. Means tests between the paid and self-employed workers reveal that self-employed workers tend to be white, male, married, and more than two years older than paid workers.

Table 1
Means and Standard Deviations
The Self-Employed and Paid Work College Graduates

<i>Variable name</i>	<i>Variable description</i>	<i>Full Sample n = 83,024</i>	<i>Self-Employed n=13,740</i>	<i>Paid Workers n=69,284</i>	<i>T-test on Means</i>
Married	Marital status	0.770 (0.421)	0.802 (0.398)	0.764 (0.425)	-8.96***
Small kids	ber of children under age 6	0.277 (0.624)	.252 (0.610)	0.282 (0.626)	4.90***
Age	Age at time of survey	44.982 (10.622)	47.770 (11.162)	44.389 (10.407)	-34.21***
Female	Gender, 1 if Female	0.441 (0.496)	0.365 (0.481)	0.457 (0.498)	20.79***
African-American	Race 1, if Black	0.068 (0.251)	0.032 (0.176)	0.075 (0.264)	19.18***
Asian	Race 1, if Asian	0.094 (0.292)	0.095 (0.293)	0.094 (0.292)	-0.70
Otherrace	Race 1, if other race	0.025 (0.155)	0.022 (0.145)	0.025 (0.157)	2.47**
Foreignborn	1 if born outside the US	0.175 (0.380)	0.179 (0.383)	0.174 (0.379)	-1.86*
Yrs Since Highest Deg	Years since highest degree	18.015 (10.695)	21.649 (11.328)	17.243 (10.393)	-45.15***
Spousework	1 if spouse working	0.582 (0.493)	0.585 (0.493)	0.581 (0.493)	-0.51
Prev Retiree	1 if previously retired	0.035 (0.184)	0.048 (0.214)	0.032 (0.177)	-8.96***
Hi MA	1 if Highest degree is a Masters	0.285 (0.451)	0.208 (0.406)	0.301 (0.459)	24.36***
Hi PhD	1 if Highest degree is Ph.D.	0.065 (0.246)	0.041 (0.198)	0.070 (0.255)	13.12***
Hi Prof	1 if Highest degree is professional	0.067 (0.250)	0.155 (0.362)	0.048 (0.215)	-51.62***

Data Source: National Science Foundation, The 2003 National Survey of College Graduates, weighted for stratification and nonresponse bias. Standard deviations are in parentheses. T-statistics test the difference between the means of paid and self-employed workers. A negative sign on the t-test indicates that the average is larger for the self-employed. ***=statistical significance at the 1 percent level, **=statistical significance at the 5 percent level, and *=statistical significance at the 10 percent level of significance.

As noted above, we employ a factor analysis to summarize individual opinions about job attributes. Respondents were asked, “When thinking about a job, how important is each of the following factors to you?” Individuals rated the various attributes on a four-point scale, from *very important* to *not important at all*. Table 2 presents the variables we selected for the factor analysis. These variables represent the z in the model and include: benefits, challenge, independence, responsibility, salary, job security, and social responsibility.³ Using a principal factor analysis, we tested several factor loadings, and the results always indicated two common factors among the variables.⁴ The rotated factor patterns are then used to interpret the common factors, while the standardized coefficients (the λ in Equation (6)) are used to create weighted individual factor scores. These results are also presented in Table 2.

Table 2					
Estimated Factor Patterns and Scoring Coefficients					
<i>Full Sample</i>					
<i>Variable</i>	<i>Description</i>	<i>Rotated Factor Patterns</i>			
		<i>Procedural Utility</i>	<i>Outcome Utility</i>		
<i>Advancement</i>	Opportunity for advancement	0.37380	0.43714	0.10128	6014
<i>Benefits</i>	Benefits	0.06619	0.70827	-0.05537	8494
<i>Challenge</i>	Job challenge	0.66142	0.10137	0.29999	-0.02802
<i>Independence</i>	Independence on the job	0.58828	0.06985	0.23434	-0.03132
<i>Responsibility</i>	Job responsibility	0.68549	0.17204	0.33169	0907
<i>Salary</i>	Importance of salary	0.03744	0.61839	-0.05279	7738
<i>Job Security</i>	Security of the job	0.11975	0.61161	-0.01057	6873
<i>Social Responsibility</i>	Social responsibility of the job	0.5563	0.03596	0.19638	-0.03889
<i>Those who switched jobs</i>					
<i>Variable</i>	<i>Description</i>	<i>Rotated Factor Patterns</i>			
		<i>Procedural Utility</i>	<i>Outcome Utility</i>		
<i>Benefits</i>	Benefits	0.08212	0.67467	-0.02130	0508
<i>Challenge</i>	Job challenge	0.62992	0.06779	0.29469	-0.02003
<i>Independence</i>	Independence on the job	0.60438	0.06936	0.27162	-0.01420
<i>Responsibility</i>	Job responsibility	0.65085	0.15266	0.32022	3263
<i>Salary</i>	Importance of salary	0.03521	0.57521	-0.03540	9097
<i>Job Security</i>	Security of the job	0.11469	0.57201	0.00493	8546
<i>Social Responsibility</i>	Social responsibility of the job	0.51840	0.03189	0.21358	-0.02639
Data Source: National Science Foundation, The 2003 National Survey of College Graduates. Rotated Factor Patterns arise from a varimax rotation method. Individual factor scores are calculated by using the standardized coefficients against the related values for each of the variables.					

Although interpretation of factor analysis is subjective, it does appear that two distinct common factors arise from the analysis and these factors appear to be tied to the literature descriptions related to job satisfaction and self-employment. We employ a common heuristic in factor analysis and assume that any individual attribute score from the rotated factors that is at least 0.3 indicates that the variable is important to the common factor. Thus, we find that challenge, independence, responsibility, and social responsibility are statistically important to the first common factor, with scores for these variables ranging from 0.518 to 0.651. This common factor appears to be comprised of attributes consistent with procedural utility. In contrast, job benefits, importance of salary, and job security with scores ranging from 0.572 to 0.675 load on the second common factor. The attributes loading on the second common factor are consistent with traditional outcome-based utility. Given the rather clear demarcation associated with the factor analysis, we are inclined to refer to the first common factor as procedural utility and the second common factor as outcome utility.

The next step in the analysis is to examine how the common factors procedural utility and outcome utility are related to self-employment. We define the dependent variable, *Self-Employment*, equal to 1 if the individual is currently self-employed and 0 if in paid work. As typical of qualitative dependent variable analysis, we use a reduced form probit regression estimation method (A reduced form model implies that income is not included in the analysis in order to avoid simultaneity bias). The probit results are presented in Table 3. A likelihood-ratio test indicates an overall good fit to the model (The Chi-square value tests whether the variables in the model jointly contribute to the explanation of the variance in the probability of self-employment). Due to the nature of probability models, the coefficients in Column (1) of Table 2 do not represent the marginal effects of individual variables on the dependent variable; Column (2) presents these effects. The average probability for our base case was calculated at the means of all continuous variables and at zero for all binary variables and was estimated at 17.1 percent (Estimated results are available from the authors).

As expected, the family and demographic characteristics are in the direction expected. Females have an average probability of being self-employed that is 3.9 percentage points lower than males. Likewise, except for those of Asian descent, African-Americans and other races (this grouping includes all other races not captured by the two race variables) are less likely to be self-employed than their white counterparts (average probabilities are 8.2 and 1.9 percentage points lower, respectively, for African-Americans and the Other Race category). On the other hand, foreign-born individuals have a 2.2 percentage point higher average probability of being self-employed compared to native-born individuals. The presence of small children also increases the probability of being self-employed, and an additional child increases the average probability by 1.2 percentage points. Being married is not statistically important to this model, perhaps because we have included whether the spouse works, which does increase the average probability of self-employment, although the effect is very small (0.5 percentage point increase). Finally, individuals who were previously retired have an increased average

Table 3 Probit Results				
	<i>Full Sample (N=83,024) (1)</i>	<i>Marginal Effect (2)</i>	<i>Switchers (N=13,979)(3)</i>	<i>Marginal Effect (4)</i>
Intercept	-0.667*** (0.075)		-0.971*** (.175)	
Married	0.006 (0.013)	0.001	-0.010 (0.030)	-0.003
Children <5 yrs. old	0.047*** (0.007)	0.012	0.0468*** (0.015)	0.019
Age	-0.030*** (0.004)	0.001	-0.015* (0.009)	0.006
Age-squared	0.0004*** (.00004)	NA	0.0002** (0.0001)	NA
Female	-0.153*** (0.008)	-0.039	-0.060*** (0.019)	-0.010
African-American	-0.371*** (0.018)	-0.082	-0.216*** (0.039)	-0.050
Asian	0.00001 (0.016)	-0.0001	0.060* (0.036)	0.022
Other Race	-0.069** (0.025)	-0.019	0.059 (0.054)	0.022
Foreign Born	0.087*** (0.012)	0.022	0.053* (0.029)	0.021
Yrs. Since Highest Degree	0.025*** (0.002)	0.003	0.028*** (0.004)	0.010
Yrs. Since Highest Degree –squared	-0.0002*** (.00004)	NA	-0.0004*** (0.0001)	NA
Working Spouse	0.024** (0.010)	0.005	0.040 (0.025)	0.017
Previous Retiree	0.036* (0.020)	0.008	0.033 (0.043)	0.015
Highest Degree – MA	-0.216*** (0.010)	-0.052	-0.163*** (0.024)	-0.034
Highest Degree – PhD	-0.406*** (0.018)	-0.088	-0.296*** (0.044)	-0.062
Highest Degree— Professional	0.667*** (0.013)	0.220	0.428*** (0.033)	0.139
Procedural Utility	0.076*** (0.005)	0.019	0.004 (0.0109)	0.007
Outcome Utility	-0.203*** (0.004)	-0.049	-0.170*** (0.011)	-0.036
Log Likelihood	-70977		-12477	
Log Likelihood Ratio	11842***		937.3***	
Data source: National Survey of College Graduates 2003 weighted for stratified and nonresponse bias. *** statistically significant at p<.001 level; ** statistically significant at p<.05 level; * statistically significant at p<.10 level. Marginal effects for Age and Yrs Since Highest Degree include the nonlinear component.				

probability of self-employment of 0.8 percentage points compared to those workers who never retired.

When we turn to the human capital-related variables, we find that age increases the probability of being self-employed. A one-year increase in age increases the probability of self-employment by 0.1 percentage points. Thus, *ceteris paribus*, one would need to age about ten years in order to increase the probability of being self-employed by 1 percentage point. The variable “years since attaining one’s highest degree” has a similar level of effect on being self-employed (.3 percentage point change). Finally, the binary variables that control for educational attainment indicate that only a professional degree increases the likelihood of self-employment. Individuals with a professional degree have a 22 percentage point higher average probability of being self-employed than those with a bachelor’s degree. Receipt of a Masters or doctoral degree reduce the average probability of self-employment compared to completion of a bachelor’s degree. The human capital results are very similar to what has been found in previous research (Aaronson 1999, Benedict et al. 2010).

The variables of particular interest to this paper are those related to the two common factors. As hypothesized, the *procedural utility* factor is positively associated with being self-employed. A tenth of a point increase in the factor’s index increases the probability of being self-employed by 1.9 percentage points (Because these factors are normalized to a mean of 0 and variance of 1, we decided to make the marginal change be 0.10). Similarly, as hypothesized, the *outcome utility* factor has the opposite effect and a tenth of a point increase in outcome utility lowers the probability of being self-employed by 4.9 percentage points. These results are consistent with the findings summarized in the literature review. The probability of self-employment is positively associated with attributes contributing to procedural utility and negatively associated with attributes contributing to outcome utility. Thus, in our model, the probability of paid employment is negatively associated with procedural utility and positively associated with outcome utility.

The last part of the analysis examines a subset of the workers. Recent work on self-employment has focused on transitioning to paid or self-employed work rather than the current work status of the individual. Some researchers contend that the movement to self-employment is more interesting because the transition reveals a preference for self-employment. We cannot track job changes using the NSCG.⁵ However, we can identify workers who changed jobs between the 2001 and 2003. Only those who were working during the survey weeks for both years and changed jobs are included in the modified dataset. These conditions result in a sample of 13,979 observations; 2,387 report being self-employed and 11,592 report being in paid work on the 2003 survey. This sample comprised entirely of respondents reporting changing jobs, *switchers*, is very similar to the full sample, although the average age and years of experience is approximately two years less (Results available from authors upon request). We do not know the employment status of workers in 2001. We know only that they were working in 2001 and their

current job status in 2003. Given this shortcoming of the data, we cannot empirically test hypotheses 3-6.

The factor analysis using the subsample of job *switchers* yields the identical common factors as with the full sample. The probit results are very similar; however, the procedural utility factor is no longer statistically significant and the marginal effect, although still positive, is not statistically different from zero. Given our earlier discussion, it may be that procedural utility is an important factor for moving from one job to another, regardless of whether the switch is into paid or self-employment. Thus, because movement into paid work is motivated by procedural utility as is movement into self-employment, the statistical and economic significance of the variable is a wash.

For the *switchers*, the coefficient estimate for the outcome utility factor remains negative, indicating a decrease in the probability of transitioning into self-employment (3.6 percentage points) and similar to the effect for the full sample. Thus, we find that greater importance assigned to pecuniary job attributes comprising the outcome utility factor decreases the probability of moving into self-employment and increases the probability of moving into paid employment.

CONCLUSION

Departing from the compensating wage approach, we test the extent to which procedural utility explains variation in employment status among paid and self-employed workers. This paper contributes to the existing literature by employing factor analysis to identify variables representing procedural and outcome utility. We contend that using factor analysis to group job attributes is a compelling alternative to using reports job satisfaction as a proxy for utility. We include the grouped attribute factors as independent variables in a probit regression model with employment status as the dependent variable. Our results indicate that more importance placed on the attributes comprising the procedural utility factor increases the probability of being situated in self-employment whereas more importance placed on the attributes comprising the outcome utility factor reduces the probability of being situated in self-employment.

Examination of a subsample of *switchers*, who changed jobs in the two-year period prior to the 2003 survey, reveals the importance of attributes comprising the outcome utility factor among respondents. Our results do not reveal a similar importance of the attributes comprising procedural utility. Given that the sample includes only highly educated workers, this result is no surprise. Highly educated workers likely derive procedural utility from attractive paid employment opportunities that require at least a baccalaureate degree. Thus, the draw of procedural utility-related job attributes that move an individual from one job to another appear to have similar effects for transitioning into paid work as they do for self-employment.

In conclusion, we find evidence that procedural utility is a useful explanatory variable of self-employment status among a sample of highly educated workers. We find no evidence indicating that procedural utility is useful in explaining the transition to self-employment. However, we do find that traditional employment attributes associated with outcome utility motivate the decision to move into paid-employment and are related to being in paid work generally. Our findings add to the literature examining the usefulness of procedural utility as an explanatory variable and motivate further examination of the relationship between procedural and outcome utility. Given the body of evidence suggesting the usefulness of procedural utility as explanatory variable of the self-employment decision, future research would contribute further understanding by exploring the transition to self-employment and paid employment. We have provided discussion and four hypotheses that we assert guides future research in this context.

END NOTES

We use the notation in the Train et al. (1987) and Lankford and Wyckoff (2000) to create the latent variable model. In regard to the job choice, there are obviously other choices, such as unemployment or moving out of the labor force. However, other studies have used the binary decision between self and paid-work (Blanchflower and Oswald, 1998; Taniguchi, 2002). The notion is that the choice is particularly relevant between the two and less so between working and nonworking status. The model could be extended to include nonwork status with a multinomial probit, but this extension is left for future research.

See Parker (2004) for a review of the literature that finds associations between self-employment and individual, family, and human capital characteristics. We also recognize that there has been some work on financial capital constraints and self-employment (Evans and Jovanovic 1989), but the NSCG does not provide information that would capture this relationship. To the degree that this relationship exists, we would expect that some bias would exist on the coefficients of the included variables. For example, if older individuals have a better credit rating, they may have access to debt financing. However, we also know that the estimated impact of financial variables on self-employment has not been large, so the resulting bias is likely to be small.

Note that NSCG also included opportunity for advancement and location as two additional job attributes. However, the advancement factor cross-loads on both factors and was removed as is the norm for this type of analysis. Further, factor analysis uses correlations to create the factors and location does not have any theoretical connection to the included variables. It could be that location is important to the self-employment choice, as some individuals may be limited in paid work choices in certain areas of the country, but one's attitude about location is not relevant to this analysis.

Typical eigenvalue and scree tests were employed. The eigenvalue test requires that the number of factors with an eigenvalue score greater than 1 indicates the number of factors. The scree tests present the eigenvector scores against the number of variables, and one examines the resulting graph for “elbows” in the plot, where the scores level off. We also examined a three-factor load, but it was excluded by these tests and the fact that it produced a “singlet” factor, meaning only one variable was important to that common factor. Two factors were present as a result of these tests.

A few national surveys, such as the Panel Study of Income Dynamics (PSID), present monthly job information over more than one year for respondents. However, the PSID does not provide the level of detail we desire on attitudes regarding job attributes; thus, we opted for the NSCG for the present study.

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