

Male-Female Student Retention Differences in HBCUs: Evidence from Probit Analysis of Data from Selected Colleges in the South

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Abstract

This work provides a qualitative analysis of the various factors that contribute to the dismal college completion rates of black male students. We find that Attitudinal variables shaped by the student's overall perception of the importance of higher education seem to have significant inter-school impact of retention of male students than female students; and a typical black male student is apt to be more influenced by his personal attitude to school, than a typical black female student. Moreover, the variables that indicate the student's own behavior and his/her perception of the institution's disposition in providing him/her with education, appear to be important in female student retention, and less so in male student retention.

Keywords: Attitudinal variables, Educational commitment; Behavioral variables, Retention rates, Situational variables; College orientation.

1. Introduction

During the past several decades, black students have had virtually unhindered access to higher education across the United States, and their enrollment rates have continued at an all-time high. Yet a more important measure of the achievement of blacks in higher education is the proportion of black students that really complete college successfully.¹ According to the U.S. Department of Education (2014) data, the college completion rate has improved nationwide across America by more than 4 percentage points over the past five years (from 51.4 percent to 55.6 percent), although the completion rate remains at a relatively low 42 percent for blacks; and the gap between the graduation rates of black and white students continues to widen (Cross and Slater, 2001; 2000). Therefore, the question arises as to why more than half of all black students overall often fail to complete college, even at Historically Black Colleges and Universities (HBCUs). This study is motivated by this troubling question, and seeks to address it by carrying out a comparative analysis of the various retention parameters and how they tend to impact black male and female students differently.

Available data indicates that the nationwide college graduation rate for black students is about 43 percent, and stands at 20 percentage points below the 63 percent graduation rate reported for white students (Journal of Blacks in Higher Education, 2015). The completion rate for black males stands at 36 percent (which is an improvement from the 28 percent that it was a decade ago). Relatively, the black female college graduation rate stands at 47 percent, having increased steadily over the past two decades from 34 percent in 1990 to 47 percent in 2010. And several factors often combine to determine the college retention rates of students -- ranging from such issues as those related to the individual student's own personality attributes and personal and/or family circumstances, to financial factors, background events, social factors, as well as a myriad of institutional factors associated with the school system and/or a particular school itself (Henderson and Kritsonis, 2007).

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The issue of student information problems and college procedures also present important retention implications. The competing demands on time and cultural estrangement that black male students may feel on the college environment may help explain why they may experience greater difficulty integrating and negotiating institutional etiquettes and procedures. The extent of faculty initiatives into labor market linkages is also crucial for student retention. Although outside of their normal academic duties, faculty input into leveraging career outcomes for students would help establish strong connections that students make with the reality of what their education would provide for them. If the potential for labor market success is closely linked with the acquisition of the knowledge and skill as detailed in the course curriculum and objectives, students would be motivated to greater effort and determination toward degree completion.

This paper addresses the question of whether the various retention parameters affect black male students differently as much as they affect black female students in regard to their continuity decisions. It provides a comparative analysis of male-female retention rates among black students at five selected HBCUs by carrying out a Probit regression analysis using the data of retention rates and three composites of explanatory retention variables, namely, the Attitudinal Variables (A-Variables), the Behavioral Variables (B-Variables), and the Situational Variables (S-Variables) based on the responses obtained in a survey of selected cohorts of freshmen male and female students. We compare and contrast the results between black females and males to determine the relative importance of each of the retention composite variables. We seek to provide important insights into not only the factors that impact retention, but also for devising ways to address the dismal retention problem of black students in general, and males in particular, across HBCUs.

2. Black Student Retention: Some Previous Literature

Significant research has been compiled on the subject of minority student retention over the past few decades, among which the leading ones include Stewart et al (1997), Galloway and Watson (1999), Good et al (2000), Greenwald and Davis (2000), and St. John (2004). Most of these works stressed the notion that the issue of minority student retention in higher education is not unconnected with their status of being disadvantaged and underserved, and therefore calls for a deeper study and understanding of the issues of minority retention in higher education. The issue of minority retention still remains as timely as it has always been, especially given the high rate of attrition among black males in higher education in current times. Among the many studies, Borego et al (2005) had concluded that the most striking result of their study using Virginia Polytechnic University data, was that the graduation rates both within engineering and elsewhere in the university were higher for female students than for males; and that this was true for both the current and previous data sets used. Moreover, analysis of previous cohorts in the current data set indicated that this trend began with the 1992 freshman cohort; and that differences between the two studies indicated that students at a private university, particularly females, were quicker to switch out of engineering majors -- indicating that retention rates in the first few semesters were lower at the private university than in the current study, though both sets converged to similar values by the junior year.

Focusing on the issues and barriers facing minority students at HBCUs, Swail (1995) gave a conceptual framework for student retention which was used to generate a specific retention strategy based on a framework of five retention components that the author identified as: student services, academic services, curriculum and instruction, financial aid, and recruitment and admission. Galloway and Swail (1999) subsequently followed with a study that demonstrated how the five components of Swail's conceptual framework act as a basic foundation for student retention at a higher institution, by offering an interpretation of how students and institutions interact. For example, the model showed the relationship between institutional factors and practices of the college and the academic and social skills students bring with them to school by linking the students' college experience with the various factors that impact that experience -- such as the students' academic preparedness and overall readiness for college, personal maturity, social awareness, ability to get along, and other several such attributes. These represent different aspects of what Burnett (2003) summarized as the three classifications of retention parameters, namely: the attitudinal, the behavioral, and the situational attributes that students bring with them from high school or the work environment, and which shape their ability to ultimately persist and complete college. Davis et al. (2004) explored the importance of belonging and the need for healthy interactions amongst peers during matriculation, in a stark contrast between black and white students enrolled in a predominantly white college. The study examined how African American students fared academically in a predominantly white environment, and built on the concept about the importance of social variables such as unfairness, sabotage, condescension, isolation, connection, confidence, and educational commitment, in the academic achievements of minority young adults.

The study was helpful and extremely instrumental, as it used a convenient sample of nursing school students who successfully met graduation requirements and ranged from ages 21-24. Yet, a most recent study (Campbell and Mislevy, 2013) investigated the extent to which college freshmen attribute such as behaviors, expectations, and attitudes precondition enrollment patterns and outcomes. Using data from an institutional survey and applying multinomial logistic regression analysis to predict four different enrollment patterns, namely, continuously enrolled, intermittent (stop-outs), transfer-outs, and drop-outs, the work found that freshmen perceptions and demographic characteristics such as gender and race do matter significantly in subsequent decisions to persist or not persist to complete college education.

Some recent studies (such as Haydarov et al, 2013; Ma and Cragg, 2013; Schreiner, 2009; or Grier-Reed et al., 2008) have highlighted several background peculiar obstacles that face minority students, which they bring with them to school, especially those that enroll in HBCUs. Most of the HBCUs see themselves and their mission to be in the service of those students whose backgrounds present difficult challenges to their prospects of succeeding in college.

While academic challenges represent a major challenge in retention of minority students in higher education, perhaps one of the most formidable barriers is financial support. Fenske, Porter and DuBrock (2000), as well as Galloway and Swail (1999), had noted that many HBCU students rely on the financial aid provided through Pell Grants, personal and family incomes, and savings; and that often these provide only a modest and limited level of the size of financial support needed. Loans and other forms of government aid are often heavily relied on to supplement, which usually result in heavy student indebtedness upon graduation. In many cases, students take account of such potential indebtedness in making retention decisions. Research indicates that even though the society rewards credentialism in many cases (regardless of skill), most minority students worry about job prospects upon college completion, and therefore tend to think twice about the huge potential indebtedness and the future tying down into loan payments in a world of unsure employment status, before deciding to persist in college completion (Campbell et al, 2013; Greenwald and Davis, 2000; Galloway and Swail, 1999).

It is clear that the early identification and intervention on behalf of students who are at risk of dropping out of college education would go a long way to help both institutions and parents to target and retain these students. The present study is addressed to this objective albeit focused on black students generally and black male students in particular; and the bulk of previous studies that have dealt with this issue have generated a great amount of leads which paved the way for this inquiry.

3. Empirical Analysis

3.1: Data and Definition of Variables

The preliminary data set is obtained from a pilot study conducted by Noel-Levitz during 2011, among a group of five HBCUs, namely, Jackson State University, Dillard University, Alcorn State University, Tougaloo College, and Miles College. The demographics of these institutions are highlighted in Table 1, which provides the details of geographical location, size, designation, and data sizes of each gender covered in the study.

TABLE 1: Descriptive Statistics -- Institutional Data Sizes and Demographics

	Jackson State	Dillard	Alcorn State	Tougaloo	Miles
Females Surveyed	110	56	62	48	8
Males Surveyed	88	30	14	40	19
Total Student Population	9,802	1,185	2,918	906	1,668
Designation	Public	Private	Public	Private	Private
Location	Jackson, MS	New Orleans, LA	Lorman, MS	Tougaloo, MS	Fairfield, AL

Source: Field Research Data, 2012.

Data were collected on 14 retention parameters identified as: Academic Behavior (student's attitude to his/her academic responsibilities, such as class attendance, time spent studying, and doing homework); Confidence (how confident the student is that he/she will successfully complete the degree requirements); Difficulties with College (level of difficulty the student encounters with college life); Educational Commitment (how committed he/she is to completing the program); Faculty Interaction (how much does student interact with faculty);

Financial Concern (the degree of concern the student has about availability of financial resources to pay for his/her education); Institutional Commitment (how committed he/she believes the school is to providing education); Intent to Change (whether or not student intends to change program, or change school); Occupational Uncertainty (how certain the students is about what he/she will do with the degree after graduation; that is, how far the degree will prepare him/her for a successful career path); Peer Interaction (how much and how well the student interacts with peers); Perception of Program (whether or not the academic program content is perceived as interesting and relevant to future success); Personal Problems (how much student's personal and family problems weigh on his/her education); Prefer a Job (whether or not he/she prefers holding a job rather than being in school); University Orientation (whether the student would prefer to attend another institution); Value of Education (the value in education in terms of the extent to which it enables college graduates to obtain good jobs).

The variables are organized into the Burtnett (2003) classifications of retention parameters: the Attitudinal, Behavioral, and Situational variables. These represent attributes that students bring with them from high school and/or the work environment, which shape their ability to ultimately persist or fail to persist to complete college.

- The Attitudinal variables (A-Variables) are those that shape the student's attitude and determine his/her overall perception of higher education. These variables tend to be at work even long before the student enrolls in college. They hold strong sway on shaping his/her attitude toward deciding whether or not to persist in school after enrollment.
- The Behavioral variables (B-Variables) are those that drive the student's personal behavior. Again, they tend to be impacted by views and perceptions formed prior to enrollment, but they drive the student's actions and therefore make him/her reach the decisions of staying or dropping from higher education. The two classes of variables, attitudinal and behavioral, relate to the personal attributes of the student, and may be impacted by such factors as the student's culture, family background, parents' level of education, race, or gender.
- The Situational variables (S-Variables) are the variables that are exogenous to the student -- they are factors outside of the student's control, but they bear significant effects on the student's decision about persisting to complete, or dropping from, school.

Table 2. Summary of Calculated Mean Responses (%) by Composite Classifications

Composite Variables	Females	Males
A-Variables		
Confidence	98	99
Educational Commitment	92	87
Financial Concern	96	93
Intent to Change	98	94
Perception of Program	98	97
Prefer a Job	36	55
B-Variables		
Academic Behavior	87	81
Faculty Interaction	83	90
Peer Interaction	94	94
University Orientation	46	42
S-Variables		
Institutional Commitment	97	90
Occupational Uncertainty	96	95
Difficulties with College	89	93
Personal Problems	59	62
Value of Education	86	82

Source: Calculated from Field Research Data, 2012.

Table 2 provides the composite data classifications; and it is important to note that there are grey areas in these classifications, as some of the variables could possibly be classified under any two or more of the categories, especially between the attitudinal and behavioral categories. It shows the overall mean responses by composite classifications of the retention variables for females and males.²

3.2: Probit Analysis

Retention rate is posited as a binary variable R_i which takes the value of one if retention rate is 45 percent or higher -- the average retention threshold for all HBCUs ($R_i=1$), and takes the value of zero if retention rate less than 45 percent ($R_i=0$). A Probit specification of R_i is given as:

$$\text{Prob}(R_i = 1 | x) = f\{B \cdot k(rX + uY + vZ)\} \quad (1)$$

where: $f(\cdot)$ = standard normal distribution $N(0,1)$;

B = vector of coefficient estimates;

k = vector of exogenous independent variables comprised of the composite retention variables organized in vectors of the three A-, B-, and S-Variables, defined as:

X_i = composite vector of the Attitudinal Variables (A-Variables), which are

- Confidence [CONF]
- Educational Commitment [EDCOM]
- Financial Concern [FINCONC]
- Intent to Change [INTENT]
- Perception of Program [PERCEPT]
- Prefer a Job [PREFJOB]

Y_i = composite vector of the Behavioral Variables (B-Variables):

- Academic Behavior [ACADBEH]
- Faculty Interaction [FACINT]
- Peer Interaction [PEERINT]
- University Orientation [UNIVORIENT]

Z_i = composite vector of the Situational Variables (S-Variables):

- Institutional Commitment [INSTCOMM]
- Occupational Uncertainty [OCCUPUNC]
- Difficulties with College [DIFFCOLL]
- Personal Problems [PERSONAL]
- Value of Education [VALUEDUC]

and r , u , and v are the weighting indexes of the A-Variables, the B-Variables, and the S-Variables of retention, respectively. The linear specification of the model is

$$R = a + b_i \sum X_i + c_i \sum Y_i + d_i \sum Z_i + \epsilon_i \quad (2)$$

where: a , b_i , c_i , d_i are parameter estimates; ϵ = error term.

The equation is estimated using ordinary least squares. The sign expectations of the various explanatory variables help provide some preliminary prelude to the expected results of the analysis, especially the paper's central intuition regarding the relative impacts of the A-, B-, and Z-variables on retention. It is expected that the parameter estimate for:

- CONF be positive (student's degree of confidence toward degree completion).
- EDCOMM be positive (how committed student is to completing the program).
- FINCONC be negative (student's level of concern about availability of financial resources).
- INTENT be negative (student's intention to change program, or change school).
- PERCEPT be positive (Dummy variable = 1 if academic program content is perceived as interesting and relevant to future success, 0 if not).
- PREFJOB be negative (Dummy variable = 1 if student prefers holding a job rather than being in school, 0 if not).
- ACADBEH be positive (student's attitude to his/her academic responsibilities).
- FACINT be positive (Dummy variable = 1 if student interacts smoothly with faculty, 0 if not).
- PEERINT be positive (Dummy variable = 1 if student interacts smoothly with peers, 0 if not).
- UNIVORIENT be positive (Dummy variable = 1 if the student would prefer to attend another institution, 0 if not).
- INSTCOMM be positive (Dummy variable = 1 if students believes the school is highly committed and helpful in providing education, 0 if not).

- OCCUPUNC be negative (Dummy = 1 if student believes the degree will prepare him/her for a successful career path, 0 if not).
- DIFFCOLL be negative (level of difficulty the student encounters with college life).
- PERSONAL be negative (how much student's personal and family problems weigh on his/her education).
- VALUEDUC be positive (value in terms of the extent to which education enables college graduates to obtain good jobs).

4. The Results

The regression results are presented in Tables 3 and 4.

Table 3. Parameter Estimates of Retention: Females

	Alcorn State	Dillard	Jackson State	Tougaloo
Constant	0.82 (0.63)	1.06 (0.55)	1.84 (1.03)	2.31 (1.22)
A-Variables				
CONF	3.04** (2.69)	2.87** (2.81)	3.29** (3.52)	2.66* (2.03)
EDCOM	2.55* (3.25)	2.03* (1.82)	2.11** (3.02)	2.59* (1.98)
FINCONC	-4.22** (2.80)	-3.09* (1.97)	-3.91** (2.92)	-2.42* (2.06)
INTENT	-2.11* (1.86)	-1.92* (1.94)	-3.01* (2.06)	-1.21* (1.89)
PERCEPT	2.65** (2.83)	2.99** (3.23)	3.11** (2.86)	2.01** (2.44)
PREFJOB	-2.56** (2.28)	-2.64** (3.14)	-3.14** (2.92)	-2.18** (2.36)
B-Variables				
ACADBEH	2.28** (4.02)	3.23* (2.24)	3.56** (3.19)	2.93** (3.08)
FACINT	1.62* (1.92)	1.82* (1.84)	1.19* (1.94)	1.63* (1.80)
PEERINT	0.51 (1.33)	0.79 (0.81)	1.14* (1.81)	0.71 (0.79)
UNIVORIENT	3.08* (2.07)	2.13** (2.67)	3.83** (3.59)	2.04* (1.98)
S-Variables				
INSTCOM	4.12** (2.78)	4.03** (2.39)	4.67** (2.77)	4.22** (3.01)
OCCUPUNC	-1.79** (2.99)	-3.25 (3.13)	-3.56** (3.41)	-3.17** (2.78)
PERSONAL	-3.42* (3.03)	-1.90** (3.26)	-4.18** (3.12)	-2.71* (2.07)
DIFFCOLL	-3.06** (3.79)	-3.26** (4.02)	-3.92** (3.95)	-2.05* (2.08)
VALUEDUC	2.66** (2.92)	2.43** (3.04)	3.19** (3.02)	3.29** (3.34)
R ²	0.53	0.47	0.58	0.51
F	26.1	19.9	39.2	22.4
N	62	56	110	48

Notes: t-statistics in parenthesis; *Significance at 10% level; **Significance at 5% level

Table 4. Parameter Estimates of Retention: Males

	Alcorn State	Dillard	Jackson State	Tougaloo
Constant	1.98 (2.01)	1.94 (1.28)	2.52 (1.59)	2.09 (1.91)
A-Variables				
CONF	2.12* (1.89)	2.94** (3.28)	3.08** (2.91)	2.78* (1.24)
EDCOM	1.08** (3.21)	1.71* (1.82)	2.08** (2.84)	1.92 (0.81)
FINCONC	-3.07** (2.61)	-3.09* (1.97)	-2.33** (1.99)	-1.94 (1.66)
INTENT	1.93* (1.88)	2.36* (4.06)	2.55** (3.01)	2.08* (1.90)
PERCEPT	3.52* (1.92)	1.92* (1.89)	2.09* (1.95)	3.02* (1.87)
PREFJOB	1.03** (2.89)	-1.92* (2.01)	-2.68* (1.87)	-1.29* (1.79)
B-Variables				
ACADBEH	4.02* (1.91)	2.94* (2.10)	4.11** (2.69)	3.62** (2.73)
FACINT	0.88** (3.61)	2.53* (2.02)	2.61** (2.97)	1.91* (2.19)
PEERINT	3.24** (3.62)	5.11** (4.06)	3.19** (2.68)	2.95** (2.82)
UNIVORIENT	3.21** (4.08)	2.93* (2.18)	4.32* (2.00)	1.94 (1.86)
S-Variables				
INSTCOM	3.55** (3.23)	2.69** (2.94)	2.85** (2.89)	2.34* (2.13)
OCCUPUNC	-2.98** (2.80)	-5.16** (2.94)	-3.44** (4.21)	-3.04* (1.98)
PERSONAL	-2.89* (2.08)	-2.56** (2.29)	-4.18** (3.12)	-2.02* (2.17)
DIFFCOLL	-5.14** (3.52)	-3.91** (4.02)	-2.69** (2.84)	-0.85* (1.85)
VALUEDUC	3.21** (3.02)	3.21** (3.02)	-3.44** (2.79)	2.61** (2.73)
R ²	0.56	0.49	0.58	0.53
F	30.3	14.7	23.4	19.2
N	14	30	88	40

Notes: t-statistics in parenthesis; *Significance at 10% level; **Significance at 5% level

The high values of the F-ratios indicate an overall significance. The low values of the R² seem to be a result of the utilization of cross-sectional data for the regression; however, despite the high F-ratios, pairwise correlation tests of the presence of multicollinearity were performed among the independent variables (especially between the A-variables, and UNIVORIENT in the B-variables and INSTCOM in the S-variables; and between DIFFCOLL and PERSONAL in the S-variables) to ascertain the reliability of their estimated coefficients. A weak correlation coefficient (0.2903) was found among them. The results are examined by looking at the composite vectors separately according to the variable groups.

The regression estimates for both female and male students across the four sample institutions generally yield the correct and expected signs; and we shall interpret the magnitude of a coefficient estimate as indicator of the strength of the effect of the variable.

The estimated coefficients of the Attitudinal variables for females reveal a relatively large impact for level of Confidence toward degree completion (averaging about 3.0 and significant at the 5 percent level for all colleges in the sample except Tougaloo at the 10 percent level); and also a relatively large impact for Educational Commitment (averaging about 2.32 and significant at the 5 percent level for Jackson State, and 10 percent level for the rest). The Financial Concern variable has much larger estimated coefficients (averaging over 3.40 in magnitude and significant at the 5 percent level for two of the sample schools, and 10 percent level for the others); indicating the crucial role of financial resources as a prominent factor in student retention. Intent to Change appears to have a mild effect (except for Jackson State and Alcorn State with average magnitude of 2.5 coefficient estimates, with 10 percent level of significance). The coefficient estimates for the Perception of Program and Prefer a Job variables (both averaging about 2.7, and significant at the 5 percent level for all the sample schools), indicate some significant degrees of impact of these variables on retention. Moreover, this further highlights the critical bearing that a student's financial situation has on retention. And, we see that these A-variables which are the factors that shape the student's attitude that impact retention, do not seem to have significant inter-school variations for female students, nor are the results for the public colleges (Jackson State and Alcorn State) significantly different from the results for the private colleges (Dillard and Tougaloo).

The coefficient estimates of the Behavioral variables average out from highs of 3.56 and 3.23 for Jackson State and Dillard, respectively, in magnitude for Academic Behavior (significant at the 5 percent level for Jackson State and 10 percent level for Dillard); and highs of 3.83 and 3.08 for Jackson State and Alcorn State, respectively, in magnitude for University Orientation (significant at the 5 percent level for Jackson State and 10 percent level for Alcorn). It is seen that Faculty Interaction and Peer Interaction do not seem to exert much impact of student retention, given the relatively low magnitudes of their coefficient estimates, which are not significant at either levels for any of the sample schools (except for the Faculty Interaction variable that shows a 10 percent significance level for all sample schools). Thus, contrary to the general expectation, only certain aspects of the Behavioral variables, namely, the student's own behavior and perception of the institution's disposition (behavior), seem to be important in female student retention; while the role of faculty and the student's peers do not seem to be as important as expected.

In terms of the Situational variables, it appears that the student's perception of the school's commitment, personal problems, and difficulties with college life (all with high magnitudes of coefficient estimates ranging from 4.67 to 4.18 and 3.12 across all the sample schools, and mostly significant at the 5 percent level), are especially the most important factors; indicating how strong these external factors are in impacting retention of female students. The coefficients of the OCCUPUNC and VALUEDUC variables seem to suggest that a key negative external factor against female student retention could be the labor market conditions in the economy.

The estimations for male students' retention (Table 4) also reveal very interesting results. There is correspondence in the expected signs for each of the variables, but the magnitudes of the coefficient estimates are more profound. The Confidence variable has an average magnitude of about 2.75 (with significance at the 5 percent level for Dillard and Jackson State, and at 10 percent level for Alcorn); and Educational Commitment does not show the high impact for male students as much as it does for the female students. And a similar result is obtained for the INTENT variable except that it has negative signs for all the sample schools; which in this case indicates a major difference between male students and female students. But the PERCEPT and PREFJOB variables have relatively high estimated coefficients, and all significant at the 10 percent level (and at the 5 percent level for Alcorn). This reveals a strong similarity with the female students; that is, that the student's own perception of the importance of the degree to eventual job market is a major factors that impacts retention for both female and male students.

Both Academic Behavior (with magnitudes of coefficient estimates averaging nearly 4.0, and significant at the 5 percent level for two of the colleges, and at the 10 percent level for the rest), and University Orientation (with magnitudes of coefficient estimates averaging nearly 3.0, and with at least 10 percent significance level for all the sample schools except Tougaloo for which it is not significant) appear to have stronger impacts on the retention of males, than for females. And yet a major difference between male and female student retention is indicated by the results shown by the high magnitudes of the Peer Interaction coefficient estimates (averaging about 4.5, and all significant at the 5 percent level for all the sample schools).

Thus, we observe that whereas peer interaction appears to exert much significant impact on retention of male students, it does not appear to do so for female students; and this is a remarkable difference.

Furthermore, the results appear to show that the Situational variables exert much stronger impacts on male students retention than female students retention. It is noteworthy to observe the relatively high magnitudes of the coefficients of all the variables: INSTCOMM (averaging 2.9 and all significant at the 5 percent level except for Tougaloo at the 10 percent level), OCCUPUNC (averaging -3.7 and all significant at the 5 percent level), DIFFCOLL (averaging -3.66 and all significant at the 5 percent level except for Tougaloo at the 10 percent level), PERSONAL (averaging -3.0 and significant at the 5 percent level except for two of the sample schools and 10 percent level for the rest), and VALUEDUC (averaging 2.6 and all significant at the 5 percent level). These results indicate that male students retention are far more impacted by external factors than female students. Again this is a major difference in gender retention differences.

5. Policy Implications and Conclusion

This study has provided an in-depth comparative analysis of retention variables between some selected HBCUs using female and male freshmen data from a pilot study. The retention variables were classified under various composites on the basis of their respective roles in students' retention decisions; and within each composite, the variables were analyzed individually. Data on retention rates were sought for four colleges and applied in a Probit model to obtain regression estimates for the various composite variables. The work provides a great deal of useful results. The analysis reveals important differences (and similarities) in the retention dispositions of female and male students within the various HBCUs. It is important that the problem of student retention in general, and black male students' retention in particular, be addressed with application of the appropriate long-term policy approaches that focus strongly on the relevant socioeconomic parameters such as key external factors like job market prospects, institutional commitment, and personal (family) constraints. These factors affect male students differently than female students, and must be applied in important ways toward retention policy decision making.

In the main, we see that whereas Attitudinal variables -- shaped by the student's overall perception of the importance of higher education -- seem to have significant inter-school impact of retention of male students, they do not seem to have significant inter-school variations for female students; and these results are consistent across school designations (i.e. across public and private colleges). This means that a typical black male student is apt to be more influenced by his personal attitude to school, than a typical black female student. Also, contrary to general expectations, only certain aspects of the Behavioral variables, namely, the variables that indicate the student's own behavior and his/her perception of the institution's disposition in providing him/her with education, appear to be important in female student retention, and less so in male student retention; while the role of faculty and the student's peers do not seem to be as important as expected for both females and males.

Major gender differences are shown in the Attitudinal and Behavioral variables; for example, whereas peer interaction appears to exert much significant impact on retention of male students, it does not appear to do so for female students; and this is a remarkable difference. Yet, close similarities are revealed by the Situational variables -- exogenous factors outside of the student's control -- for example, the student's own perception of the importance of the degree to eventual job market, is a major factor that impacts retention for both female and male students. Generally, the results show that male students retention is far more impacted by Situational variables than female students, and this is a major finding in gender retention differences. Key policy implications of these results point to the need to shift direction toward greater mentoring of black male students. For example, regarding the individual student's expectations from the school, the HBCUs do have strong advisement programs that inform students on their academic progress and potential future career outlets; but there is need for greater counseling on labor market opportunities and career paths.

Students need advisement on how best to convey their value to employers; but as revealed in the results of this study, ways to provide this advisement to male students must differ from that of females. In many schools, these advisement services may or may not always be mandatory; and, in most cases such services are provided by college faculty rather than professional counselors who would be most suited to provide the service. The result is that often there is limited and insufficient time dedicated to any one student, which could result in student frustration, especially for the males. Therefore, a recommendation from this study is that male student advisement be provided by professional counselors rather than college faculty.

Another policy implication from the results of this study is that, given the prevailing relatively harsh labor market conditions that black males face in the U.S., a black male student needs to perceive that his school does have some individualized approach designed to match his skill sets (and potential skill sets) with the specific needs of employers. In order to commit very deeply into the school and its programs, a student must have firm confidence in what completion of such programs would hold for him. The black male student needs to be oriented to perceive that the primary goal of his education is for labor market preparation in addition to his personal enrichment for social integration. This will make the difference in the retention of black male students, even at HBCUs.

Recommendations for further research

Further investigation is warranted to ascertain whether the gender retention differences observed in this study would also apply to different age cohorts, or generational differences. That is, the degree to which the various composite retention variables (A-, B, and S-Variables) could impact different student age groups, needs to be determined also, to enable us evaluate the importance of age in retention.

Notes

1. College completion rate may be defined as the proportion of all enrolled students who earn a degree within six years. The term "persistence" is also often used to denote this concept.
2. Each entry is found as the average of the mean responses between the five chosen representative HBCUs; for example, the 98 percent for females in the Confidence Variable is found by adding together each of the Confidence responses among the five colleges, and then dividing by 5.

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