Racial and Community Wealth Disparity the Bane of HBCUs: A Wealth Ecology Model Relational Perspective

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For an HBCU (Historical Black Colleges and Universities) as anchor institution, the improvement duality assumption links its fortunes with that of its community served. The study performs a regression analysis to determine the degree of the relationship and its direction. Measured African American family wealth status using the SCF data on median US household wealth and HBCU school choice by annual enrollment numbers from NCES digest of educational statistics, the analysis yields significant positive effects of student wealth status on HBCU school choice.

This positive direction finding does not support the research question that a decrease in African American students' perceived wealth status leads to a corresponding increase in their HBCU school choice. The assumption that the catchment community served by HBCUs is the source of the school's financial and growth challenges is not supported by the findings. The result shines a light on the benefits of the anchor mission to HBCUs and informs HBCUs' student recruitment strategies.

Keywords: racial wealth disparity, median household wealth, anchor mission, behavioral intention, school choice.

I. Introduction

Racial wealth disparities among minority communities in the U.S. and around the globe have persisted despite the improvement in global democratic norms and the proliferation of market and capitalist principles. Most have attributed the phenomena to inferior culture (Lavoie, 2002), values and planning (the lack thereof) and aptitude of African Americans (Galenson, 1972; Wilson, 1987; Brimmer, 1988; Lawrence, 1991; Szydlik, 2004; Frazier, 1957; Lewis, 1963; Banfield, 1974; Charles et al. 2009). Lavoie (2002) says, African Americans need to "tell good stories" about the markets to inject the values system integral to the enterprise school of thought inherent in capitalist society. Thus, appreciating culture's role in economics could provide likely different paths toward economic prosperity for different cultures.

More importantly, others have attributed the wealth gap to knowledge and to structural and unequal ownership opportunity. Including, discriminatory practices and racialized policies in labor markets (Herring & Henderson, 2016), income inequality (Wolff, 2017) and of human capital (Robb & Fairlie, 2007). Thus, the importance of human capital, education, knowledge driving income form significant ingredients to improving the wealth status of minority communities.

Racial income inequality is disproportionately affecting African Americans as data from the Federal Reserve survey of household wealth shows African Americans income have consistently lagged all races (Wolff, 2017). Coupled with higher debt proportions (Rodney & Mincey, 2020), the wealth wellbeing of most African American families and communities continues to be significantly under pressure. Within most African American communities sit Historical Black Colleges and Universities (HBCUs) with the sole purpose to educate Black Americans and have continued to produce increasing proportion of all African American college graduates (Wilson, 2007; Harper, 2019). HBCUs have shouldered systematic equity challenges financially and academically for decades due to both internal and external barriers (Harper, 2019; Simms et al., 1993). Inequitable federal and specifically state funding rates, stagnant and declining enrollments partially spurred by increasing college operating cost, have had significant impact (Kim & Conrad, 2006). Brown and Burnette (2014) find that PWIs have higher capital spending patterns, for example, than HBCUs. HBCUs have been plagued with declining economic status and have student retention challenges (Harper, 2019; Cheatham et al, 1990).

Higher education costs have increased dramatically requiring most African American students to use loans (Rodney & Mincey, 2020) with attendant student loan burden impacting negatively on income or wealth (Espinosa et al. 2019). Financial assistance availability and cost of attendance are substantial predictors of African American students' decision to attend higher education as well as success and

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performance (Simms et al., 1993; Harper, 2019). All these pointing to vulnerable universities and colleges that are especially hampered when located in vulnerable communities (Goddard et al., 2014).

To change their vulnerable status, HBCUs have options to improve their enrollment rates (from their 'anchored' regions as well as widening their catchment areas), retention rates and fees charged (Goddard et al., 2014) for a better bottom line. By leveraging their resources as anchor institutions for their community's development (Clarke, 2017) through Community Wealth Creation (CWC) initiatives, such as the Wealth Ecology™ Model (WEM) (Source Energy Global, 2022), they may enhance their close connection with their communities in a mutually beneficial relationship. In so doing, improve their competitiveness (Garton, 2021) in recruiting and retaining students and faculty. Goddard et al. (2014) find "no specific incentives" (p.321) in their review showing any specific bottom line benefits to anchor institutions' community development or wealth creation initiatives in their local economies. This may be due to the non-profit status of most of the institutions under the study and their heavy dependence on government and external funding.

The Wealth Ecology™ Model is an anchor-based CWC model based on the Revolution Wealth (RW™) (Source Energy Global, 2022) principles that brings Regimes of Support (RoS) and communities (Lumpkin & Bacq, 2019) together to generate economic enterprises. Anchor institutions (such as Universities, research institutions, local and community banks and financial services, hospitals, etc.) as part of RoS network enable money flows through the community to be anchored within the community to enhance a wider sharing of created wealth. The HBCU-CDFI anchored by Hope credit union is a typical collaboration example (Hope Enterprises, 2022). Other RoS may include, for-profit and non-profit organizations, fund managers, government agencies, philanthropic organizations, wealthy individuals and families, etc.) that have the financial resources and initiative to collaborate with the community for democratized wealth (Dubb, 2016). The community brings its natural and/or human resources to the enterprise.

Acting as anchor institutions within WEM, HBCUs may expect to increase their enrollments, for example, from the key communities they serve the most. Underlying this expectation is the observation and assumption that HBCUs challenges reflect the fortunes of the core communities they serve – African Americans and minorities. The purpose of this study is to understand the nature of this relationship using relation regression techniques. It is found that HBCUs challenges go beyond the wealth status of their students and communities.

This understanding can inform the debate on the mutuality of the benefits of the anchor mission to HBCUs and help strengthen or weaken the need to accept the anchor mission broadly across HBCUs in participation in the WEM initiative or any CWC. It could inform HBCUs strategies on student and faculty recruitment. It adds to the literature on community wealth creation initiatives, anchor institutions and refines the mutual benefits of the anchor mission. Understanding this observed link can help substantiate and fashion out appropriate approaches as part of WEM or any CWC program targeting HBCUs as anchor institutions and inform HBCU policy on contemplating the anchor mission.

The rest of this paper follows with a review of current literature including some definitions of operational variables and hypothesis development. This is followed by sections on data and methodology, and results and discussion. The last section concludes with policy implications.

II. LITERATURE REVIEW

a) Definitions

Historically Black Colleges and Universities (HBCUs) –are defined by the Higher Education Act of 1965 as institutions of higher learning established before 1964 whose principal mission is the (higher) education of African Americans (Wilson, 2007).

School choice –School choice, as an operational variable, is school choice achievement represented by annual fall enrollment as recorded by the NCES. Most admissions occur in the fall semester, and this acts as a good estimate and indicator of enrollment strength.

Student Wealth status – is an operational variable using the median household net worth for a typical HBCU student household.

Wealth accumulation type is an operational variable representing the specific type(s) of household wealth components such as business equity, financial assets, savings bonds, investment funds, certificate of deposit, home ownership and equity, stock holdings, debt obligations, etc. (Wolff, 2017). The elements aggregate to the median household net worth estimation.

b) Wealth and Minority Communities

Economists define wealth in terms of marketable assets, such as real estate, stocks, bonds, etc. More recent studies have identified knowledge and IP as the new currency explaining some of the wealth gaps. As an economy, ownership structures drive how its resources are allocated (Domhoff, 2020). Therefore, the lack of ownership of the sources of wealth (Klein, 2017; Kotlowski, 1998) within a community by its members could entail declining community wealth stock and its competitiveness in supporting its student population to persist and achieve in their college educational drive.

To overcome the increasing cost of education, declining sources of financial aid (grant, scholarship, etc.) and school funding, students have had to rely more on private and public loans and family support. With African American communities mostly suffering from racial wealth disparities (Wolff, 2017; Herring & Henderson, 2016, Robb & Fairlie, 2007; Cavalluzzo & Wolken, 2005), the availability of family support becomes the most supportive and differential determinant that influences college enrollment. This is assuming financial aid and public funding are available to all students and based on achievement, should be the same opportunity to all incoming students without potential racialized differential. Most African Americans have negligible impact from inheritance (Herring & Henderson, 2016; Robb & Fairlie, 2007) and therefore depend mostly on acquired wealth from immediate and close family circles.

The average wealth stocks of all members of a community can be effectively used as a determinant of the wealth status of a community as far as that measure constitute majority of the wealth builders, drivers or indicators. A study by Herring and Henderson (2016) finds Stock ownership, inheritance, Income, business ownership, home ownership, college level education, and retirement asset investments are the highest wealth indicators and creators. Additionally, social and community-based wealth improvement initiatives identify human, intellectual, social, cultural, and environmental capital as sources of wealth (Lumpkin & Bacq, 2019). Any measure that includes a sizable proportion of the above indicators should provide an effective proxy for a community's wealth.

Here, the wealth concept by Wollf (2017) is used. Defining …

"wealth (or net worth) … as the current value of all marketable or fungible assets less the current value of debts. Where total assets are defined as the sum of: (1) the gross value of owner-occupied housing; (2) other real estate owned; (3) cash and demand deposits; (4) time and savings deposits, certificates of deposit, and money market accounts; (5) government bonds, corporate bonds, foreign bonds, and other financial securities; (6) the cash surrender value of life insurance plans; (7) the value of defined contribution (DC) pension plans, including IRAs, Keogh, and 401(k) plans; (8) corporate stock and mutual funds; (9) net equity in unincorporated businesses; and (10) equity in trust funds. Total liabilities are the sum of: (1) mortgage debt, (2) consumer debt, including auto loans, and (3) other debt such as educational loans. This measure reflects wealth as a store of value and therefore a source of potential consumption (2017, p.6).

The student wealth status is measured using the median household net worth of HBCU students. This is that represented by their racial group annual median. This data is compiled by the Survey of Consumer Finance (SCF) sponsored by the US Federal Reserve.

c) HBCUs and School Choice

HBCUs' challenges seem to be reflective of the fortunes of the core communities they serve - African Americans and minorities. HBCUs have, shouldered systematic equity challenges financially and academically for decades. Founded as a place for African Americans to be educated, HBCUs have experienced growth and recognition as institutions and expanded their research and degree offerings. The advancement of these institutions has transformed the lives of many African Americans, but they continue to face challenges academically and financially. External systemic and structural influences and barriers as afore discussed, student loan crisis, dwindling grant funding, and federal budget cuts have contributed to the lack of resources at HBCUs (Kim & Conrad, 2019, Wilson, 2007). Internal barriers, including rising cost of college education, low achievement of incoming students ((Maxey et al. 1995; Kim & Conrad, 2019), low alumni giving, and low-income students seem to have impacted.

School choice is discussed to be reliant on several factors categorized into behavioral, econometric and sociological (Pitre et al., 2006). An expanded model of categories includes personal and parental effects, economic effects, academic effects and social effects (Dial, 2014). Pegini and Staffolani (2015) finds that cost and geographical dispersion are critical to disadvantaged students but at the same time, high quality institutions attract talented students irrespective of their wealth status. That is, student achievement is the determinant without mentioning that achievement at the pre-entry levels may be determined by quality of the learning environment that may depend heavily on availability of funding and the wealth of the student community. Most traditional school choice models focus on the student characteristics as input for understanding student choice (Hossler et al., 1999). An earlier model by Hossler and Gallagher (1987, as cited in Hossler et al., 1999) has the broad components of the school choice process stages as predisposition, search and the choice decisioning.

Pitre et al. (2006) using the theory of reasoned action provided an enhanced model with additional behavioral concepts. They laid out the broad components of the school choice process as student attitude, subjective norms (beliefs and influences of significant others), and the student-college perceptive behaviors that shape the decision process. Thus, the choice process is not only shaped by student characteristics like achievement scores but also by student predisposition behaviors such as personal assessment of ability to afford (wealth status, cost, etc.), perception of readiness for college, the perception of others within their circle of influence and control, etc. Pitre et al. (2006) further indicate other studies that show that African American students have an intention to

achievement gap as compared to other racial groups. This they attributed to differential behavioral norms that negatively impacts African Americans. This highlights the importance of subjective norms and perceptions pertaining to the African American student's immediate environment as an important driver than what occurs nationally.

For African American students, Maxey et al. (1995) indicate school choice as mostly dependent on programs offered, their location, quality of housing system and education offered, commute distance, academic reputation and financial aid availability. Their research finds that cost of education is of highest influence for African American students followed by family income. And that African American students with lower achievement scores are more likely to attend HBCUs. And by implication, from majority poor neighborhoods and communities.

Low achieving students are linked to low wealth communities where student preparation for college is considered poor(Cheatham et al., 1990; Brown & Burnette,2014). School systems within low income and poor communities are said to be without some education enhancing structures and resources generally available in affluent communities that aid student learning and development. Are HBCUs stuck with underachieved students they need to spend more on average to develop their full potential to be able to be competitive?

Sissoko and Shiau (2005) investigated the factors influencing African American students HBCU choice with the findings suggesting African Americans HBCU enrollment is influenced more by tuition and fees (education cost), the availability of financial aid, African American population trends, school retention rates and federal policies. They did not find student household wealth as a significant influence on choice of HBCU attendance though there is a positive relationship which they find as not significant. This they attributed to the general real median income decline over the study period. This outcome seems to be at odds with Maxey et al. (1995) finding that student family income, that contributes to student achievement levels, has influence on HBCU choice.

These studies agree that cost of attendance is the highest consideration to the African American student preparing for college education. However, the verdict on household wealth (that has elements of attitude – perception of level of wealth and subjective norms – perception of family support) is mixed. That is, students' ability to afford college education and have intention to attend is not yet agreed to depend upon their perceived wealth status.

A major proportion of schools' revenue comes from students' tuition and fees and therefore the quantity of students admitted become important. The level of student population in a particular school also affects all other school financial receipts - grants and awards. Most HBCUs have struggled with dwindling student rolls (Sissoko & Shiau, 2005) exacerbated by the reducing African American male(Simms et al., 1993) proportion and the quality of students they receive. Schools struggling with student enrollment, are known to struggle financially, with some closing(Harper, 2019). The enrollment numbers for schools could be used to gauge the struggles of institutions especially, HBCUs who tend to face dwindling external funding sources. Strong enrollment numbers are therefore boon to the school all around.

d) Objectives and Hypothesis

Do HBCU students' represented communities determine HBCUs wealth status? The community served by HBCUs is represented by students coming from diverse communities but mostly the African American communities facing racial and structural discriminatory wealth disparities. Here, the community-institution relationship is between the institution and its student population primarily. Since students come from different minority communities and are not homogeneous, the implication of the relationship is in general across all such communities from which HBCU students are based. Given the purpose of establishing the relationship between HBCUs and their served community's wealth, this requires determining the relationship between HBCUs and their students' wealth. This may answer whether HBCU students' wealth status is a source of the struggles of HBCUs. On the surface, this seems so. Further, HBCUs student body are, majority African American with some level of minority groups and more recently, some white students (Harper, 2019; Kim & Conrad, 2006)The objective is to determine how HBCUs struggle with African American students' enrollment is linked to their students' wealth status. The result will help shed light on whether HBCUs served communities' wealth status influences HBCUs speculated non-competitive status while adding to the literature on HBCU school choice and clarifying the dimension of wealth.

School enrollment occurs as a result of prospective students' school choices. There are multiple reasons for students' school choices. There is need to know whether the African American student wealth status has a relationship to African American students' choice of HBCU attendance or whether African American students of HBCUs do have a different wealth profile than African American students who attend non-HBCUs. There is the fact that African American students make their initial intention school choice based on their perceived achievement level and may choose HBCU (Maxey et al. 1995) as a result of their low achievement. Simms et al. (1993) find personal and pre-college factors are better predictors of college attendance by African American male students. Whereas Pigini and

Staffolani (2015) find that perceived quality institutions accept talented students irrespective of their wealth status. Thus, does a student or a student's family wealth status or type of wealth accumulation influence their choice of HBCU over for example, a Predominantly White Institution (PWI). For African American students to choose HBCUs because they are poor and/or from poor communities, then as wealth status deteriorates, HBCUs should see enrollment grow.

Based on the theory of reasoned action, per Pitre et al. (2006) analysis, a graduating high school student's behavioral attitude and subjective norms play roles in students' school choices. Students attitude to school choice may be influenced by their perception of their wealth status. This perceptive behavior on wealth seems to affect the student's attitude as well as their held norms of support they can receive from their immediate circle (family, family friends). As individuals, their wealth perception or expected income level may tell them they cannot afford the school they may want to attend, and this contributes to their behavioral attitude. Their perception of their family or family members wealth and coupled with their ability or intention or potential to support may increase the student's intention to attend and choose a particular college.

The following two propositions suffice: African American students' perceived low wealth status leads to their choice of HBCU post-secondary education. And that, the type of wealth accumulation influences their HBCU choice. The propositions lead to the following relational testing hypotheses. The first null hypothesis, Ha0 and its alternative, Ha1 are:

H_{a0}: African American students' wealth increases with their HBCU enrollment (HBCU school choice).

H_{a1}: African American student wealth status decreases, their HBCU enrollment increase.

The second null and its alternative hypotheses are:

H_{b0}: African American students HBCU enrollment is not related to any specific type of wealth component (or wealth accumulation type).

H_{b1}: African American students HBCU enrollment is influenced by at least one specific type of wealth component.

III. Data and Methodology

This study uses archival data research from available survey data on behavioral choices in relation to prevailing economic status to test the hypotheses. From the hypotheses, the dependent variable is school choice (HBCU enrollment) with the independent variables as family wealth (household wealth) status and its decomposed contributing components.

Data for school enrollment (fall semester enrollment) is taken from the National Center for Educational Statistics' (NCES) 2019 Digest of Educational Statistics (DES). The 2019 edition of the DES is the 55th in a series of publications initiated in 1962. The DES provides a compilation of statistical information on the broad fields of American education from prekindergarten through graduate school (de Brey et al., 2021). It contains data on varieties of education delivery topics with post-secondary enrollments for HBCU and non-HBCUs in separate sections, the main dataset used for this study.

The DES has data over a long period but do not show enrollment figures for each year since its inception. However, it provides comprehensive data on the periodic data collection years. The period for the study is from 1989 to 2017 with enrollment figures for fall semesters only.

Data for household wealth is taken from the Survey of Consumer Finances (SCF) for the same time periods. The SCF is a triennial survey sponsored by the Federal Reserve with the cooperation of the Department of the Treasury. It is designed to provide detailed information on U.S. families' balance sheets and their use of financial services, as well as on their pension rights, labor force participation, and demographic characteristics at the time of the survey interview. The survey also collects information on total family income, before taxes, for the calendar year preceding the survey. The family term in family income is similar to the U.S. Bureau of the Census definition of household that excludes single people (Kennickell et al., 1997). It is a fully representative data on the broader financial status of U.S. households. The SCF is unique in that there is not any other survey that collects data on the household finances of a probability sample of Americans. The underlying statistical methodology of the surveys has largely stayed the same since its inception making all the periodic data more comparable (Kennickell et al., 1997).

a) Sample Size

The target population is African American students who attended or chose to attend HBCU and non-HBCU post-secondary education during the targeted period from 1989 to 2017. The study is a longitudinal study of period cross-sectional samples as per the design of the surveys forming the database from which the research test data is sourced.. The sample size in terms of the number of periods covered is ten based on available data at the survey's periodic collection years. This constricted number of periods for the study may introduce validity concerns but the broad-based nature of the data sets and their randomness of cases from the larger population minimizes the effects.

b) Methodology for Data Analysis

In this analysis, use is made of both descriptive and regression statistics for the variables: enrollment and median household wealth. To determine the significant association effects and determinants of

enrollment levels by household wealth, the Ordinary Least Squares (OLS) method is used. Many proxies have been used to measure wealth. Here, the wealth of African American households is estimated by the median household wealth as published by the SCF. This measure of wealth is used to measure student wealth status. The data represents a comprehensive measure of all reportable and measurable aspects of a family's wealth and therefore has the strongest indication of an individual student's wealth status. It represents most of the elements of wealth.

Wealth accumulation occurs along the various dimensions of wealth. Each wealth dimension or type may have a differential influence on students' perception of wealth or their liquidity potential to support their intent to attend higher education. The types of wealth accumulation applied here are the major elements of the median household wealth as published by the SCF. See Table C.1 in Appendix C for the applied elements.

Student choice of a school leads to enrollment rolls of schools and using this measure as an indication of students' choice behavior should provide an excellent fit. Sissoko and Shiau (2005) established that even though non-African Americans' proportion in HBCU enrollment increased in proportion to HBCU total enrollment, the proportion of African Americans held steady. This allows enrollment levels to be generalized to African American enrollment change without loss of accuracy.

c) Data Analysis

The objective of this study is to understand how HBCU students' wealth status influences their behavioral choice of HBCUs for higher education attendance. The first hypothesis focuses on how the median household wealth of African American students influences their HBCU enrollment patterns which is a directional correlation investigation. The second is whether school choice is influenced more by specific wealth accumulation types and this portents to a correlational size effect determination.

On the first hypothesis H_a, based on the sample data obtained from the survey results sourced from NCES and the SCF, the regression analysis between the dependent variable, African Americans (AA) HBCU enrollment and the independent variable, African American median household wealth (net worth) is performed. As a basis for this analysis, it is assumed that school choice is made on the perception of family income. This necessitates the assumption that at year 0, the enrollment effect of current year perceived wealth status would determine year one (1) enrollment intention. The result leads to the following regression relationship:

$$Y_i = \beta_0 + \beta_1 * X_{i-1} \forall i \in (1,10) \ldots\ldots\ldots \text{Eq. 1}$$

where i is year i, the antecedent X is African American student (median household) income, and the outcome Y as African American students (AA HBCU) annual enrollment. B_0 and β_1 are the regression coefficients.

To test the relationship in Eq. (01), ten dataset points were selected from the two databases CFS and NCES matching the periodic survey years between 1989 and 2017 with the networth data selected a year ahead of the enrollment years. That is, for the starting year of 1990, the income dataset is selected at year 1989 to align with the enrollment dataset in year 1990. The combined data set is presented in Table A.3 (a & b) in appendix A.

Since a directional and strength of correlational relationship investigation is being conducted, Ordinary Least Squares regression analysis is used to process the data with SPSS software. To account for a possible biasing of the net worth effect, the average national median and the non-African American students' net worth data were collected. This helps to understand if there is any moderating effect from the national wealth trend.

For the second hypothesis, H_b the same sample data obtained from the survey results from NCES and the CFS as applied in the previous analysis is used. There are multiple independent variables representing African American wealth accumulation elements that combined to produce the median wealth values, a decomposition of household net worth. The selected key components of wealth, aligning with the findings from the work of Herring and Henderson (2016) are shown in Table A.5 in appendix A. Multiple regression analysis is performed to identify which wealth elements show significant correlation and explanation (coefficient of determination) of the variation in enrollment (school choice). In this test, size effects were determined to identify the dominant variables impacting the dependent variable, the African American HBCU school choice as represented by school enrollment numbers. This is shown in Eq. (02) below.

$$\hat{Y}_i = \beta_0 + \beta_1 * \bar{X}_{i-1}^1 + \cdots + \beta_n * \bar{X}_{i-1}^n \forall i \in (1,10) \ldots \text{Eq. 2}$$

Where i is year i, β_n is the relative size effect of each wealth element, X_i at year I and n is the number of wealth elements selected.

The elements with the dominant size effects are considered as the main drivers of the wealth effects on enrollment. Further analysis of the main elements informs understanding the wealth accumulation patterns that focus African American students' wealth perception. This leads to understanding which wealth accumulation trend drives African American students' enrollment and thus, college school choice.

IV. RESULTS

a) Descriptive Statics

The descriptive statistics in Table 01 shows the means of the key variables used for investigating the Hypothesis from the research questions.

Table 1: Descriptive Statistics

Descriptive Statistics

	Mean	Std. Deviation	N
HBCU AA Annual Enrollment	237512.20	17890.434	10
African American Median Household Net Worth	20.165	6.2408	10
National Average Net Worth	68.600	12.6191	10
Non-African American Ave Household Net Worth	81.970	13.9368	10

The above Table 01 shows that on the average, the African American student generally has the lowest median household wealth relative to other racial groups and the national average.

b) Analyzing Correlation between the Variables

First, the relationships between the key variables AA median household net worth, national median household net worth, non-AA median household net worth, and AA HBCU enrollment are analyzed. The results of the correlation test as shown in Table B.1 in appendix B based on data in Table A.3b, establishes that African American HBCU enrollment shows high correlation with AA net worth and non-African American average net worth of .681 and .559 respectively with all $p<.05$. However, National average median relationship strength of .436 is insignificant at $p>.05$ (95% CI). The preliminary assessment is that the most effect or influence on HBCU enrollment is exhibited by AA net worth.

The net worth variables show relatively higher correlation relationships among them indicating their expected circular relationships as following the national household wealth trend. A stepwise regression modeling is used to examine their explanatory effects on HBCU enrollment. The result is shown in Table 02.

Table 2: Wealth stepwise regression modeling

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
					Change Statistics					
1	.681[a]	.464	.397	13888.383	.464	6.934	1	8	.030	1.001

a. Predictors: (Constant), African American Median Household Net Worth
b. Dependent Variable: HBCU AA Annual Enrollment

The effects of the two independent variables on AA enrollment is investigated by adding each independent variable step-wisely to the regression modeling process. This helped to check and validate the strength of each variable's effect or influence on the outcome variable AA HBCU enrollment. As shown in Table 02, no-AA net worth has no significant explanatory effect and did not appear in the stepwise regression modeling result. AA net worth with $r=.681$, $p<.01$ demonstrated the highest change in AA HBCU enrollment of 46.4% (95% CI). See Appendix B, Table B.2 for excluded variables.

Table 3: Stepwise regression coefficients

Coefficients[a]

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.	95.0% Confidence Interval for B Lower Bound	Upper Bound	Correlations Zero-order	Partial	Part	Collinearity Statistics Tolerance	VIF
1	(Constant)	198122.372	15589.881		12.708	<.001	162172.041	234072.703					
	African American Median Household Net Worth	1953.388	741.808	.681	2.633	.030	242.776	3664.000	.681	.681	.681	1.000	1.000

a. Dependent Variable: HBCU AA Annual Enrollment

The regression coefficients are shown in Table 03 with their significance. In supporting the previous analysis on the explanatory effects of the variables, the resulting model constant and β_i coefficients are statistically significant, $t>2.6$, $p<.05$ (95% CI) confirming the relationship that African American household wealth is a determinant of the changes in African American HBCU enrollment. This establishes the following

direction relational relationship between AA Wealth status $\bar{X}$, and the outcome $\hat{Y}$, AA HBCU enrollment in Eq. (03).

$$\hat{Y}_i = 198122.372 + 1953.388 * \bar{\bar{X}}_{i-1} \ \dots\dots \quad \text{Eq. 3}$$

Eq. (03) shows that AA enrollment in HBCUs denoted by $\hat{Y}$ at year i is dependent upon the prior year's (i-1) African American student's median household wealth, denoted by $\bar{X}$.

For the second hypothesis H_b, the association effects with the major categories of wealth accumulation are studied. The main categories selected include Income, Assets, Debts and Loans as shown in Appendix A, Table A.4. The results of the correlation analysis is shown in Table 04 below. All the categories of wealth, except Loans, seem to show significant relationship with AA HBCU enrollment, $r > .791$ (95%, $p < .05$). No significance with Loans, $p > .05$.

Table 4: Correlation between AA enrollment and wealth categories

Correlations

		AA HBCU Enrollment	Total Assets	Total Debt	AA Median Income	All Loans
Pearson Correlation	AA HBCU Enrollment	1.000	.845	.801	.791	.331
	Total Assets	.845	1.000	.658	.592	.166
	Total Debt	.801	.658	1.000	.887	.713
	AA Median Income	.791	.592	.887	1.000	.776
	All Loans	.331	.166	.713	.776	1.000
Sig. (1-tailed)	AA HBCU Enrollment	.	.001	.003	.003	.175
	Total Assets	.001	.	.019	.036	.324
	Total Debt	.003	.019	.	.000	.010
	AA Median Income	.003	.036	.000	.	.004
	All Loans	.175	.324	.010	.004	.
N	AA HBCU Enrollment	10	10	10	10	10
	Total Assets	10	10	10	10	10
	Total Debt	10	10	10	10	10
	AA Median Income	10	10	10	10	10
	All Loans	10	10	10	10	10

The results of regression analysis between AA HBCU enrollment and the significant correlated wealth categories as independent variables are the shown in Table 05 below. The model establishes only significance of Assets and Income as antecedents explaining 84.4% of the variation in AA HBCU enrollment, $r = .919$, $p < .05$. However, the change due to the additional effect of Income of 13.0% is significant, $p < .05$.

Table 5: Wealth categories regression result

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
					Change Statistics				
1	.845[a]	.714	.678	10148.016	.714	19.972	1	8	.002
2	.919[b]	.844	.799	8012.403	.130	5.833	1	7	.046

a. Predictors: (Constant), Total Assets

b. Predictors: (Constant), Total Assets, AA Median household Income

Now, considering the decomposed constituent elements of these categories, as shown in Table A.5 in appendix A, the decomposed constituents correlation test is shown in Table C.2 in appendix C. From the preliminary results, AA median household income (Med_Inc), credit card debt (CCdt), homeownership (HOsh), Stockholdings (Stockh), and business ownership (Buseq) are found to have statistically significant association, $\neq 0$ ($p < .05$,CI 95%), with AA HBCU enrollment (AAenrl).

The preliminary correlation indicates some order of association strength between the independent variables and AAenrl. To establish a dependency relationship between the variables, the order determined under the correlation analysis is used to perform a stepwise regression modeling of the five variables with the dependent variable. This approach enables the cumulative strength effects of each antecedent variable to be appraised. The model result is shown in Table 06 below.

Table 6: Strength of association modeling

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
					Change Statistics				
1	.884[a]	.781	.754	8872.071	.781	28.596	1	8	<.001

a. Predictors: (Constant), Credit Card Debt

Table 7: Strength of association combination modeling

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
					Change Statistics				
1	.791[a]	.625	.578	11616.641	.625	13.346	1	8	.006
2	.922[b]	.850	.807	7859.222	.225	10.478	1	7	.014

a. Predictors: (Constant), AA Median household Income
b. Predictors: (Constant), AA Median household Income, Credit Card Debt

Credit card debt (CCdt) shows the most significant effect, r=.884, p<.001 (CI=95%) of about 78.1% explanatory power of the changes in AAenrl from Table 06. In support of this analysis result on the explanatory effects of the variables, the coefficients analysis is in Table 08. The coefficients of all other variables except credit card debt in models 2 to 4 are insignificant at t<1.0, p>0.05 (CI=95%) and cannot reject the possibility of their being zero. And hence, the other antecedents acting concurrently may not have any significant effect on changes in AAenrl.

Table 8: Wealth decomposed elements regression coefficients

Coefficients[a]

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.	95.0% Confidence Interval for B Lower Bound	Upper Bound
1	(Constant)	175034.649	12015.586		14.567	<.001	147326.659	202742.639
	Credit card debt	36008.377	6733.650	.884	5.348	<.001	20480.553	51536.202
2	(Constant)	173198.695	13418.094		12.908	<.001	141469.944	204927.447
	Credit card debt	31998.322	11902.895	.786	2.688	.031	3852.448	60144.195
	Home ownership	72.411	172.383	.123	.420	.687	-335.210	480.032
3	(Constant)	172781.396	14060.442		12.288	<.001	138376.733	207186.059
	Credit card debt	31381.886	12497.690	.770	2.511	.046	801.140	61962.631
	Home ownership	-7.397	221.154	-.013	-.033	.974	-548.541	533.747
	Stock holdings	943.398	1511.665	.187	.624	.556	-2755.515	4642.310
4	(Constant)	175692.781	16473.468		10.665	<.001	133346.383	218039.178
	Credit card debt	24793.612	20028.121	.609	1.238	.271	-26690.312	76277.536
	Home ownership	91.232	325.502	.155	.280	.790	-745.497	927.961
	Stock holdings	314.790	2156.009	.062	.146	.890	-5227.409	5856.989
	Business equity	148.856	335.721	.166	.443	.676	-714.143	1011.855

a. Dependent Variable: AA enrollment

When CCdt is combined with other variables taken first, only Med_Inc accumulates a combined significant relationship of 85.0% effect change, r=.922, p<.05 shown in Table 09. Evaluating the combined coefficients of the association, the coefficient of Med_Inc is insignificant, p>.05 and cannot reject the possibility of it being zero. See Table 08. Hence, credit card debt is the only statistically significant wealth element that influences AAenrl (AA HBCU enrolment).

Table 9: Wealth elements combination regression coefficients

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	141375.275	26570.530		5.321	<.001	80103.523	202647.027
	AA Median household Income	2888.398	790.635	.791	3.653	.006	1065.190	4711.607
2	(Constant)	148817.485	18122.684		8.212	<.001	105964.146	191670.824
	AA Median household Income	1298.152	726.273	.355	1.787	.117	-419.212	3015.516
	Credit Card Debt	26216.179	8098.973	.644	3.237	.014	7065.150	45367.207

a. Dependent Variable: AA HBCU Enrollment

Table 10: Wealth decomposed elements regression coefficients

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	175034.649	12015.586		14.567	<.001	147326.659	202742.639
	Credit Card Debt	36008.377	6733.650	.884	5.348	<.001	20480.553	51536.202

a. Dependent Variable: AA HBCU Enrollment

The resulting significant model with coefficients in Table 10 above leads to the following regression prediction equation. By inputting the coefficients from Table 10 in Eq. (02) gives the relationship between credit card debt (CCdt) and AA HBCU enrolment (AAEnrl) as Eq.(04):

$$AAEnrl_1 = 175034.649 + 36008.377 * CCdt_0 \quad .. \text{Eq. } 4$$

Thus, higher credit card debt seems to have a higher and most effective signaling effect on the perception of family wealth than all the other wealth indication elements. Thereby, having a higher and most effective signaling effect on the perception of AA family wealth than all other wealth indication elements.

V. DISCUSSION

The results from the descriptive statistics confirmed the widely held and validated view that African Americans generally hold the lowest wealth of all races and earns less for the same dimensions of wealth (Herring & Henderson, 2016; Brimmer, 1988)). Maybe, that influences their behavioral intentions of post-secondary education school choice.

The correlation test provides the expected relationship between the African American students' HBCU school choice as measured by enrollment and wealth as measured by the median household wealth. This seems to suggest that the research question is satisfied. However, there is the need to identify the direction of change effects between the variables per the hypothesis H_a.

From the test of dependency analysis, there is 95% confidence that the national wealth level changes do not have any statistically significant effect on AA HBCU enrollment patterns unless there is a corresponding correlated positive change in African American student wealth as a moderating effect. This is an important result to differentiate what happens nationally and within local African American communities. This shows the extent the national wealth trend may have on the African American student HBCU enrollment patterns as inconsequential.

The relationship established from the regression Eq. (03) based on analysis of the regression coefficients shows a positive correlational relationship between school choice and African American student wealth status. The positive relationship as determined by β_1=1953.388, t>2.6, p<.05, 95% CI, implies the null hypothesis H_{a0} cannot be rejected. The alternate hypothesis H_{a1} is rejected. The result does not answer the research question of whether a decrease in HBCU student wealth status using the median household wealth as proxy increases their behavioral intentional choice of HBCU attendance using annual fall enrollment.

In respect of hypothesis H_b, correlation is established between wealth indication elements of income, credit card debt, homeownership, Stockholdings, and business ownership with student enrollment. However, from the dependency test, only credit card debt had any significant explanatory effect, R^2 =78.1%, p<.001(CI95%) of the changes in African American HBCU student enrollment. Also, the correlation with wealth categories yielded Assets and Income as the significant signaling categories of wealth with 84.4% change effect.

Based on the size effect, the null hypothesis H_{b0} is rejected since there is at least one wealth category (Assets, Income) or wealth element (credit card debt as

shown by Eq. (04)) that demonstrates positive changes in AA HBCU enrollment. Thus, more assets, higher income and credit card debt seems to have a greater and most effective signaling effect on the perception of family wealth than all other wealth indication elements and categories. Thereby, having the most statistically significant effect on African American HBCU enrollment. Another explanation can be seen as African American students attending college based on their low wealth status causes their families to enter into higher debts, and mostly credit card debt. Many findings indicate that African Americans rely on credit card debt more than bank loans or other loan sources (Klein, 2017; Robb & Fairlie, 2007; Cavalluzzo & Wolken, 2005) to fund improvement initiatives including education. Further, higher credit card debt with satisfactory progress payments is generally associated with higher credit worthiness and could be an indication to prospective students of their wealth basis and ability to pay for college.

a) Recommendations for Future Research

The results of this study only present the potential explanatory power of student wealth status on African American students' choice of HBCU as a place of higher education. There may be more significant variables that shape the school choice dilemma in addition to the wealth status. As this effort did not focus on the causation effects of wealth status on specifically AA students' HBCU choice, given that most HBCUs cost of attendance is not much different than TWIs (Sissoko & Shiau, 2005; Dial, 2014; Wilson, 2007), there is need for an empirical study that can establish the causal relationship.

Future studies may use a self-administered survey method to confirm the results from this study. A more in-depth qualitative study to understand the key behavioral intentions (of subjective norms and attitude) (Pitre et al., 2006) that not only predisposes an African American student to choose an HBCU for post-secondary education but also moves the choice process beyond the intention stage may prove more comprehensive. It may settle the general inconclusiveness of the wealth causation, moving the research on school choice forward while adding to the usefulness of the theory of reasoned action as a basis for understanding school choice.

VI. Conclusions and Policy Implications

The results of the study show that the wealth status of African American HBCU students is positively correlated with and positively affects the choice of HBCUs as higher education preferences of African American students at46.4% (95% CI, p<.05) explanatory power. This revealing outcome does not support the research objective of a negative relationship that will support the notion that the wealth status of African American communities is a cause of HBCU fiscal challenges.

The main objective is the need to know if African American students choose HBCUs because of their low wealth. A negative relationship reinforces the fact that, as African American students perceive family wealth to decrease or to be low, more African American students will flock to HBCUs. The positive relationship results show that African American students' HBCU school choice may follow similar pattern as for those who attend other schools. And that, other behavioral intention drivers could be the main determinants of why a prospective African American student will choose an HBCU for post-secondary education. The outcome here is that African American students do not choose HBCU just because they are of low wealth.

Moreover, the fact that the national median wealth and income had no significant effect on African American HBCU enrollment assures the accuracy of the prediction. This provides that national improvements in income and wealth do not show the same signal effect as do what happens within the African American communities. Thus, community economic or wealth factors are the more dominant perceptive determinants of wealth for the African American student school choice decisioning than what happens nationally. This is supported by the results of hypothesis H_b with signaling effect of credit card debt as the most significant wealth indicator for the African American HBCU student.

The above analyses by no means establish that wealth status is the only condition of the African American student that through their attitudes, influences their behavioral choices on higher education school attendance. Previous studies either showed no influence of African American students' wealth or income on African American students' HBCU choice or some effect. The findings from this study demonstrate the relationship with more than 44.6% explanatory share. This may be due to a general positive following effect from the population environment that student wealth benefits from rather than just their wealth status (Sissoko & Shiau, 2005).

The theory underpinning this study is based on the notion that the school choice process is volitional (Pitre et al., 2006). There could be a state in the process where student attributes may take precedence like after choosing alternatives and the need to match attributes and perceptions to making a choice. Thus, the practical application may not be fully supported.

With this finding, the overall objective of establishing the assumption that the wealth status of HBCU students and their catchment communities have effects on HBCU financial and growth state is found not to exist. The fact that HBCU students make their school choice not because they are poor implies that improving the community wealth status may not automatically lead

to significant improvement on the wealth status of HBCU students. That through improvement in school enrollment levels can HBCUs improve their fiscal state. This understanding will inform the base theory of any community-based wealth creation (CWC) concept with HBCUs as anchors to focus on enrollment measures as part of the CWC concept and not as a benefit.

As such, the key finding highlights policy implications for HBCUs considering the anchor mission to boost their school choice potential. Thus, additional policy and promotional actions may be required in addition to the anchor mission of improving the wealth of the communities most served by HBCUs, directed towards improving the attractiveness of HBCUs as a competitive choice to the communities' students. This should help drive the duality objective of anchor-institution-based CWC initiatives.

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Appendices

Appendix A: Analysis Datasets selected from SCF and NCES data bases.

Table A.1: SCF Wealth Data

Net worth by race or ethnicity

Make Full Screen

Date	White, non-Hispanic (US$ Thousands)	Black, non-Hispanic (US$ Thousands)	Hispanic (US$ Thousands)	Other (US$ Thousands)
1989	143.56	8.55	9.94	72.00
1992	124.60	17.70	12.14	66.41
1995	128.20	18.23	20.87	51.88
1998	150.96	24.38	15.46	60.40
2001	177.50	27.87	16.90	75.82
2004	191.11	27.66	20.80	96.12
2007	211.73	25.92	26.05	75.18
2010	152.88	18.73	19.50	50.31
2013	155.83	14.36	15.15	44.98
2016	181.87	18.24	22.04	68.73
2019	189.10	24.10	36.05	74.50

Source: https://www.federalreserve.gov/econres/scf/dataviz/scf/table/#series:Net_Worth;demographic:racecl4;population:all;units:median

Table A.2: NCES HBCU Enrollment dataset

Enrollment Data from NCES Digest statistics		
HBCU Enrollment		
Year	African American	All races
1990	208,682	257,152
1993	231,198	282,856
1996	224,201	273,018
1999	226,592	274,321
2002	247,292	299,041
2005	256,584	311,768
2008	258,402	313,491
2011	263,435	323,648
2014	231,889	294,316
2017	226,847	298,134

Source: https://nces.ed.gov/programs/digest/2019menu_tables.asp

Table A.3a: Combined Enrollment and Wealth data

Wealth year	Enrollment Year	School Choice Year i	Net Worth	HBCU AA Annual Enrollment	All (Races Annual Enrollment)
1989	1990	1	8.6	208,682	257,152
1992	1993	2	17.7	231,198	282,856
1995	1996	3	18.2	224,201	273,018
1998	1999	4	24.4	226,592	274,321
2001	2002	5	27.9	247,292	299,041
2004	2005	6	27.7	256,584	311,768
2007	2008	7	25.9	258,402	313,491
2010	2011	8	18.7	263,435	323,648
2013	2014	9	14.4	231,889	294,316
2016	2017	10	18.2	226,847	298,134

Table A.3b: Combined enrollment and wealth racial mix data

School Choice Year, i	AA Median Household Net Worth	Non-AA Median Household Net Worth	National Median Household Net Worth	HBCU AA Annual Enrollment	All (Races Annual Enrollment)
1	8.6	75.2	58.5	208,682	257,152
2	17.7	67.7	55.2	231,198	282,856
3	18.2	67.0	54.8	224,201	273,018
4	24.4	75.6	83.7	226,592	274,321
5	27.9	90.1	74.5	247,292	299,041
6	27.7	102.7	83.9	256,584	311,768
7	25.9	104.3	84.7	258,402	313,491
8	18.7	74.2	60.4	263,435	323,648
9	14.4	72.0	57.6	231,889	294,316
10	18.2	90.9	72.7	226,847	298,134

Table A.4: Main wealth categories

Wealth year	Enrollment Year	School Choice Year i	African American Median Household Income - Main categories (in thousands)				
			Median Income	Assets	Debt	Loans	African American Enrollment
1989	1990	1	22.8	53.4	9.9	15.9	208,682
1992	1993	2	31.1	54.3	10.0	18.2	231,198
1995	1996	3	29.1	50.1	10.3	18.0	224,201
1998	1999	4	30.3	55.1	18.9	17.9	226,592
2001	2002	5	35.6	84.2	27.4	25.4	247,292
2004	2005	6	37.6	74.6	40.7	24.5	256,584
2007	2008	7	38.1	87.6	37.5	22.6	258,402
2010	2011	8	35.9	73.2	36.6	24.4	263,435
2013	2014	9	34.5	58.4	28.6	26.4	231,889
2016	2017	10	37.7	49.5	33.4	34.5	226,847

Table A.5: Selected key wealth elements

School Choice Year i	Wealth year	Enrollment Year	African American Median Household Wealth and Income- Some main components																HBCU Enrollment	
			Net Worth	Income	Assets	Financial Assets	Investment Funds	Life Insurance	Retirement	Stock Holdings	Home Ownership	Vehicles Owned	Business Equity	Debt	Loans	C.Card Debt	Education Loans	African American	All
1	1989	1990	8.6	22.8	53.4	4.0	89.5	4.0	11.9	8.0	89.5	9.9	4.0	9.9	15.9	1.2	4.0	208,682	257,152
2	1992	1993	17.7	31.1	54.3	4.6	17.9	5.4	9.8	10.4	82.2	8.2	20.6	10.0	18.2	1.3	5.2	231,198	282,856
3	1995	1996	18.2	29.1	50.1	7.4	7.3	8.3	13.4	7.3	96.8	11.7	12.5	10.3	18.0	1.7	5.8	224,201	273,018
4	1998	1999	24.4	30.3	55.1	9.9	12.6	7.9	17.3	11.8	110.1	12.6	7.9	18.9	17.9	1.4	8.0	226,592	274,321
5	2001	2002	27.9	35.6	84.2	12.4	18.8	8.7	12.3	14.4	115.5	14.4	72.2	27.4	25.4	2.2	7.2	247,292	299,041
6	2004	2005	27.7	37.6	74.6	5.6	24.4	4.7	20.3	15.6	141.0	11.3	39.9	40.7	24.5	1.9	11.5	256,584	311,768
7	2007	2008	25.9	38.1	87.6	9.0	27.2	6.2	32.1	18.5	185.2	12.2	30.9	37.5	22.6	2.5	11.4	258,402	313,491
8	2010	2011	18.7	35.9	73.2	7.2	35.3	4.2	21.2	10.6	141.4	12.5	35.3	36.6	24.4	2.2	15.3	263,435	323,648
9	2013	2014	14.4	34.5	58.4	5.5	16.5	3.3	20.9	9.1	120.8	12.1	15.4	28.6	26.4	1.6	16.5	231,889	294,316
10	2016	2017	18.2	37.7	49.5	4.3	28.7	4.0	26.3	12.8	131.9	13.8	29.5	33.4	34.5	1.5	21.3	226,847	298,134

Appendix B

Table B.1: Correlation between dependent and independent variables

Correlations

		HBCU AA Annual Enrollment	African American Median Household Net Worth	National Average Net Worth	Non-African American Ave Household Net Worth
Pearson Correlation	HBCU AA Annual Enrollment	1.000	.681	.436	.559
	African American Median Household Net Worth	.681	1.000	.792	.657
	National Average Net Worth	.436	.792	1.000	.824
	Non-African American Ave Household Net Worth	.559	.657	.824	1.000
Sig. (1-tailed)	HBCU AA Annual Enrollment	.	.015	.104	.046
	African American Median Household Net Worth	.015	.	.003	.020
	National Average Net Worth	.104	.003	.	.002
	Non-African American Ave Household Net Worth	.046	.020	.002	.
N	HBCU AA Annual Enrollment	10	10	10	10
	African American Median Household Net Worth	10	10	10	10
	National Average Net Worth	10	10	10	10
	Non-African American Ave Household Net Worth	10	10	10	10

Table B.2: Excluded antecedents

Excluded Variables[a]

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics		
						Tolerance	VIF	Minimum Tolerance
1	National Average Net Worth	-.277[b]	-.629	.549	-.231	.373	2.679	.373
	Non-African American Ave Household Net Worth	.196[b]	.546	.602	.202	.568	1.759	.568

a. Dependent Variable: HBCU AA Annual Enrollment

b. Predictors in the Model: (Constant), African American Median Household Net Worth

Appendix C

Table C.1: Correlation among enrollment and wealth categories

Correlations

		AA HBCU Enrollment	Total Assets	Total Debt	AA Median Income	All Loans
Pearson Correlation	AA HBCU Enrollment	1.000	.845	.801	.791	.331
	Total Assets	.845	1.000	.658	.592	.166
	Total Debt	.801	.658	1.000	.887	.713
	AA Median Income	.791	.592	.887	1.000	.776
	All Loans	.331	.166	.713	.776	1.000
Sig. (1-tailed)	AA HBCU Enrollment	.	.001	.003	.003	.175
	Total Assets	.001	.	.019	.036	.324
	Total Debt	.003	.019	.	.000	.010
	AA Median Income	.003	.036	.000	.	.004
	All Loans	.175	.324	.010	.004	.
N	AA HBCU Enrollment	10	10	10	10	10
	Total Assets	10	10	10	10	10
	Total Debt	10	10	10	10	10
	AA Median Income	10	10	10	10	10
	All Loans	10	10	10	10	10

Table C.2: Correlation among the wealth elements

Correlations

		AA Median household Income	AA HBCU Enrollment	Financial Assets	Investment Funds	Life Insurance Value	Retirement Assets	Stock Holdings	Home Ownership	Vehicles Owned	Business Equity	Credit Card Debt	Education Loans
AA Median household Income	Pearson Correlation	1	.791**	.243	-.510	-.092	.694*	.735*	.770**	.534	.651*	.676*	.706*
	Sig. (2-tailed)		.006	.499	.132	.801	.026	.016	.009	.112	.042	.032	.023
	N	10	10	10	10	10	10	10	10	10	10	10	10
AA HBCU Enrollment	Pearson Correlation	.791**	1	.397	-.320	.022	.492	.687*	.753*	.305	.663*	.884**	.322
	Sig. (2-tailed)	.006		.256	.367	.952	.149	.028	.012	.392	.037	<.001	.364
	N	10	10	10	10	10	10	10	10	10	10	10	10
Financial Assets	Pearson Correlation	.243	.397	1	-.426	.803**	.013	.423	.258	.596	.547	.596	-.223
	Sig. (2-tailed)	.499	.256		.220	.005	.972	.224	.472	.069	.102	.069	.535
	N	10	10	10	10	10	10	10	10	10	10	10	10
Investment Funds	Pearson Correlation	-.510	-.320	-.426	1	-.482	-.105	-.204	-.125	-.286	-.247	-.242	-.181
	Sig. (2-tailed)	.132	.367	.220		.159	.774	.572	.730	.423	.492	.501	.617
	N	10	10	10	10	10	10	10	10	10	10	10	10
Life Insurance Value	Pearson Correlation	-.092	.022	.803**	-.482	1	-.305	.148	-.134	.292	.273	.226	-.539
	Sig. (2-tailed)	.801	.952	.005	.159		.392	.684	.712	.413	.445	.530	.108
	N	10	10	10	10	10	10	10	10	10	10	10	10
Retirement Assets	Pearson Correlation	.694*	.492	.013	-.105	-.305	1	.625	.917**	.434	.090	.536	.729*
	Sig. (2-tailed)	.026	.149	.972	.774	.392		.053	<.001	.210	.805	.110	.017
	N	10	10	10	10	10	10	10	10	10	10	10	10
Stock Holdings	Pearson Correlation	.735*	.687*	.423	-.204	.148	.625	1	.790**	.365	.599	.663*	.239
	Sig. (2-tailed)	.016	.028	.224	.572	.684	.053		.007	.300	.067	.037	.506
	N	10	10	10	10	10	10	10	10	10	10	10	10
Home Ownership	Pearson Correlation	.770**	.753*	.258	-.125	-.134	.917**	.790**	1	.467	.366	.802**	.558
	Sig. (2-tailed)	.009	.012	.472	.730	.712	<.001	.007		.173	.298	.005	.094
	N	10	10	10	10	10	10	10	10	10	10	10	10
Vehicles Owned	Pearson Correlation	.534	.305	.596	-.286	.292	.434	.365	.467	1	.541	.507	.523
	Sig. (2-tailed)	.112	.392	.069	.423	.413	.210	.300	.173		.107	.134	.121
	N	10	10	10	10	10	10	10	10	10	10	10	10
Business Equity	Pearson Correlation	.651*	.663*	.547	-.247	.273	.090	.599	.366	.541	1	.663*	.163
	Sig. (2-tailed)	.042	.037	.102	.492	.445	.805	.067	.298	.107		.037	.653
	N	10	10	10	10	10	10	10	10	10	10	10	10
Credit Card Debt	Pearson Correlation	.676*	.884**	.596	-.242	.226	.536	.663*	.802**	.507	.663*	1	.232
	Sig. (2-tailed)	.032	<.001	.069	.501	.530	.110	.037	.005	.134	.037		.519
	N	10	10	10	10	10	10	10	10	10	10	10	10
Education Loans	Pearson Correlation	.706*	.322	-.223	-.181	-.539	.729*	.239	.558	.523	.163	.232	1
	Sig. (2-tailed)	.023	.364	.535	.617	.108	.017	.506	.094	.121	.653	.519	
	N	10	10	10	10	10	10	10	10	10	10	10	10

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).