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## OPPORTUNITY RECOGNITION DIFFERENCES BETWEEN BLACK AND WHITE NASCENT ENTREPRENEURS: A TEST OF BHAVE'S MODEL

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Examining the opportunity recognition processes of black and white entrepreneurs may help improve the lagging rate of black entrepreneurship. Based on the framework provided by Bhave's (1994) model of new venture creation, and using data collected through the Panel Study of Entrepreneurial Dynamics, we found significant differences between the percentage of black and white nascent entrepreneurs who recognized externally-stimulated versus internally-stimulated opportunities and their projected firm revenues. As predicted, black nascent entrepreneurs were more likely to pursue externally-stimulated opportunities with significantly lower expected revenues than their white counterparts. Academic and practical implications are discussed and future research directions are offered.

*Keywords:* Black entrepreneurship; African-American entrepreneurship; opportunity recognition; PSED.

### 1. Introduction

According to the US Bureau of Labor Statistics (BLS), the unemployment rate for blacks is about nine percent, while the unemployment rate for whites is about four percent (US Bureau of Labor Statistics, 2006). In fact, over the last 50 years, the unemployment rate of blacks has consistently remained about double that of white Americans (Badgett, 1994; Hoynes, 2000; Spriggs and Williams, 2000). The disproportionate unemployment rate is one of the reasons that almost 25 percent of the black population in the US lives below the poverty line, compared to 8.6 percent of the white population (US Census Bureau, 2005). Since most of the net new jobs in the US economy are created by new ventures and small businesses (Birch, 1987; Scarborough and Zimmerer, 2005), a natural solution to improving the elevated black unemployment rate is through increased black entrepreneurship. Research has found that black business owners are more likely to hire African-Americans and other minority job seekers than white business owners (Bates, 1994). Thus, entrepreneurship represents a viable alternative to unemployment and/or discrimination in the labor market, and can provide a path out of poverty (e.g., Glazer and Moynihan, 1970; Light, 1979; Moore, 1983; Sowell, 1981).

Many entrepreneurs founded their ventures because they believe that they are viewed (and accordingly treated) as outsiders by the mainstream wage-employment sector (Dollinger, 2003). This, along with government and community efforts to increase inner city entrepreneurship, should have resulted in elevated rates of black entrepreneurship. But, the statistics do not bear this out. In fact, the opposite is true. Fairlie (1999) found that black men are one-third as likely to be self-employed as white men. Only 4.4 percent of employed black men and two percent of employed black women work for themselves (Fairlie and Meyer, 1996). The difference between the percentage of blacks and whites who are self-employed in the US is striking. Approximately 12 percent of whites are self-employed, and the three-to-one ratio in the self-employment rate between whites and blacks has remained roughly constant for nearly a century (Bates, 1995; Fairlie, 1999; Fairlie and Meyer, 1996, 2000).

The fact that the black entrepreneurship rate lags the national average is somewhat surprising given the unemployment statistics provided above, as well as research that has shown that black youths appear to be much more interested in entrepreneurship than white youths (Walstad and Kourilsky, 1998; Wilson *et al.*, 2004). So, while the need to create self-employment opportunities is clear, and the desire to start a business appears to be higher for blacks as a group, the black entrepreneurship rate remains low. Understanding why this is so and addressing the causes for the long-standing wide gap between the percentages of whites and blacks who found firms could have significant societal benefits.

To date, much of the research that has examined differences between black and white entrepreneurs and entrepreneurship rates has focused on economic and demographic differences between the two groups. While this research may be important, we believe that greater emphasis is needed on studying and testing for differences in firm founding behaviors, actions and processes of black and white entrepreneurs. In this paper, we focus on the opportunity recognition processes of black and white "nascent entrepreneurs" (NEs). NEs are individuals who are actively involved in attempting to start a new business (see Reynolds, 2000). Using data collected through the Panel Study of Entrepreneurial Dynamics (PSED), we compared 618 white NEs to 108 black NEs. To analyze the similarities and differences, comparisons are made between these two groups of NEs with respect to Bhavé's (1994) model of new venture creation. Following the literature review, statement of hypotheses, and presentation of the empirical results, we discuss the findings and offer practical and academic research implications. We close with future research directions.

## 2. Literature Review/Hypotheses

Beyond the lagging rate of black entrepreneurship discussed above, race has been found to be an important determinant of small business outcomes (Fairlie and Robb, 2007; Robb, 2002). Fairlie and Robb (2007) found that black-owned businesses lagged behind white-owned businesses in profits, sales and number of employees. Research has also found that black-owned businesses are 43 percent more likely to close than white-owned businesses; black male-owned businesses are 51 percent more likely to close than white male-owned businesses; and black female-owned businesses are 38 percent more likely to close than white male-owned businesses (Robb, 2002).

The reasons for the disparity in founding rates and statistical discrepancies between black- and white-owned businesses are not clear. However, the lack of clarity is not surprising given the relatively sparse body of knowledge within the academic literature. The majority of research to date — as well as public policy initiatives that attempt to improve black entrepreneurship rates — has largely focused on the differences between blacks and whites in terms of personal financial assets (Evans and Leighton, 1987) and access to capital (Bates, 1995; Cavalluzzo and Cavalluzzo, 1998). It would seem that if the problem was simply providing greater access to capital, the issue of low black participation in entrepreneurship could have been solved long ago.

Research that has looked beyond the financial disparities has focused primarily on differing family and social structures and educational differences between blacks and whites. Rhodes and Butler (2004) argue that the socioeconomic conditions of the black community are not as conducive to creating successful entrepreneurial role models for blacks. They point out that the institutional structures of the black business community are comprised of an underdeveloped black Chamber of Commerce and a greater percentage of undercapitalized business organizations (Rhodes and Butler, 2004). In addition, black youths are less likely to know a small business owner than white youths (Walstad and Kourilsky, 1998). These results suggest that blacks have fewer informal and formal network contacts who can help secure key resources and information, and serve as knowledgeable mentors.

Research has found that white male entrepreneurs have almost twice as many self-employed relatives than black male entrepreneurs (Fratone, 1988). Blacks are also less likely to have a parent who is a small business owner (Hout and Rosen, 2000; Fairlie, 1999; Walstad and Kourilsky, 1998). Having a father who is/was an entrepreneur has consistently been found to be related to becoming an entrepreneur (Hisrich and Peters, 2002; Hundley, 2006). This is not surprising given that fathers serve as role models and pass on knowledge and experience to their children. However, given the depressed rate of black entrepreneurship, there simply are not as many black entrepreneur fathers per capita as white entrepreneur fathers. This is supported by the findings of Hout and Rosen (2000), who combined General Social Survey (GSS) data collected from 1974 through 1996, and found that blacks are less likely to have fathers who are self employed (15.5 percent) than the general population (24.1 percent). However, Hout and Rosen (2000) also found that black males whose fathers were self-employed had lower rates of self-employment than white males whose fathers were not self-employed. This suggests that not only is there a significant difference in the percentage of having a self-employed father between blacks and whites, but also that the parent-child impact of having a self-employed father is different between black and white males. According to Hout and Rosen (2000), the differing percentage of whites and blacks who had self-employed fathers could only explain 15 percent of the gap between white and black men who chose to be self-employed.

Research has also shown that differences in educational attainment and household net worth between blacks and whites exist. However, our goal is to look beyond the economic and demographic differences between blacks and whites to better understand the long-standing entrepreneurship gap. We chose to focus on the opportunity recognition processes of black and white NEs. We discuss the differences in education and net worth for the two groups later in the paper in the context of their impact on opportunity recognition processes.

Opportunity recognition is the critical first step of the entrepreneurship process (Christensen *et al.*, 1994; Hills, 1995; Shane and Venkataraman, 2000). Bygrave (1989a, 1989b) calls the founding of an organization to pursue an entrepreneurial opportunity the "Entrepreneurial Event." Similarly, Stevenson and Jarillo-Mossi (1986) view entrepreneurship as the process of creating value by combining resources to exploit an opportunity. And, the pursuit of the opportunity may be regardless of resources controlled (Stevenson *et al.*, 1989). Bygrave and Hofer (1991) acknowledge that entrepreneurs come in all shapes and sizes, and propose a broad definition of the entrepreneur as "someone who perceives an opportunity and creates an organization to pursue it." Clearly, the above definitions underscore the critical importance of opportunity to entrepreneurship.

Bhave (1994) proposed a process model of venture creation with opportunity recognition being the key early stage in the sequence of events leading to the creation of the venture. Using an open-ended interview technique, Bhave (1994) surveyed 27 New York City firms in an effort to better understand the venture creation process. The firms in his sample represented four major industries (trade and distribution; financial and management consulting; computer services; and technology-based design and manufacturing). Perhaps his most important contribution to the literature was his identification and illustration of two different types of opportunity recognition based on Cyert and March's (1963) earlier typology, which divided opportunity recognition into two categories: externally-stimulated and internally-stimulated opportunity recognition.

An externally-stimulated opportunity is one where the decision to start a venture precedes opportunity recognition. Entrepreneurs who recognize the opportunities for their businesses through this process engage in an ongoing search for opportunities which they filter, massage, and elaborate before founding their firms. An alternative venture creation path results from internally-stimulated opportunity recognition. Here, the entrepreneurs discover problems to solve, or needs to fulfill, and only later decide to create ventures. Using PSED data, Singh and Hills (2003) found significant differences between NEs who were pursuing internally-stimulated versus externally-stimulated opportunities in terms of their motivations for founding new ventures and their expectations for success. A related question — and the focus of this paper — is do black and white NEs differ with respect to recognizing internally-stimulated opportunities versus externally-stimulated opportunities. The reasons for using one method over the other, as well as the implications of doing so, are discussed in the following sections. We then present our three formal research hypotheses.

### **2.1. Educational attainment**

Entrepreneurship theory has established a clear link between educational attainment and entrepreneurship (Dolinsky *et al.*, 1994; Fairlie, 2004; Hisrich and Peters, 2002; Scarborough and Zimmerer, 2005). Vesper (1980) found that between 60 and 90 percent of his sample of successful new businesses relied primarily on their education and experiences as sources of ideas for their businesses. Cooper and Dunkelberg (1981) found that 36 percent of entrepreneurs had, at a minimum, a college degree, with 15 percent undergoing some advanced study in addition to a college degree. Education has also been found to

increase entrepreneurial intentions (Clark *et al.*, 1984; Crant, 1996) as well as opportunity search (Shook *et al.*, 2003); therefore, it is considered a key determinant to self employment (Walstad and Kourilsky, 1998). This is not surprising when one considers the analytical and managerial skills, as well as the technical knowledge, that are required for entrepreneurial success.

The possession of information also allows entrepreneurs to recognize opportunities that others do not (Kirzner, 1973). Education is one of the drivers of information and knowledge (Venkataraman, 1997); however, blacks have lower educational attainment than whites. The US Department of Education reported that while the number of blacks completing high school had increased between 1972 and 2004, blacks continue to drop out of school at a rate twice that of whites (US Census Bureau, 2004). More specifically, 90 percent of white Americans completed high school as compared to 80.6 percent of blacks (US Census Bureau, 2004). The good news is that the percentage of blacks that have completed high school and earned college degrees has increased significantly over the past four decades. In 1965, fewer than 300,000 African Americans were enrolled in colleges and universities, and by 1980, college enrollment figures for blacks had risen to 1,107,000 (Trent, 1984). However, of those white Americans who completed high school, 30.6 percent had earned bachelors degrees or higher, while only 17.6 percent of blacks who had completed high school had gone on to earn a bachelors degree or higher (US Census Bureau, 2004).

These findings reveal that not only is the percentage of blacks who complete high school significantly lower than that of whites, but also that the percentage of black high school graduates who go on to earn a college degree is just over half that of whites. Blacks with higher levels of human capital and education are more likely to be employed than those with lower human capital (Fairlie, 2004). It has been suggested that the significantly wide educational gap between blacks and whites contributes partially to the significant gap in black and white self-employment rates (Fairlie, 1999, 2004). Fairlie (2004) found that only 23 percent of self-employed blacks have college degrees, a significant difference when compared to 30 percent of self-employed whites.

Singh and Hills (2003) found that NEs who were pursuing internally-stimulated opportunities had significantly higher levels of education than those who were pursuing externally-stimulated opportunities. It is likely that a person's level of education plays a significant role in both the types of opportunities recognized and the process by which that person identifies opportunities. Singh and Hills (2003) posit that entrepreneurs who are better educated have gained additional analytical skills that allow them to identify and recognize market needs better than less educated entrepreneurs.

## **2.2. Net worth**

Although many firms start out with a small amount of capital provided by the founder, and little wealth is required to enter most entrepreneurship ventures (Hurst and Lusardi, 2004; Reynolds *et al.*, 2004; van Gelderen *et al.*, 2005), those persons having a higher net worth have more success leveraging their net worth to obtain sufficient venture financing through external sources. A person's asset level has been found to play an important role in

determining whether or not they choose self-employment over working for others (Blanchflower and Oswald, 1998; Fairlie, 1999; 2004). Research has shown that having access to capital at the startup phase affects firm size (van Gelderen *et al.*, 2005) as well as the ability to sustain operations (Bates, 2000, 2006). Some potential entrepreneurs never take the plunge because they are unable to assemble sufficient financial capital to start their firms (Bates, 2000, 2006). Thus, having higher asset and net worth levels affords those individuals easier access to capital, and subsequently entry into self-employment.

Differences in asset and net worth levels have been observed between blacks and other minority and majority groups. Studies have revealed that black US household asset levels are 25 percent lower than those of white US household asset levels (Fairlie, 1999), and that blacks have substantially lower levels of overall wealth than whites in the US (Hout and Rosen, 2000). The US Census Bureau reported that the median household net worth of Americans was \$55,000 in 2000 (US Census Bureau, 2003). During that same period, the median household net worth for whites was \$79,400, which is in stark contrast to the \$7,500 net worth of black households. The highest quintile of white households had a median household net worth of \$208,023, compared to a median net worth of \$65,141 for the highest quintile of black households. In the lowest quintile, the median household net worth for white households was \$24,000, compared to just \$57 for black households (US Census Bureau, 2003).

The US Census Bureau has also reported that the median household income for Americans was \$44,389 in 2004 (US Census Bureau, 2005). The median income for white households was almost \$49,000 while black households earned just over \$30,000 — nearly 40 percent lower than white households. In addition, almost 25 percent of the black population in the US lives below the poverty line, nearly three times the percentage of whites (US Census Bureau, 2005).

While there has been considerable research focus on the opportunity recognition process, limited research exists on the possible link between a potential entrepreneur's net worth and the opportunity recognition process. In one study, Singh and Hills (2003) found that those entrepreneurs whose opportunities were internally stimulated responded that they had higher net worth. In addition, Singh and Hills (2003) found that those who pursued internally-stimulated opportunities projected higher revenues for their ventures than those who pursued externally-stimulated opportunities. With respect to black entrepreneurs, Singh and McDonald (2004) found that black NEs have less income per household member than white households.

As Bhave (1994) describes, entrepreneurs who pursue internally-stimulated opportunities recognize an unmet market need and then choose to found their venture in an effort to fill that need. Effectively applying one's analytical skills, along with an ability to recognize market needs, are necessary prerequisites for recognizing internally-stimulated entrepreneurial opportunities. Formal education can help individuals gain these skills and abilities. In addition, higher educational attainment leads to better employment opportunities. This results in higher personal income and net worth.

A would-be entrepreneur with greater personal financial assets is better positioned to pursue entrepreneurial opportunities. However, an internally-stimulated opportunity is more

likely than an externally-stimulated opportunity to require immediate action. An individual pursuing an externally-stimulated opportunity may make a list of potential business ideas and deliberate on those ideas over a period of time. But someone who recognizes the market need that constitutes an internally-stimulated opportunity may have to act right away to fill that need before another entrepreneur fills that needs. Thus, having immediate access to personal financial resources would appear to be more important for pursuing internally-stimulated entrepreneurial opportunities. This makes it more likely that higher net worth individuals pursue internally-stimulated opportunities. In addition, higher net worth individuals also require greater return for their investments, especially if they plan to leave their current jobs in order to devote their full energies toward their entrepreneurial ventures. As such, we believe that those who pursue internally-stimulated opportunities are more likely to pursue more lucrative opportunities.

Research has found significant differences between blacks and whites on various demographic characteristics in the past. We believe that these demographic differences may influence the types of opportunities black and white NEs are recognizing, and thus have an impact on the new venture creation processes of the two groups of entrepreneurs. Given the lower levels of educational attainment and household net worth of blacks, Singh and Hills' (2003) earlier findings, and the broader discussion of the literature above, we propose the following three formal hypotheses:

H1a: Black NEs are more likely to pursue externally-stimulated opportunities than white NEs.

H1b: White NEs are more likely to pursue internally-stimulated opportunities than black NEs.

H2: White NEs will pursue more lucrative opportunities than black NEs.

### **3. Research Methods**

The PSED is a continuation of work initiated by over 100 entrepreneurship scholars who came together as part of an organization labeled the "Entrepreneurial Research Consortium" (ERC). The purpose of the ERC was to develop a methodology and research instrument to conduct a longitudinal study of the entrepreneurial new venture creation process. The research questions that make up the final PSED survey instruments were developed during a series of meetings, held between 1995 and 1998, where leading research scholars discussed and debated the reliability and validity of various items and measures that might be used in phone and mail surveys. Reynolds (2000) provides a more complete history and discussion of the ERC, the questionnaires and PSED.

Data collected for the PSED comes from a representative sample of the US population using random digit dialing (RDD) telephone survey interviews, followed by a mail survey questionnaire. The study methodology allowed researchers to identify NEs — those who are in the process of starting up a new venture — and follow their progression through data collection periods conducted over time (Reynolds, 2000).

Several telephone screening questions were designed to identify NEs. The first two questions were: (1) Are you, alone or with others, now trying to start a business?, and

Table 1. Which came first: Opportunity or decision to start a business?

Responses	White NEs	Black NEs
Business idea or opportunity came first	289 (37%)	34 (22%)
Desire to start a business came first	329 (43%)	74 (47%)
Business idea or opportunity and the desire to have a business came at the same time	153 (20%)	49 (31%)

(2) Are you, alone or with others, now starting a new business or new venture for your employer? Two additional questions asked whether the respondent anticipated becoming an owner (solo owner or part of a startup team) and if there had been any new venture formation activity within the last year. Those respondents who indicated that they were involved in some type of startup activity and who responded to the last two questions in the affirmative were considered NEs.

The PSED dataset contains 771 white NEs and 157 black NEs who responded to the question, "Which came first for you, the business idea or the decision to start some kind of business?" Respondents could choose one of three responses: (1) Business idea or opportunity came first, (2) Desire to start a business came first, or (3) Business idea or opportunity and the desire to have a business came at the same time. This question was specifically included in the PSED to test Bhavé's (1994) model. Table 1 summarizes the results of the number of white and black NE respondents for each response to the question.

Since we were interested in studying the differences between black and white NEs in the context of Bhavé's (1994) new venture creation model and internally- versus externally-stimulated opportunities, we chose to focus our attention on the respondents who indicated that the opportunity or the desire came first, not the respondents who indicated both came first. Thus, we were left with 618 white NEs and 108 black NEs. The statistical methods and empirical tests in this paper examine similarities and differences between the two NE groups.

#### 4. Results

The first empirical analysis we conducted was a cross tabulation and chi-square test of black and white NEs and whether the NEs were pursuing internally- or externally-stimulated opportunities (see Table 2). While NEs from both groups were more likely to pursue externally-stimulated opportunities, there were significant differences between the two groups. A greater percentage of black NEs were pursuing externally-stimulated opportunities and a greater percentage of white NEs were pursuing internally stimulated opportunities. Based on the chi-square test, the difference in the type of opportunity pursued was significant at the  $p < 0.01$  level. This provides support for Hypotheses 1a and 1b.

Table 3 presents the mean differences (and  $t$ -test results) between the black and white NEs on four items. White NEs appear to be significantly older ( $p < 0.01$ ) and have more household wealth than black NEs ( $p < 0.001$ ). It is interesting to note that there was no difference in the educational achievement for the two types of NEs. In addition, the household net worth for both groups was much higher than the national average and the



Table 2. Crosstab of NE race versus type of opportunity pursued.\*

NE type	Internally-stimulated	Externally-stimulated
White NE	289 (46.8%)	329 (53.2%)
Black NE	34 (32.5%)	74 (68.5%)

\*Chi-square test significant at  $p < 0.01$  level.

Table 3. Mean differences between black and white NEs.

Item	W/B <sup>1</sup>	Mean
Respondent age (years)	W	40.8***
	B	35.8***
Respondent's highest level of educational attainment (Scale for 0-9; 0 = 8th grade, 9 = Ph.D/MD)	W	4.9
	B	4.7
Respondent self-estimate of household net worth	W	\$147,368***
	B	\$70,416***
Expected firm revenue in 5 years	W	\$2,508,794***
	B	\$604,978***

<sup>1</sup>W = White NE/B = Black NE.

\*\*\* Significant at  $p < 0.001$  level.

averages for both respective racial groups based on Census data for each group. As mentioned earlier, the median US household net worth for whites was \$79,400, while it was just \$7,500 for blacks. As expected and in support of Hypothesis 2, white NEs were more likely to pursue more lucrative opportunities than black NEs ( $p < 0.05$  level). Black NEs projected 5th year firm revenues for the ventures they were pursuing to be just over \$600,000. White NEs projections were about four times higher at \$2.5 million.

We were interested in further examining the differences in the opportunities pursued between black and white NEs using multiple hierarchical regression (see Table 4). The expected 5th year firm revenue was first regressed on age, education and total household net worth (Model 1), and then on two dummy variables — externally-stimulated opportunity recognition (Model 2) and black NE (Model 3). Model 2 explained the most variance in expected 5th year firm revenue (adjusted *R* Square = 16.1 percent,  $F = 27.121$ ,  $p < 0.001$ ).

Model 1 shows that the standardized regression coefficients for age and household net worth were significantly related to the expected 5th year firm revenue but education was not. Beyond the three control variables, the standardized regression coefficient for choosing to pursue an externally-stimulated opportunity was significant ( $p < 0.01$ ) and negative. However, based on Model 3, controlling for the four variables above, black NEs did not significantly differ from white NEs in terms of how lucrative they perceived the opportunities they were pursuing to be. This suggests that black and white NEs pursue similar opportunities in terms of expected future revenues when controlling for age, household net worth and the

Table 4. Regression results for expected 5th year firm revenue.<sup>1</sup>

Variable	Model 1 Beta	Model 2 Beta	Model 3 Beta
Age	-0.166***	-0.157***	-0.160***
Education	-0.002	-0.003	-0.001
Total Household Net Worth	0.411***	0.398***	0.396***
Ext. Stimulated Opportunity		-0.104**	-0.102**
Black NE			-0.031
<i>F</i>	33.470***	27.121***	33.470***
Adjusted <i>R</i> Square	0.151	0.161	0.160
Change in <i>R</i> Square from Model 1		0.010	0.009
Change in <i>R</i> Square from Model 2			-0.001

<sup>1</sup>We eliminated three outliers that were more than three standard deviations from the mean 5th year firm revenue.

\*\*Significant at  $p < 0.01$  level.

\*\*\*Significant at  $p < 0.001$  level.

choice of pursuing an externally-stimulated opportunity versus an internally-stimulated opportunity.

## 5. Discussion

Improving the rate of black entrepreneurship could have significant positive social and economic impacts. Unfortunately, relatively little research on the subject has been conducted to date. The research that has been conducted has largely focused on demographic differences between blacks and whites to explain the lagging rate of black entrepreneurship. In this paper, we broke new ground by examining the opportunity recognition processes of black NEs and comparing them to white NEs. Using Bhavé's (1994) opportunity recognition framework in his process model of venture creation, we hypothesized and found support for differences between black and white NEs in terms of whether they were pursuing externally-stimulated or internally-stimulated opportunities. More specifically, the chi-square test revealed that black NEs were more likely than white NEs to be pursuing externally-stimulated opportunities, while white NEs were more likely than black NEs to be pursuing internally-stimulated opportunities. These results support Hypotheses 1a and 1b.

The findings reported in this paper also suggest that the type of opportunity an entrepreneur pursues is related to the anticipated size of the firm as measured by projected revenues. As noted earlier, Singh and Hills (2003) found that nascent entrepreneurs who first recognize a need and then develop their opportunity to address that need (internally-stimulated opportunity), pursue more lucrative opportunities than those who first have a desire to found a firm and then search for opportunities before selecting one to pursue (externally-stimulated opportunity). Since black NEs were more likely to pursue externally-stimulated opportunities than white NEs, the *t*-test result, which shows that black NEs were pursuing lower projected revenue opportunities than white NEs, is consistent with Singh and Hills (2003) findings and provides support for Hypothesis 2.

The regression results provide additional insights into the nature of the differences between black and white NEs. Beyond age, education and net worth, choosing to pursue externally-stimulated opportunities resulted in lower projected revenue ventures, but being a black NE made no difference to projected revenues. The significant difference in the projected revenues of the ventures pursued by the two groups of NEs can be explained by the different ages of the two groups, the significant difference in net worth, and the type of opportunity recognition process chosen. Of these variables, the most easily addressed by policy makers and entrepreneurship educators is the chosen opportunity recognition process. It is difficult to tell someone at what age they should become an entrepreneur. Finding and committing financial resources to make up the wealth gap will always remain a challenge. However, training individuals on how to recognize better opportunities may be both feasible and desirable and the benefits can be easily measured. We do not mean to downplay the importance of access to financial resources. However, the results of this paper suggest that there may be value in helping blacks better understand market needs to identify entrepreneurial opportunities. By doing so, it may be possible to have more black NEs pursue internally-stimulated opportunities, which could result in higher revenue generating ventures.

Aside from making college and formal business education more accessible to blacks, it may be possible to offer specialized market analysis and/or opportunity recognition training courses at local community centers, community colleges and/or churches. Lecture series programs or short training courses that are taught by volunteers (e.g., business school faculty, executives and financial experts) could be developed and offered to expose would-be entrepreneurs to basic management and marketing related concepts. Such training has been conducted as part of micro-enterprise training programs and typically focuses on economic literacy, basic marketing concepts, financial planning, business plans and personal effectiveness (Posner *et al.*, 2001). These types of programs also offer peer support and mentoring opportunities, which can serve to enhance the opportunity recognition process.

It is interesting to note the relatively high level of education for both NE types, particularly black NEs. Although not shown in the results, white NEs and a comparison group of white non-NEs within the PSED showed no significant differences in terms of educational achievement. However, black NEs were significantly more likely to have achieved higher levels of education than their comparison group of black non-NEs. As has been demonstrated in prior studies, this suggests there is a significant relationship between formal educational attainment and entrepreneurship.

Black NEs in our sample also had a relatively high mean household net worth (\$70,416); this was much higher than the national average for blacks. However, it was still significantly lower than the mean level of household net worth of white NEs (\$147,368). Part of this difference may be explained by the finding that black NEs were significantly younger — 5 years younger — than white NEs. Five years of additional work experience and wealth accumulation is likely to have a significant impact on household net worth.

We did compare black and white NE household sizes and found no significant difference between the groups on the number of people in the household (both lived in three-person

households). However, we did not look at the specific makeup of the households. A three-person household with two wage earners and one minor child is very different from a household in which a single wage earner takes care of two minor children. Black households are more likely to be single-parent homes than white households (US Census Bureau, 2007), which may also help to explain the observed difference in household net worth. Based on the demographic differences in our sample, it appears that personal financial resources and educational attainment remain major factors in spurring entrepreneurial intentions among blacks. In other words, those who are educated and who have some personal wealth are more likely to become entrepreneurs.

Although we believe that improving the opportunity recognition processes of black NEs may be important to closing the entrepreneurship gap, the fact remains that financial issues are a persistent problem that blacks face. Our data suggest that blacks are at a disadvantage to whites in terms of the chances for survival and success of their firms because they do not have the same personal financial resources to invest in startups. Having fewer financial resources may also be a limiting factor for actually founding a firm. Black NEs may never found firms because they simply do not have, or cannot secure, the resources to do so. Regardless of why there is a difference between whites and blacks (e.g., age, discrimination, job opportunities, differences in chosen professions, etc.), without adequate financial resources, new venture startups may face cash shortages that could threaten survival. Continued efforts to provide better access to capital and ensure fair lending practices, in order to make it easier for black-owned firms to finance growth, is critical for successful black entrepreneurship.

### **5.1. Limitations**

The primary limitation of this study is the reliance on self-report data. Some may consider the use of self-report data as a flaw of the PSED data collection methodology. However, the PSED dataset allows researchers to study a wide range of variables on many different types of nascent entrepreneurs that otherwise have not been studied, or are difficult to study. In this study, it is possible that there is a halo effect, and self-reported figures for household net worth and educational attainment may be over-reported. If true, this could greatly affect the findings in this paper. For example, if black NEs consistently overstated their educational attainment and/or personal net worth and white NEs did not, then our results may falsely understate the importance of education and personal capital to spurring new venture creation. On the other hand, if white NEs overstated their educational attainment and personal net worth and black NEs did not, we may be putting too much stock in the importance of education and personal capital. However, we can think of no reason to believe that black and white respondents are not providing honest answers, or at worst are equally overstating or understating their responses.

A second limitation is that the study relies on cross-sectional data. Actual firm founding rates and future financial performance of the two groups of nascent entrepreneurs, as well as those pursuing internally- versus externally-stimulated opportunities, were not examined. It may very well be that some or even most of the NEs will quit their efforts to become an entrepreneur. We also want to reiterate that the NEs we studied are not entrepreneurs

with fully functioning firms, rather they are individuals who are in the process of pursuing entrepreneurial ventures. They may never establish firms to exploit the opportunities they are pursuing, but they remain important because they demonstrate entrepreneurial intentions. For without the intent, entrepreneurs cannot emerge.

Another limitation is the single item measure used to distinguish those who were pursuing internally-stimulated opportunities versus externally-stimulated opportunities. Multi-item measures should be used in future research to more fully identify the distinction between the two types of opportunity recognition processes. This is discussed further in our future research discussion.

Finally, we relied on respondents' estimates for future 5th year firm revenue as a measure of how lucrative the opportunities were that the NEs' were pursuing. Clearly, the use of these estimates may be problematic. Projections five years into the future are not necessarily reliable and whether or not the NEs actually prepared formal financial projections or simply guessed is not known. In addition, what, if any, education, skills and abilities NEs possessed that would allow them to make solid financial projections are also not known. It is possible that the measure is an indicator of entrepreneurial self-efficacy. Different measures and additional information to more accurately measure future firm revenues would enhance the results. That said, the estimates provide insight into what types of opportunities in terms of future revenues and firm size the NEs believe they are pursuing.

## **5.2. Future Research**

While we found a difference between black and white NEs, the reason(s) more black NEs pursue externally-stimulated opportunities than their white counterparts needs further study. Educational achievement for both black and white NEs in our sample was similar so this would not appear to be a reason. Although significantly different, both groups still reported relatively high levels of household net worth. It is likely that there are other reasons — beyond education and net worth — for the differing opportunity recognition processes. One possible explanation may be related to the motivations for pursuing entrepreneurship. Singh and McDonald (2004) found that black NEs were significantly more likely than white NEs to report that they choose to pursue their entrepreneurial opportunities to gain a higher position for themselves, to fulfill personal visions, to lead and motivate others, and to have the power to influence organizations. Black NEs may perceive entrepreneurship as a way to achieve power, responsibility and personal satisfaction that may not be attainable by working for others. Financial considerations may not be as important to black NEs as they are to white NEs. There may be a “push-pull” factor at work. Whites may be pulled to entrepreneurship by opportunities they wish to pursue, while blacks may feel pushed toward entrepreneurship because of real or perceived inequities in the labor market.

In the literature review, we discussed differences between blacks and whites with respect to having mentors and family members who can provide first-hand entrepreneurial knowledge. A potentially rich area of study may be the role social networks play in the entrepreneurial processes for black versus white entrepreneurs. Prior research has found that social networks are critical during the opportunity recognition process (Singh, 2000).

Understanding the pre-startup networks, exchange relationships and who NEs discuss their business opportunities with may reveal insights into why some entrepreneurs pursue internally-stimulated versus externally-stimulated opportunities, as well as other aspects of entrepreneurial opportunity recognition processes.

The performance implications of the two opportunity recognition processes are not clear. Future research should investigate how the two types of opportunity recognition processes and performance are linked. By using actual firm revenues after a firm has been founded and has been operating, researchers can determine whether or not there is indeed a difference between internally- and externally-stimulated opportunities. Does one type of opportunity have an advantage in predicting whether a firm survives and succeeds? It may be that in addition to screening more opportunities, or perhaps as a result of screening more opportunities, entrepreneurs with externally-stimulated opportunities may have more refined opportunities than those who recognize internally-stimulated opportunities. If this is so, we might expect externally-stimulated opportunities to result in a higher rate of survival and success.

Finally, nearly 20 percent of white NEs and 31 percent of black NEs in our sample indicated that the "idea or opportunity and desire to have a business came at the same time." These NEs were not included in our analyses, but studying this group more fully could help further improve our understanding of opportunity recognition and the validity of Bhavé's (1994) model, as well as the different opportunity recognition and new venture creation processes of black and white entrepreneurs. Given that a significant group of NEs did not identify one recognition process over the other (internally-stimulated versus externally-stimulated), it would seem that Bhavé's model is incomplete and may need some adjustment. The fact that a greater percentage of black NEs were in this category is also worthy of additional study.

## 6. Concluding Comments

Any solution to the lagging rate of black entrepreneurship will be complex and the problem cannot be solved quickly. The limitations of this study notwithstanding, we believe the results of this study make an important contribution to the entrepreneurship literature by advancing knowledge in an understudied area of research. The process of identifying fledgling ideas and then developing them into bona fide business opportunities is a key element of the new venture creation process. This paper is the first study that we are aware of that examines and finds that there are differences between the opportunity recognition processes followed by black and white NEs. By taking a broader view — beyond just demographic differences between blacks and whites — and focusing on the opportunity recognition processes of the two groups, it may be possible to find more innovative ways to help spur successful entrepreneurship in the black community.

We recognize that data is not theory (e.g., Sutton and Staw, 1995), but data analysis is a critical part of theory development (Weick, 1995). As DiMaggio (1995) points out, theory construction is social construction that often takes place after the fact. We feel that through the data results, the paper provides a new direction for theory development and opens up new

possibilities for understanding and addressing the lagging rate of black entrepreneurship. Clearly, future research is needed to further develop the theory in this important area.

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