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Black-White differences in saving behaviors

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Abstract

This study uses the 2007 Survey of Consumer Finances to empirically explore Black-White differences in saving behavior. The impact of the explanatory variables in the model is allowed to differ between Black and White households to understand Black-White differences in saving. The results indicate that Black-White differences in saving are explained by racial differences in the individual determinants of saving, not by race in and of itself. The individual variables that significantly differ for Black and White households in their effect on saving are receiving government assistance, feeling that credit use is bad, being turned down for credit in the past 5 years, and having a saving horizon of the next few years.

JEL classification: D12; D91; J15

Keywords: Household saving; Racial differences

1. Introduction

According to U.S. Bureau estimates, African Americans are the second largest minority group and are projected to increase to approximately 15% of the U.S. population in the future (Lusardi, 2005). African Americans have a substantial, increasing presence in the United States, and the wealth disparities between Black and White households have not decreased much over the past 20 years (Hanna and Lindamood, 2008), so it is important to continue exploring the financial behaviors of this group. Research shows that Blacks hold lower levels of wealth compared to Whites, and racial and ethnic differences in financial well-being and financial knowledge are consistently shown by researchers. A recent study by the Center for

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Responsible Lending indicates that California's payday lenders are more concentrated in Black and Latino neighborhoods, draining these communities of $247 million in payday loan fees each year (Davis, Ernst, Li, and Parrish, 2009).

Research shows that the wealth of Whites is five to 10 times higher than that of Blacks (Davern and Fisher, 2001; Oliver and Shapiro, 1995; Smith, 1995; Wolff, 1998). Studies consistently show that Whites hold more wealth than Blacks even when controlling for other variables (Badu, Daniels, and Salandro, 1999; Bucks, Kennickell, Mach, and Moore, 2009; Plath and Stevenson, 2000), with this wealth inequality possibly resulting from the composition of wealth, as some assets provide a higher return than others (Keister, 2000). In addition, racial and ethnic differences in financial well-being and financial knowledge are consistently shown by researchers, with significant inequalities in wealth accumulation (Brobeck, 2002; Keister, 2004; Lusardi, 2005) and financial literacy (Chen and Volpe, 1998; Hogarth and Hilgerth, 2002; Joo, Grable, and Bagwell, 2003; Mandell, 2006).

The racial wealth gap has many implications for the social position of African Americans (Altonji and Doraszelski, 2002). Wealth is a source of power, both socially and politically, provides insurance against future fluctuations in income, and affects the ability to finance higher education. The gap in wealth also affects the quality of housing, neighborhoods, and schools a family can access.

In their study on differences in wealth between Blacks and Whites, Altonji and Doraszelski (2002) find that differences in saving behavior may play an important role in racial wealth differences. Scholz and Levin (2003) conclude that investigating whether saving behaviors vary by race after controlling for income is worthy of future study. Understanding the saving and investment behavior of minority groups is critically important for creating and implementing policies related to the behavior of families with a lack of wealth (Lusardi, 2005). Those with fewer financial resources are less likely to develop financial skills necessary to achieve and maintain financial well-being (Mandell, 2006). The purpose of this study is to empirically explore differences in household saving between Black and White households.

2. Literature review

Many explanations for differences in financial assets and behaviors between Black and White households have been provided in the literature. The results of Altonji and Doraszelski (2001) indicate important differences between Whites and Blacks in the effects of income and demographics on savings and/or rates of return. Smith (1995) shows that minority wealth disparities are due in part to lower minority incomes. Blacks have significantly less wealth than their White counterparts even after controlling for income and demographics (Badu et al., 1999; Conley, 1999; Plath and Stevenson, 2000), and Blacks experience greater income uncertainty (Gittleman and Joyce, 1996; Mazumder, 2001). According to Conley (1999), income is an important predictor of wealth, and most, if not all, of the observed difference in saving rates can be accounted for by differences in income (Gittleman and Wolff, 2004). Gittleman and Wolff (2004) suggest that after controlling for income, the saving rate for Blacks may be slightly lower than that of Whites.

There is little other empirical evidence regarding racial differences in saving rates, but many factors shown to differ by race may influence saving behavior, including government transfer programs, health, risk aversion, bequest motives, time preferences, rates of return (Scholz and Levine, 2003), and self-employment (Altonji and Doraszelski, 2001; Fairlie and Meyer, 2000). Means-tested government assistance programs, which generally have asset limits to be eligible, provide a direct incentive against asset accumulation (Scholz and Levine, 2003). Hubbard, Skinner, and Zeldes (1995) conclude that the presence of government programs using asset testing may contribute to differences in saving behavior between high- and low-income families. Gruber and Yelowitz (1999) report that Medicaid lowered wealth holdings by about $1,500 in 1993 among the eligible population, while Neumark and Powers (2000) find mixed evidence that Supplemental Security Income affects wealth and saving, and Powers (1998) finds modest effects of Aid to Families with Dependent Children on wealth accumulation. Scholz and Levine (2003) conclude that, in the aggregate, wealth accumulation is not substantially affected by asset limits and that asset-tested programs are unlikely to have a large impact on the racial gap.

Researchers have consistently found a negative correlation between poor health and wealth (Smith, 1999), and research also indicates that Blacks have poorer health than Whites (Smith, 1995). Those in poor health may change their saving behavior, a shorter expected life span associated with poor health could reduce the need to save for retirement, or poor health may negatively affect income by reducing wages or increasing unemployment (Scholz and Levine, 2003). According to Smith (1999), negative health shocks reduce saving by a sizeable amount, partly because of out-of-pocket medical expenses, lowered life expectancy, and reduced earnings.

Households with a greater degree of risk aversion will save more to prevent low consumption when earnings are low or health is poor compared to less risk-averse households (Scholz and Levine, 2003). However, Jacobs-Lawson and Hershey (2005) find a positive relationship between higher risk tolerance and increased retirement saving. Risk aversion could also affect portfolio choices and rates of return, and Black households have significantly less willingness to take risk compared to Whites, even after conditioning on education, age, and income. Barsky, Juster, Kimball, and Shapiro (1997) indicate that Blacks have higher mean risk tolerance levels compared to White respondents, while all studies based on the Survey of Consumer Finances (SCF) dataset have found Black respondents less willing to take some investment risk compared to White respondents (Hanna and Lindamood, 2008). Gutter, Fox, and Montalto (1999) find that there are Black-White differences in the ownership of risky assets.

Differences in the desire to leave an estate for one's children may also contribute to the Black-White wealth inequality (Scholz and Levine, 2003). Smith (1995) finds that respondents for whom leaving a bequest is "very important" will accumulate $85,000 more in assets than those who place no importance on leaving a bequest, and also finds a large difference in the coefficient on the very important indicator variable when estimating the wealth regressions separately by race. Although the desire to leave bequests appears to be stronger among Blacks than among Whites in the Health and Retirement Study (HRS), racial differences in bequests may occur because Blacks are less able to "afford" bequests. In contrast, the results of Menchik and Jiankoplos (1997) show no contribution of the bequest

motive to the wealth gap. According to Scholz and Levin (2003), although many people report a desire to leave a bequest, how much this desire actually affects savings is unclear.

Many Black Americans arrive at retirement with low levels of wealth relative to the wealth levels of White Americans (Lusardi, 1999, 2000; Smith, 1995). This could be due, in part, to Black households having more limited access to institutionalized saving mechanisms such as 401(k) plans, shorter life expectancies (Gittleman and Wolff, 2004), a short-term focus, or lack of a focus on saving for retirement for a variety of reasons. Because of the greater income uncertainty experienced by Black households (Gittleman and Joyce, 1996; Mazumder, 2001), Black and White households may also differ in the need to save for emergencies.

Blacks are less likely to be homeowners, which is important because housing is the largest component of wealth for most families in the United States and the homes of Blacks tend to be less valuable compared to the homes of Whites, even after adjusting for housing unit characteristics (Long and Caudill, 1992). In addition, Blacks are more likely than Whites to be rejected for a mortgage, which reduces their ability to purchase a home (Long and Caudill, 1992), and have been found to pay higher rates for mortgages (Badu et al., 1999).

A higher self-employment rate and stronger link between self-employment and wealth have been found among Whites compared to Blacks, making an important contribution to the wealth gap between White and Black couples (Altonji and Doraszelski, 2001). There are large Black-White differences in self-employment (Fairlie and Meyer, 2000), and self-employment is positively related to wealth. Studies show that differences in self-employment account for 24% and 8% of the wealth gap of married and single households, respectively (Menchik and Jianakoplos, 1994). If credit is less available to Black households, their likelihood of self-employment may be decreased (Scholz and Levine, 2003).

Research shows that the credit behaviors of Black and White consumers differ. White families are more likely to use credit than Black families (Schnittgrund and Baker, 1983), perhaps because of racial differences in access to credit markets (Scholz and Levine, 2003). Blacks are more likely than Whites to be turned down for credit, and may be less likely to apply for credit such as mortgages because they expect to be rejected (Charles and Hurst, 2000). Compared with White consumers, Black consumers appear to have less positive views of credit (Joo et al., 2003). Black households are also more likely than White households to not have a bank account, perhaps because of a lack of financial literacy or distrust of financial institutions (Hogarth and O'Donnell, 1997; Lyons and Sherpf, 2004; Rhine et al., 2001). Plath and Stevenson (2000) find that, for lower income groups, the use of basic banking services is less prevalent among Black households than White households.

Racial differences in financial knowledge are consistently shown by researchers (Chen and Volpe, 1998; Hogarth and Hilgerth, 2002; Joo et al., 2003; Mandell, 2006). As compared with young White adults, young Black adults of the same age have lower levels of financial literacy (Mandell, 2006), and Black respondents have been likely to answer financial literacy questions correctly than White respondents, which may influence saving outcomes (Lusardi and Mitchell, 2007).

In addition, respondents in Black households have significantly shorter planning horizons compared to Whites, even after conditioning on education, age, and income (Scholz and Levine, 2003). According to Rabinovich and Webley (2007), time horizon is one of the most

robust covariates of saving behavior in previous research, helping to predict saving behavior and to discriminate between savers and nonsavers (Warneryd, 1999). Lee, Park, and Montalto (2000) find that a longer planning horizon is positively associated with saving, and Lusardi (1999) finds a positive relationship between planning and saving, where those who thought a lot about retirement had more wealth. Therefore, if Black households have shorter planning horizons, they may be less likely to save compared to Whites.

Altonji and Doraszelski (2001) investigate Black-White wealth inequality using data from the PSID and a regression decomposition framework. The results indicate that there are important differences between Whites and Blacks in the effects of income and demographics on savings and/or rates of return. Altonji and Doraszelski (2001) suspect that a difference in saving behaviors is the main factor in the wealth inequality. In addition, Scholz and Levine (2003) call for examination of whether saving behaviors vary by race after controlling for income. If no differences in saving behavior by race are found, then factors related to saving behavior can be ruled out as contributors to the racial wealth gap, but if a relationship between race and saving behavior is found, these individual elements could be explored further. The purpose of the current study is to explore whether such differences in saving behaviors between Blacks and Whites exists.

3. Data

This study uses the 2007 Survey of Consumer Finances (SCF), which is sponsored by the Federal Reserve Board in cooperation with the Department of Treasury and provides comprehensive information on the financial characteristics of U.S. households. The sample for the current study is restricted to households with a White or Black household head to compare Black-White differences in saving behaviors. The sample is also limited to nonretired respondents because retirees are expected to exhibit different saving behaviors than nonretirees. Kennickell and Lusardi (2003) find that desired precautionary saving differs between persons under 62 and persons 62 and older, and individuals from the United States and Britain appear to reduce consumption at retirement (Hurd and Rohdwedder, 2003). After removing households with a retired respondent and/or spouse (if present), the sample includes 3,092 respondents.

The SCF consists of five data sets to deal with the problem of missing responses (Kennickell, 1997). Multiple imputation techniques produce the five complete data sets which are referred to as "implicates" (Board of Governors of the Federal Reserve System, 2009). The 2007 SCF data set thus consists of five complete implicates, and the number of observations in the full data set is five times the actual number of respondents. All five implicates are used for the current study. A repeated imputation inference procedure (RII) is used to combine the results from all implicates and adjust for between-implicate error (Montalto and Sung, 1996). The RII procedure is used to estimate the descriptive statistics for this study as well as to conduct the logistic regression analyses in this study.

As the SCF sample does not follow an equal-probability design, the use of weights is required to interpret the survey data (see Board of Governors of the Federal Reserve System, 2009). The descriptive statistics are weighted while the logistic regressions are not, based on

the arguments of Kennickell and McManus (1993) and Montalto (1998). Pooled data, which does not account for the variability in the data because of missing values, is used for the likelihood ratio tests. Additional information on the use of the SCF data set can be found in Bi and Montalto (2004), Gutter and Saleem (2005), Kyrychenko and Shum (2009), Lee, Abdul-Rahman, and Kim (2007), and Yao, Hanna, and Lindamood (2004).

3.1. Definition of variables

Dependent variable: The saving measure is based on the respondent's statement regarding the household's saving habits, with setting aside a certain amount each month or saving the income of one spouse and spending the other considered to be saving regularly (SAVEREG equal to 1 if the household saves regularly, and 0 otherwise).

Income: Researchers have found important differences between Blacks and Whites in the effects of income on saving, and Blacks have been shown to have lower incomes. INC is a continuous variable, scaled by 100,000 in the logistic regression model.

Income uncertainty: Blacks have been shown to experience greater income uncertainty than Whites, so a dummy variable for income uncertainty is included. INCUNC is equal to one if the household does not usually have a good idea of income in the next year, and zero otherwise.

Government assistance: The receipt of government assistance may affect wealth accumulation and saving behaviors. A dummy variable is included for the receipt of government assistance such as TANF (Temporary Assistance for Needy Families), food stamps, or other forms of welfare or assistance such as SSI. The dummy variable, GOVT, is equal to one if the household received any income through such assistance programs, and zero otherwise.

Poor health: Researchers have indicated that Blacks have poorer health than Whites and that there is a negative correlation between poor health and wealth. A dummy variable, POORHLTH, is included in the model, where it is equal to one if the respondent and/or spouse (if present) is reported to be in poor health, and zero otherwise.

Risk tolerance: Studies using the SCF have shown that Blacks are less willing to take investment risks compared to Whites, and risk tolerance has been shown to affect a household's financial behaviors (e.g., Gutter, Fox, and Montalto, 1998). Respondents in the SCF are asked to choose among four hypothetical investment scenarios, and their responses indicate their level of risk aversion, from least risk averse to most risk averse. Three dummy variables are used to represent risk tolerance, from low risk tolerance to above average/high risk tolerance (LOWRISK, AVERISK, HIGHRISK), where average risk tolerance is the reference category.

Saving motives: Researchers have shown that the bequest motive may contribute to a wealth gap between Blacks and Whites. SCF respondents are asked to report up to six of their most important reasons for saving. The dummy variable (BEQMOTV) is equal to one if the household reported a motive to save for an estate as one of their most important reasons for saving, and zero otherwise. Black and White households may also vary in terms of the goal of saving for retirement and/or emergencies. Two dummy variables (RETMOTV and EMERMOTV) are included to represent these motives, with one indicating that the household holds this as a saving motive, and zero otherwise.

Homeownership: As Blacks are less likely to own homes, a dummy variable is included for homeownership (OWN, which is equal to one if the household owns a home, and zero otherwise).

Self-employment: Blacks are less likely than Whites to be self-employed, so a dummy variable is included for self-employment (SELFEMP). The dummy variable is equal to one if the respondent and/or spouse (if present) is self-employed, and zero otherwise.

Credit: Research shows that Blacks and Whites have different access to credit markets and also use credit differently. Dummy variables are first included to indicate a household's feelings toward credit, which is expected to be related to their use of credit. Respondents were asked if they think it is a good idea or a bad idea for people to buy things on an installment plan. The reference category is "good in some ways, bad in others," with dummy variables for "good idea" (CREDITGD) and "bad idea" (CREDITBD). A dummy variable is included to indicate if the household has at least one credit card, where one indicates that the household has a credit card and zero indicates that the household has no credit cards (CCARD). A dummy variable is also included to indicate whether the respondent or spouse/partner (if present) was turned down for credit or considered applying for credit or a loan but did not because of the belief that he or she would be turned down, with one indicating that this did apply to the household and zero indicating that it did not (NOCREDIT).

Unbanked: A dummy variable is included to indicate whether the household is unbanked, or does not have a checking or saving/money market account, with one indicating that the household is unbanked, and zero otherwise (UNBANKED).

Financial literacy: There are no direct questions to test financial literacy in the SCF, so a proxy variable to measure the respondent's general level of cognition about the SCF questions is included (FINLIT). A question answered by the interviewer indicates the respondent's level of understanding of the questions in the survey. Four dummy variables are used in the current study to represent these responses, where poor is the reference category and the three other categories are fair, good, and excellent.

Planning horizon: The SCF includes a question asking respondents which time period is most important to them in planning for saving and spending. The five categories from which respondents can choose are used to construct dummy variables for the household's planning horizon since Blacks have been found to have significantly shorter planning horizons than Whites. The reference category is the next few months (HORIZ1), with four other categories: next year (HORIZ2), next few years (HORIZ3), next 5–10 years (HORIZ4), and longer than 10 years (HORIZ5).

Demographic control variables: age (variable AGE) and education (variable EDUCAT) are included in the model. Continuous variables are used for age and years of education.

Number of persons in the household, NUMBER, is also included as a continuous control variable because it may directly affect consumption and saving (Scholz and Levine, 2003).

Marital status: three dummy variables are used to represent married (MARST1), single male (MARST2), and single female (MARST3) households.

Race: an indicator variable (RACE2) representing race is equal to 1 if the household respondent is Black, and zero otherwise.

4. Empirical model of household saving

4.1. Hypotheses

Hypothesis 1: The factors that affect household saving differ between Black and White households.

Hypothesis 2: Differences in household saving between Black and White households are because of racial differences in the individual determinants of household saving (coefficient effect), not race in and of itself (constant effect).

4.2. Logit model

The method of Jackson and Lindley (1989) is used to test for statistical differences between Black and White households by estimating a full interaction model and decomposing any statistical difference to better understand the nature of the between-group differences. Gutter, Fox, and Montalto (1999) use this method to examine racial differences in investor decision making. To estimate the interaction model, the data for White and Black households is pooled. The dependent variable is regressed on an intercept, the set of explanatory variables, an indicator for race (RACE2), and a set of interaction variables created by multiplying each independent variable by the race variable. The decomposition requires estimating two additional models: a reduced model that omits the set of interaction variables and the indicator for race, and an intermediate model that includes the race indicator but does not include the interaction variables.

The interaction and reduced models are compared using a likelihood ratio test to determine the joint significance of the indicator variable for race and the set of interaction variables. If this test is significant, then the method of Jackson and Lindley (1989) to decompose the total between-group difference into three components is used. The three components are the constant effect, the endowment effect, and the coefficient effect. The endowment effect is the portion of the total difference accounted for by differences between Black and White households in the level of the explanatory variables. The coefficient effect is a measure of the difference between the two groups in the response of the dependent variable to changes in the independent variables. To determine whether there is a significant coefficient effect, the interaction and intermediate models are compared. The constant effect is the part of the total difference that cannot be accounted for by differential endowments or responses. The estimated coefficient on the race indicator variable in the interaction model is used to assess whether there is a significant constant effect.

To test Hypothesis 1, a likelihood ratio test is used to test the joint statistical significance of the race indicator variable and the set of interaction variables by comparing the interaction model to the reduced model. The significance of the χ^2 statistics on individual interaction variables is then used to identify the specific coefficients that differ between Black and White households. A likelihood ratio test is also used to investigate Hypothesis 2, which states that differences in saving behavior between Black and White households are because of racial differences in the individual factors related to household saving (coefficient effect) and not race in and of itself (constant effect). To test Hypothesis 2, the statistical significance of the

set of interaction terms is explored by comparing the interaction and intermediate models. A significant coefficient effect provides evidence of Black-White differences in the impact of the independent variables on saving. A significant constant effect provides evidence of Black-White differences in household saving beyond the factors controlled for in the model.

5. Empirical results

5.1. Characteristics of Black and White households

Descriptive statistics for the total sample of Black and White households as well as the tests of significant differences between households headed by Black and White respondents are provided in Table 1. The SCF does not include oversampling of minority groups, so the number of Black households is much smaller than the number of White households (Black $N = 518$ vs. White $N = 2{,}574$). In the total sample, there is no significant difference in the proportion of households reporting to be regular savers (42.3% for Black and 45.7% for White households).

The average income of Black and White households in the sample is significantly different, with average income of $46,206 for Black households and $99,136 for White households. About 43.7% of Black households and 24.8% of White households have income uncertainty, or do not usually have a good idea of their income in the next year. This difference is statistically significant. About 20.8% of Black households received some form of government assistance in the previous year, while only about 8% of White households received such assistance ($\chi^2 = 73.4$; $p < 0.05$). There was no significant difference in the proportion of Black and White households in the total sample reporting to be in poor health (7.72% and 5.97%, respectively).

The risk tolerance distributions of Black and White households differ significantly. Half of Black respondents indicated a low risk tolerance compared to about one-third of White households (32%). Nearly half of White households (42.9%) reported average risk tolerance, compared to 32% of Black households. One-quarter of White households reported above average to high risk tolerance, while about 18% of Black households reported above average to high risk tolerance. The difference in the proportion of Black and White households reporting a motive to save for a bequest is significant, with 14.1% of Black and 7.0% of White households reporting a bequest saving motive. The difference in the proportion of households in each group reporting to have a retirement saving motive is statistically significant, with over half of White households (55%) reporting this motive as compared with 32% of Black households. About 38% and 32% of Black and White households reported an emergency saving motive, respectively, and the difference is statistically significant. Around three-quarters of White households in the sample reported owning a home (72.2%), while less than half of Black households (43.8%) were homeowners.

About 15% of White households in the sample were self-employed, with only 6.7% of Black households reporting self-employment, which is a statistically significant difference. A greater proportion of White respondents indicated that they think using credit is bad (36%) as compared with Black respondents (31%), with 28% and 36% of White and Black

Table 1 Descriptive statistics of total sample[a]

	Black $N = 518$	White $N = 2574$	Test for difference between samples
SAVEREG	42.26%	45.73%	$\chi^2 = 2.10$
INC	$46,206	$99,136	$t = 176.43$*
INCUNC	43.7%	24.83%	$\chi^2 = 76.09$*
GOVT	20.82%	7.96%	$\chi^2 = 78.37$*
POORHLTH	7.72%	5.97%	$\chi^2 = 2.25$
LOWRISK	50.27%	32.06%	$\chi^2 = 62.74$*
AVERISK	32.06%	42.88%	$\chi^2 = 20.85$*
HIGHRISK	17.67%	25.06%	$\chi^2 = 12.97$*
BEQMOTV	14.07%	7.01%	$\chi^2 = 28.49$*
RETMOTV	32.46%	55.12%	$\chi^2 = 88.55$*
EMERMOTV	37.61%	31.73%	$\chi^2 = 6.77$*
OWN	43.84%	72.23%	$\chi^2 = 158.17$*
SELFEMP	6.66%	15.44%	$\chi^2 = 27.66$*
CREDITGD	35.88%	27.95%	$\chi^2 = 13.08$*
CREDITN	33.41%	36.02%	$\chi^2 = 1.28$
CREDITBD	30.71%	36.03%	$\chi^2 = 5.35$*
CCARD	50.72%	77.46%	$\chi^2 = 156.21$*
NOCREDIT	35.12%	14.35%	$\chi^2 = 126.83$*
UNBANKED	30.87%	18.68%	$\chi^2 = 39.01$*
EXFINLIT	34.78%	53.16%	$\chi^2 = 58.27$*
GDFINLIT	51.82%	39.92%	$\chi^2 = 25.08$*
FRFINLIT	11.76%	6.71%	$\chi^2 = 15.77$*
PRFINLIT	1.64%	0.21%	$\chi^2 = 19.60$*
HORIZ1	31.00%	18.88%	$\chi^2 = 38.35$*
HORIZ2	16.40%	9.46%	$\chi^2 = 21.85$*
HORIZ3	21.59%	27.14%	$\chi^2 = 6.86$*
HORIZ4	21.47%	27.76%	$\chi^2 = 8.72$*
HORIZ5	9.54%	16.76%	$\chi^2 = 17.12$*
AGE	41.65	45.32	$t = 151.65$*
EDUCAT	13.16	13.79	$t = 161.54$*
NUMBER	2.59	2.54	$t = 7.58$*
MARST1	31.64%	53.32%	$\chi^2 = 81.02$*
MARST2	24.25%	22.73%	$\chi^2 = 0.56$
MARST3	44.12%	23.95%	$\chi^2 = 88.22$*

Note. Significant differences indicated by *$p < .05$.

respondents indicating that using credit is good, respectively. About three quarters of White households (77%) had a credit card, while only about half of Black households (51%) had a credit card. Over one third of Black households (35%) were turned down for credit in the previous five years or did not apply because they thought they would be turned down as compared with only 14% of White households. About 31% and 19% of Black and White households did not have a checking or saving account, respectively.

The planning horizons of Black and White differ significantly. A greater proportion of Black households reported a planning horizon of the next few months (31% vs. 18.9% of White households) or the next year (16.4% vs. 9.5%). Greater proportions of White households had planning horizons of the next few years, the next 5–10 years, or 10 years or longer. A greater proportion of White households appear to have longer planning horizons, while Black households are clustered in the shorter planning horizon groups.

Table 2 Logistic analysis of likelihood of saving regularly

	Reduced model		Intermediate model		Interaction model	
	Coefficient	*p*-value	Coefficient	*p*-value	Coefficient	*p*-value
Intercept	−1.589*	0.048	−1.928*	0.015	−2.211*	0.040
INC	−0.001	0.248	−0.001	0.262	−0.001	0.299
INCUNC	0.265**	0.004	0.288**	0.002	0.334***	<0.001
GOVT	−0.371	0.064	−0.419*	0.039	−0.191	0.446
POORHLTH	−0.405	0.061	−0.382	0.078	−0.319	0.177
LOWRISK	−0.542***	<0.001	−0.564***	<0.001	−0.609***	<0.001
HIGHRISK	−0.023	0.808	−0.025	0.795	−0.025	0.802
BEQMOTV	0.040	0.763	0.019	0.883	−0.048	0.736
RETMOTV	0.424***	<0.001	0.432***	<0.001	0.455***	<0.001
EMERMOTV	0.185*	0.034	0.172	0.051	0.178	0.058
OWN	0.195	0.097	0.262*	0.028	0.248	0.058
SELFEMP	−0.172	0.080	−0.147	0.136	−0.134	0.190
CREDITGD	0.123	0.219	0.099	0.325	0.123	0.255
CREDITBD	−0.049	0.606	−0.046	0.629	0.004	0.971
CCARD	0.092	0.467	0.160	0.211	0.115	0.432
NOCREDIT	−0.462***	<0.001	−0.501***	<0.001	−0.668***	<0.001
UNBANKED	−0.218*	0.026	−0.238*	0.015	−0.205	0.054
EXFINLIT	−0.012	0.986	0.177	0.798	0.618	0.530
GDFINLIT	−0.063	0.928	0.105	0.879	0.528	0.592
FRFINLIT	0.110	0.878	0.271	0.701	0.718	0.474
HORIZ2	0.191	0.274	0.185	0.290	0.255	0.208
HORIZ3	0.294*	0.032	0.325*	0.019	0.447**	0.004
HORIZ4	0.638***	<0.001	0.663***	<0.001	0.695***	<0.001
HORIZ5	0.660***	<0.001	0.690***	<0.001	0.742***	<0.001
AGE	−0.009**	0.009	−0.009*	0.014	−0.010*	0.015
EDUCAT	0.101***	<0.001	0.099***	<0.001	0.090***	<0.001
NUMBER	−0.041	0.240	−0.048	0.167	−0.056	0.135
MARST2	−0.143	0.250	−0.151	0.226	−0.196	0.143
MARST3	−0.062	0.625	−0.112	0.382	−0.178	0.206
RACE2	—	—	0.625***	<0.001	0.082	0.965
INC*RACE2	—	—	—	—	−0.024	0.341
INCUNC*RACE2	—	—	—	—	−0.293	0.307
GOVT*RACE2	—	—	—	—	**−0.784**	**0.081**
POORHLTH*RACE2	—	—	—	—	−0.632	0.342
LOWRISK*RACE2	—	—	—	—	0.340	0.298
HIGHRISK*RACE2	—	—	—	—	−0.021	0.957
BEQMOTV*RACE2	—	—	—	—	0.213	0.600
RETMOTV*RACE2	—	—	—	—	−0.148	0.650
EMERMOTV*RACE2	—	—	—	—	−0.318	0.274
OWN*RACE2	—	—	—	—	0.218	0.540
SELFEMP*RACE2	—	—	—	—	−0.323	0.542
CREDITGD*RACE2	—	—	—	—	−0.454	0.152
CREDITBD*RACE2	—	—	—	—	**−0.647**	**0.057**
CCARD*RACE2	—	—	—	—	0.236	0.461
NOCREDIT*RACE2	—	—	—	—	**0.787**	**0.006**
UNBANKED*RACE2	—	—	—	—	−0.321	0.299
EXFINLIT*RACE2	—	—	—	—	−0.864	0.535
GDFINLIT*RACE2	—	—	—	—	−0.666	0.631
FRFINLIT*RACE2	—	—	—	—	−0.723	0.614
HORIZ2*RACE2	—	—	—	—	−0.353	0.417

Continued

Table 2 (Continued)

	Reduced model		Intermediate model		Interaction model	
	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value
HORIZ3*RACE2	—	—	—	—	**−1.037**	**0.008**
HORIZ4*RACE2	—	—	—	—	−0.016	0.968
HORIZ5*RACE2	—	—	—	—	−0.409	0.420
AGE*RACE2	—	—	—	—	0.003	0.802
EDUCAT*RACE2	—	—	—	—	0.090	0.225
NUMBER*RACE2	—	—	—	—	0.079	0.458
MARST2*RACE2	—	—	—	—	0.562	0.173
MARST3*RACE2	—	—	—	—	0.507	0.187
-2 Log Likelihood	18569.34***		18489.21***		18350.60***	

Note. Coefficients in bold lettering differed significantly between Black and White households at $p < 0.1$. Significant individual coefficients indicated by * $p < .05$; ** $p < 0.01$; *** $p < 0.001$.

There is a statistically significant difference in the mean age of Black and White respondents in the sample. The mean age of Black respondents in the sample was 41.7 years, with a mean age of 45.3 for White respondents. The number of years of education of Black and White respondents in the sample differs significantly (13.16 vs. 13.79 years, respectively). Black households had a slightly higher average number of people in the household (2.59 vs. 2.54 for White households), although the difference is statistically significant.

5.2. Logistic regression results

The logistic regression results are shown in Table 2. The results of the interaction model indicate that there are Black-White differences in the determinants of being a regular saver. This supports Hypothesis 1, which states that the factors affecting household saving differ for Black and White households. The joint test of the race indicator variable and the set of interaction terms is statistically significant ($p < 0.001$).

The decomposition of the between-group difference indicates that there is an insignificant constant effect ($p = 0.965$) and a statistically significant coefficient effect ($p < 0.001$), supporting Hypothesis 2, which states that differences in household saving between Black and White households are because of racial differences in the individual factors related to household saving, not to race in and of itself. The race indicator is significant and positive in the intermediate model, indicating that Black households are actually more likely to save after adjusting for the factors in the model. In the interaction model, the race indicator variable for a Black household head is no longer significant.

Black-White differences in the factors affecting household saving are the result of differences in the impact of the explanatory variables on household saving. The variables for which Black and White households differ significantly in terms of the effect on the dependent variable (saving), as shown in the interacted model, are receiving government assistance, the belief that using credit is bad, being turned down for credit in the previous five years or not applying because they thought they would be turned down, and a planning horizon of the next few years.

6. Discussion and Implications

This paper presents an exploration of Black-White differences in saving behaviors. Using the SCF, the factors that affect saving are found to differ for Black and White households. The results further the investigation of racial inequalities in financial well-being in that the work of researchers such as Altonji and Doraszelski (2001) and Scholz and Levine (2003) indicates a need for research on whether there is a relationship between race and saving behavior. They also have important implications for financial educators and professionals who need to better understand the behaviors of various groups.

There are several limitations of the current study. Many of the variables in the data set are self-reported, and when using a dichotomous measure of saving, there is no way to measure the accuracy of the households' reports. In addition, the income levels of the SCF respondent appear to be higher than those in general national reports, although weights are used to remedy this situation as much as possible.

Black households receiving government assistance are significantly less likely to save, while there is no significant effect of government assistance on the likelihood of saving among White households. Previous research indicates that households receiving government assistance may be less likely to save so as to not exceed the maximum level of assets for program eligibility, but the current results indicate that this may differ for Black and White households. Feeling that the use of credit is bad also has a significantly negative relationship with the likelihood of saving for Black households, while there is no significant relationship for White households. Black households that were turned down for credit in the previous five years or were not applying for credit because of the belief that they would be turned down were significantly more likely to save relative to White households that were turned down for credit. The relationship of feelings about credit and credit use with saving behavior requires further study.

The effect of having a planning horizon of the next few years significantly differs for Black and White households, significantly increasing the likelihood of saving for White, but not Black, households. However, having planning horizons of 5–10 years and 10 years or longer increase the likelihood of saving for both White and Black households relative to having a planning horizon of the next few months. The variables in the model as a collective group differ in how they affect the likelihood of saving regularly for Black and White households, with significant differences in the effect of several individual factors. This provides further information on the saving behaviors of Black and White households. As the household composition of Black and White households often differs, further study examining married, single male, and single female households separately following the methods of Altonji and Doraszelski (2001) would help in expanding the current findings.

Scholz and Levine (2003) stated that households with greater risk aversion will save more compared to those that are less risk-averse to prevent low consumption when earnings decrease or health is poor. In contrast, the current study indicates that households with low risk tolerance (greater risk aversion) are significantly less likely to save, and this applies to both Black and White households. Bi and Montalto (2004) found that households with low risk tolerance are also less likely to have adequate emergency fund savings, although Hanna and Gutter (1998) argue that the SCF measure of risk tolerance does not strictly fit the

economic concept of relative risk aversion, so further exploration is needed. A negative link between low risk tolerance and saving is worrisome for these individuals with low risk tolerance, because the saving rates of risk averse individuals should be higher to compensate for the less risky investments with lower returns (Ervin, Faulk, and Smolira, 2009).

Developing an understanding of differences in saving behaviors among different racial and ethnic groups allows researchers, educators, and policymakers to tailor their efforts more effectively. It is crucial to recognize important ethnic and cultural differences related to financial behaviors (Brobeck, 2002) to aid minority groups in securing their place in our "ownership" society (Mandell, 2006). The findings of this study are consistent with previous studies showing that Blacks and Whites differ in financial behaviors. The empirical model allows the factors affecting saving to differ between Black and White households, and the results show that differences in saving behavior are because of Black-White differences in the individual factors related to household saving, not to race in and of itself. This finding that there are racial differences in saving behavior provides support for the belief of Altonji and Doraszelski (2001) and Scholz and Levine (2003) that racial differences in wealth may be accounted for by differences in saving behavior. However, further research, particularly research using other data sets, is needed. The results can also help financial professionals better understand the financial behaviors of various racial groups to provide better services.

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