

Does Undergraduate Institution Type Affect Entrepreneurial Interest among Minorities seeking MBAs?

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Abstract

The primary objective of this paper is to determine if students that graduate from Historically Black Colleges and Universities (HBCUs) and Hispanic Serving Institutions (HSIs) are more or less likely to pursue graduate-level entrepreneurial education than their counterparts at other institutions. Data were drawn from a database of examinee records for individuals that took the Graduate Management Admission Test[®] (GMAT[®]). An analysis was performed on data from 13,965 minorities who responded to the voluntary background information questions that accompany the GMAT[®] exam. The results reveal that interest in pursuing an education in entrepreneurship varies by race/ethnicity, gender, undergraduate major, and undergraduate institution type. Blacks that attended HBCUs were more likely to want to pursue a degree in entrepreneurship than Hispanics that attended an HSI. For both races/ethnicities, males were more likely than females to desire an education in entrepreneurship. Similarly, for both races/ethnicities, those with an undergraduate major related to business were less likely to want to pursue a degree in entrepreneurship. The potential implications of these results and how it affects minorities and entrepreneurship education are discussed.

There are over two hundred Historically Black Colleges and Universities (HBCUs) and Hispanic Serving Institutions (HSIs) in existence today. Although their origins may differ, it is believed by some that these types of institutions may be better equipped to serve the needs of racial/ethnic minority students. Accordingly, these schools can typically be found in geographic areas where there are large proportions of the minorities to be served.

The Hispanic Associate of Colleges and Universities (HACU) was formed in the 1980s by a group of colleges and universities that felt it was important to address the needs of the Hispanic student population. According to eligibility requirements for the HACU, a school qualifies as a Hispanic Serving Institution or HSI if Hispanic students make up at least 25% of the college or university enrollment (HACU, 2005). However, this definition varies slightly from what is required to receive funding from the federal government, which also takes income into account. Though there is no definitive list of such institutions, the HACU estimates that HSI universities make up less than ten percent of all colleges and

universities but educate more than 75% of the Hispanic student population (HACU, 2005).

Most HBCUs were created by government mandate in the 1800s. The intent was to appease Blacks by creating the schools, not necessarily to promote their success, but to prevent Black students from attending and graduating from majority white institutions (Evans, 2002). Despite these humble beginnings, HBCUs have survived through changes in the accessibility of mainstream institutions, and Blacks today can choose to attend HBCUs along with other institution types, with each offering its own unique cultural experience. As such, Evans has characterized HBCUs as “born from slavery and nurtured from a need of people to educate themselves” (2002:16).

Given the opportunity that minorities now have to attend different types of universities, does an environment that is more saturated with like minorities have any impact on their future career aspirations? Previous research has found that minority youth are more likely to say that they want to own their own businesses than others. Aggregate survey data from MBA graduates collected by the Graduate

Management Admission Council® found that Blacks were significantly more likely to have pursued a graduate degree as preparation to start their own business (40%) than any other ethnic group (Edgington & Marshall, 2005). The percentage of Hispanic graduates who pursued a graduate degree as preparation to start their own business was 22%. Additional surveys conducted by GMAC® of MBA alumni found that Blacks were four times as likely to report their employment status as self-employed or a small business owner—16%—compared to 4% for Hispanics (Edgington & Marshall, 2005).

In a study of career aspirations, Black and Hispanic girls were significantly more interested in starting their own businesses than white girls (Wilson, Marlino, & Kickul, 2004). However, a study among gender differences found that though girls and boys were just as likely to say they wanted to start their own business, girls did not respond as positively as did boys, which may be linked to their motivations. “Compared to men, women entrepreneurs are less likely to be motivated by things such as financial success and advancement, and more motivated by family and lifestyle” (DeMartino & Barbato as cited in Wilson et al., 2004). Regardless of such gender differences, findings by Wilson et al. (2004) indicate that factors related to autonomy are what motivate Hispanic and Black youth to want to become entrepreneurs.

This desire for autonomy is most likely due to real or perceived barriers that might exist in future workplaces. HBCUs and HSIs were created and exist to address a need that was identified by special populations, and some feel that their environments are more nurturing, thereby enabling minority students to reach a potential that would not otherwise be realized at other institution types. Opportunities to see more role models of your race and gender, which research suggests can be helpful, especially for minority students, may help influence student decisions to start their own businesses. This study will explore the relationship of these unique types of universities with minorities and entrepreneurship. The primary objective of this paper is to determine if students

that graduate from Historically Black Colleges and Universities (HBCUs) and Hispanic Serving Institutions (HSIs) are more or less likely to pursue graduate-level entrepreneurial education than their counterparts from other schools.

Methods

Data and Sample

This study uses a database of Graduate Management Admission Test® (GMAT®) candidates. Data from the 13,965 Black and Hispanic examinees who took the GMAT® exam one or more times in testing year 2005 provided the basis for this analysis. The information was obtained from test-taker responses to the background information questionnaire in combination with other information. Testing year 2005 began on July 1, 2004 and ended on June 30, 2005. This analysis includes only minority examinees who responded to the background information questionnaire. Examinees with missing information were excluded from the analysis. Due to the differences in background and evolution of HSIs and HBCUs, an HSI graduate was included for the purposes of this study only if they indicated that they graduated from an HSI with an enrolled population that was at least 35% Hispanic. This limitation was done to maintain some semblance of the true experience of attending an institution that is specially prepared to handle high populations of minority students and to make the results somewhat comparable. Graduates from twenty random HBCUs were included in this analysis. Afterwards, a random purposeful sample was drawn from among the African American students that did not graduate from an HBCU in order to match the percentages of males and females found in the HBCU population. Examinee race/ethnicity, undergraduate institution, gender, and undergraduate major category were used for analysis, along with intended area of concentration. Intended area of concentration was used to estimate the students desire to become an entrepreneur.

Measures

The variables used in this analysis are described in Table I.

Table I: Variables	
Variable	Description
Attended HBCU	Attended an HBCU and Black/African American (I=Yes, 0=No)
Attended HSI	Attended an HSI and Hispanic American (I=Yes, 0=No)
Undergraduate major	Undergraduate major category (1=Social Science, 2=Science, 3=Humanities, 4=Other Major, 5=Business and Commerce)
Gender	Gender (1=Male, 0=Female)
Intended Major	Intended major area of concentration entrepreneurship or consulting (I=Yes, 0=No)

The dependent variable, Intended Major, measures the desire to pursue some form of entrepreneurship. Intended Major is equal to 1 if the examinee indicated an interest in concentrating in entrepreneurship or consulting courses during their MBA coursework and 0 if they did not. Due to the nature of the dependent variable, a logistic regression model is used to estimate the factors that contribute to the desire to pursue entrepreneurship among minority students.

- Hypothesis 1a. *Attending an HBCU has a positive relationship to entrepreneurship.*

- Hypothesis 1b. *Attending an HSI has a positive relationship to entrepreneurship.*
- Hypothesis 2. *Being a male has a positive relationship to entrepreneurship.*
- Hypothesis 3. *Having an undergraduate major in business and commerce has a positive relationship to entrepreneurship.*

Tables 2 and 3 describe the characteristics of the examinees in the population studied.

Table 2: Descriptive Statistics Black/African American Examinees					
Variable	N	Minimum	Maximum	Mean/%	Std. Deviation
Attended HBCU	7,949	0	1	.20	.40
Social Science	1,070	N/A	N/A	.13	N/A
Science	1,398	N/A	N/A	.18	N/A
Humanities	360	N/A	N/A	.05	N/A
Other Major	588	N/A	N/A	.07	N/A
Business & Commerce	4,533	N/A	N/A	.57	N/A
Gender	7,949	0	1	.44	.50
Intended Major	7,949	0	1	.09	.29

Table 3: Descriptive Statistics Hispanic Examinees					
Variable	N	Minimum	Maximum	Mean/%	Std. Deviation
Attended HSI	6,016	0	1	.11	.32
Social Science	906	N/A	N/A	.15	N/A
Science	962	N/A	N/A	.16	N/A
Humanities	285	N/A	N/A	.05	N/A
Other Major	358	N/A	N/A	.06	N/A
Business & Commerce	3,505	N/A	N/A	.58	N/A
Gender	6,016	0	1	.54	.50
Intended Major	6,016	0	1	.07	.26

The results indicate that 20% of the Black examinees studied graduated from an HBCU, and 57% majored in Business and Commerce as an undergraduate. Also, 44% of Blacks in the study were male. Among these examinees, 9% intended to major in entrepreneurship or consulting in business school. Among Hispanics, 11% of examinees in the study graduated from an HSI. Approximately 58% of Hispanics in the study majored in Business and

Commerce as an undergraduate, and 54% are males. Regarding intended major in business school, 7% of Hispanics intend to major in entrepreneurship or consulting.

Results

Tables 4 and 5 present the logistic regression results of the examinees in the population studied.

Table 4: Logistic Regression Results for Black/African American Examinees Dependent Variable = Intended Major					
Variable	Coefficient	Wald	Exp (B)	95.0% C.I. for Exp (B)	
				Upper	Lower
Constant	-2.80*	1390.38	.06	—	—
Gender	.47*	34.51	1.59	1.36	1.86
Attended HBCU	.21*	4.88	1.23	1.02	1.48
Undergraduate Major	—	48.74	—	—	—
Social Science	.64*	35.14	1.90	1.53	2.34
Science	.37*	12.90	1.45	1.18	1.78
Humanities	.71*	17.51	2.03	1.46	2.83
Other Major	.42*	8.08	1.53	1.14	2.04
Model Chi-Square [df]	86.47 [6]				
% Correct Predictions	90.8				
Nagelkerke R ²	0.02				
The Wald statistics have 1 degree of freedom with the exception of undergraduate major, which has 4. *Statistically significant at the .05 level.					

As predicted, the coefficient on the Attended HBCU variable is positive and statistically significant at the .05 level. The odds ratio for the Attended HBCU coefficient is 1.23 with a 95% confidence interval of [1.02, 1.84]. This suggests that Blacks who graduate from an HBCU are 1.2 times more likely to want to pursue entrepreneurship than Blacks who graduate from other institution types. The coefficient on Gender is positive,

which is also in the expected direction. This indicates that Black males are more likely to pursue entrepreneurship than Black females. The surprising result from this model was that examinees who graduated with undergraduate majors in degrees other than business and commerce were more likely to want to pursue entrepreneurship than those who did major in business or commerce.

Table 5: Logistic Regression Results for Hispanic Examinees Dependent Variable = Intended Major					
Variable	Coefficient	Wald	Exp (B)	95.0% C.I. for Exp (B)	
				Upper	Lower
Constant	-3.20*	912.56	.04	—	—
Gender	.60*	29.58	1.81	1.46	2.25
Attended HSI	-.86*	13.27	.42	.27	.68
Undergraduate Major	—	47.38	—	—	—
Social Science	.81*	37.91	2.25	1.74	2.91
Science	.66*	24.65	1.93	1.49	2.51
Humanities	.55*	5.77	1.73	1.16	2.79
Other Major	.47*	4.71	1.60	1.05	2.44
Model Chi-Square [df]	112.95 [6]				
% Correct Predictions	92.9				
Nagelkerke R ²	0.05				
The Wald statistics have 1 degree of freedom with the exception of undergraduate major, which has 4. *Statistically significant at the .05 level.					

The coefficient on the Attended HSI variable is negative and statistically significant at the .05 level, which was not in the expected direction. The odds ratio for the Attended HSI coefficient is .42 with a 95% confidence interval of [.27, .68]. This suggests that Hispanic examinees that graduate from Hispanic Serving Institutions are less likely to want to pursue entrepreneurship than Hispanics who graduated from other types of institutions. The coefficient on the Gender variable for Hispanics is positive and statistically significant, just as for Blacks. This suggests that Hispanic males are more likely to pursue entrepreneurship than Hispanic females. Also similar to the results found in the model for Blacks, examinees with an undergraduate degree related to business were less likely to want to pursue entrepreneurship.

The results of the regression models in Tables 4 and 5 indicate that all of the factors studied contribute, although marginally, to an examinee’s desire to study entrepreneurship. The overall model in Table 4 is significant at the .01 level according to the model chi-square statistic, predicting 91% of the responses correctly, and the Nagelkerke R² is 0.02. The model in Table 5 is significant at the .01 level according to the model chi-square statistic, predicting 93% of the responses correctly, and the Nagelkerke R² is 0.05.

Discussion

The results of both models indicate that there is a relationship between the type of undergraduate institution attended and likelihood to pursue graduate-level entrepreneurial education. For Blacks, there was a positive

relationship between HBCUs and entrepreneurial pursuits. In the case of Hispanics, the relationship between HSIs and entrepreneurial pursuits proved to be a negative one. However, this study is faced with a number of limitations. The limitations include the problem of comparability between the two samples. Although I tried to control for this, there is a fundamental difference in HBCUs versus HSIs. Therefore, the experiences and cultures of the two environments will invariably be different. Secondly, this database is limited by the fact that not all HBCUs or HSIs were available, as not all of the schools are contained in the GMAT® database. This limitation could also affect the sample.

There are also a multitude of factors that come into play when considering graduate major choices and future career plans. As indicated in the logistic regression models, the variables chosen explained very little of the reason why examinees decide on a major, which ultimately affects their career path. Previous studies have shown that males are motivated by very different reasons than females to venture out and start their own business, and for both

Blacks and Hispanics, males were more likely to want to pursue entrepreneurship than females.

“Many policy makers assert that entrepreneurship is a viable route to economic advancement for women and minorities” (Robb, 2002: 383). Given this assertion, it is important that schools realize the differences among special student populations and provide special entrepreneurial-focused outreach programs on the campuses of HBCUs, HSIs, and other institution types. While this study is helpful in providing some insight into minorities and their interest in entrepreneurship and entrepreneurial education, it also highlights the need for further research into the background and environmental factors that impact this decision.

Contact Information

For questions or comments regarding study findings, methodology or data, please contact the GMAC® Research and Development department at research@gmac.com.

References

- Curtin, M., & Gasman, M. (2003). Historically Black College MBA Programs: Prestige, Rankings, and the Meaning of Success. *Journal of Education for Business, 79*(2), 79–84.
- Ede, F.O., Panigrahi, B., & Calcich, S.E. (1998). African American Students' Attitudes Toward Entrepreneurship Education. *Journal of Education for Business, 73*(5), 291–296.
- Edgington, R., & Marshall, N. (2005). *Blacks/African Americans and Entrepreneurship* (GMAC® Research Report RR-05-05). McLean, VA: Graduate Management Admission Council.
- Evans, A.L., & Evans, V. (2002). Historically Black Colleges and Universities (HBCUS). *Education, 123*(1), 3.
- Hispanic Association of Colleges and Universities. (2005). *Definition of Hispanic Serving Institutions*. Retrieved January 7, 2005 from http://www.hacu.net/hacu/Dues_EN.asp?SnID=488548889
- Hisrich, R., & Brush, C. (1986). Characteristics of the Minority Entrepreneur. *Journal of Small Business Management, 24*(4), 1–8.
- Robb, A. (2002). Entrepreneurial Performance by Women and Minorities: The Case of New Firms. *Journal of Developmental Entrepreneurship, 7*(4), 383–397.
- Wilson, F., Marlino, D., & Kickul J. (2004). Our Entrepreneurial Future: Examining the Diverse Attitudes and Motivations of Teens across Gender and Ethnic Identity. *Journal of Developmental Entrepreneurship, 9*(3), 177–197.

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