

EDUCATIONAL ATTAINMENT AND FINANCIAL SATISFACTION: THE CHANGING  
ECONOMIC VALUE OF A COLLEGE DEGREE

Study presented at the  
Mid-South Educational Research Association  
Knoxville, TN  
November 6-7, 2013

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## EDUCATIONAL ATTAINMENT AND FINANCIAL SATISFACTION: THE CHANGING ECONOMIC VALUE OF A COLLEGE DEGREE:

Dwindling American financial satisfaction and growing college degree attainment were revealed in national social survey data spanning more than four decades ( $N = 57,061$ ). Against these backdrops, associations between being financially satisfied and having a college degree grew stronger in each decade, with the strongest association between graduate degree and financially satisfied in 2010-2012 data. Associate degree was inversely correlated with financial satisfaction when statistically significant, but associations grew more weakly inverse over time. Older Americans with a bachelor or graduate degree in 2010-2012 were 152% more likely to be financially satisfied, compared to 68% more likely for young counterparts. The strength of associations between college degree and financial satisfaction more than doubled between the 1970s and 2012 for men and women. College degree was a stronger predictor of financial satisfaction for Other individuals than for White individuals in 2010-2012 data.

**Key Words:** College degree, educational attainment, financial satisfaction, logistic regression, social survey analysis



college degree has been called a prerequisite for prosperity [1]. According to President Obama, post-secondary education is an economic issue when unemployment in non-college educated Americans is double the rate of unemployment in college educated Americans [1]. In the interest of increasing the number of American college graduates in 2020 by eight million [1], the reauthorization of the Elementary and Secondary Education Act contained a \$14.5 billion funding request [2] for graduating every high school student— from all ethnicities and races, income levels, and disability statuses— college ready [3]. Social and economic changes, however, may have affected relationships between financial satisfaction and educational attainment. The common expectation is that higher levels of education reap greater financial satisfaction for individuals because a college degree endows graduates with skills and knowledge that are valued by society. Is this assumption regarding the economic benefit of a post-secondary degree still valid? Young adults face a question of growing complexity in today's fluid landscape of global economies, transnational knowledge societies, wealth inequities, and economic uncertainties: Is a college degree still a sound financial investment?

A preliminary, trend noting focus of the current study was to examine changes over time in the proportions of those Americans who are financially satisfied and changes in the proportions of Americans who have a post-secondary degree. A study purpose was to investigate changes in the economic worth or currency of a college degree by observing associations between financial satisfaction and educational attainment in 40 years of national social survey data ( $N = 57,061$ ). The analyses that followed observed proportions of financially satisfied Americans by age, gender, and race cohorts within educational attainment groups over time.

## Literature Review

Research and scholarship link an increased level of education with greater financial security [4; 5; 6; 7; 8]. Education provides skills and experiences that lead to “positive cycles of educational and cultural transmission, rather than intergenerational transfer of educational disadvantage” [9<sup>26</sup>]. As post-secondary education is crucial in informational societies, a college degree positions young adults for the best new jobs in today’s economy [10]. A decent living standard [5] and successful life [11] may now require a college or professional degree. College graduates report earning about \$20,000 more a year than individuals without a college degree [12]. The life-long, career course payoff from a bachelor’s degree amounts to over one million dollars [10]. One third of American 25 to 34-year-olds surveyed with a high school diploma or less level of education lived below the poverty line, compared to only 5% of individuals with an associate degree and less than 3% for individuals with a bachelor degree [13]. Additionally, young adults without a college degree experience low-pay jobs, lack of health insurance and other benefits, employment instability, and periods of unemployment [14].

The positive relationship between a post-secondary level of education and increased financial satisfaction may have been affected, or perhaps even negated, by a flooding of the labor market with college graduates—the hypothesis of an oversupply of well-educated citizens. Indeed, with a 48% increase in the proportion of young Americans with a postsecondary degree between the 1970s and the 2000s [15], the number of young adults now going to college is high. According to a 2012 Clark Poll, 79% of young adults receive college or vocational training after high school [11]. Pew Research Center reported 94% of American parents expect their child to attend college [12].

Murray has observed too many people are going to college these days, and he has questioned whether all young adults, regardless of individual circumstance or capabilities, should attend college [16]. College may be a great place to have fun and even a valuable growing up experience, but when the question is whether college is firm preparation for making a living, “the answer is: in a sensible world, hardly ever” [16<sup>87</sup>]. The demand for workers with high-tech skills is growing in every industry in the new economy of informational and knowledge societies, and, thus, high-school graduates are only marginally correct when they believe a college degree will get them higher-paying jobs [16]. Some college degreed managers with average salaries, for example, have top-pay potential as electricians [16].

Post-secondary education may be a less attractive pathway to financial satisfaction for individuals today because of student debt, underemployment, and unemployment. The cost of college tuition has skyrocketed, rising faster than housing, transportation, or medical care services [1]. Lewis observed, “Once upon a time completing a college degree provided security and the knowledge that once you paid your dues you’d never have to endure another commodity job as long as you lived. Once upon a time” [17<sup>11</sup>]. Waiters and retail salespersons in the reality of today’s workplace often hold graduate and professional degrees— jobs they qualified for with only a high school diploma [17]. Yet, less desirable outcomes are present for college graduates than underemployed. The proportion of unemployed college-educated Americans has reached historic highs [18]. The number of Americans with a post-secondary level of education carrying more than \$7,000 worth of debt has, unsurprisingly (considering ever-rising tuition and high unemployment among college graduates), doubled in only 4 years [19]. College graduates report substantial debt burdens from tuition make paying other bills and buying a home difficult [12].

The theory of academic capitalism [21] constructs a practical and economically relevant benefit to higher education—and a focus on financial profit. Slaughter and Rhoades observed the corporatization of higher education and the integration of universities in the new economy [21]. From the viewpoint of an academic capitalist, students are seen as consumers capable of shouldering large loads of educational debt and targeted as a marketable demographic for university products, such as recreation, food, or alumni services [12]. Similarly, fiscally minded college bound students may adopt tenets of academic capitalism in a cost and benefit analysis of a college degree.

### **Conceptual Framework**

The economic value that a college degree garners an individual is research worthy and not too seedy a consideration for higher education's noble purposes of "the perfectability of man's intellect" [22<sup>3</sup>] and the cultivation of a society of excellence. The educational mission of the school has been decreed by authority of the society [22]. Education has been handed the intellectual charge of fostering the types of learning that enable individuals to better deal with and balance life affairs [23]. Well-trained citizens are educational products that serve a healthy democracy [23]. An objective of enhancing beneficial dispositions and mindsets in an informed citizenry [24] reflects Tyack's [25] ideological belief that education solves societal ills. Dewey acknowledged education's responsibility towards developing individual aptitudes and interests, but this conceptualization was firmly established within a framework of service learning [26]. The deeper knowledge and more expansive mindsets of college-educated individuals can be viewed as societal contributions. Both individuals and society are served when education prepares individuals to thrive in society by doing what they are good at and enjoy doing. The views of American university presidents fall in line with this notion— 50% believe the college mission is to foster maturity and intellectual growth, while 48% believe the goal of college is to develop skills, knowledge, and training that prepare graduates for the working world [13]. An underlying proposition of the current study is the association between financial satisfaction and educational attainment is alterable to some degree by an evolving social and economic landscape; therefore, recognition of the macro context of societal need as a causal factor in the determination of the economic benefit an individual receives from a college education is a study framework.

Institutions of higher learning have an ethical obligation towards ensuring degree programs represent knowledge and skills highly valued by society. In highlighting the importance of educational programming, Bruner observed contemporary knowledge may be addressed incorrectly or inadequately [23]. Thus, the solving of social ills and the resolution of long-term national security crises not only depend on an educated citizenry [23], but on how well the skills and knowledge gained through that education were adapted to societal need. The present examination of financial satisfaction by level of educational attainment, to an extent, also observes how well higher education has adapted to the dynamic social and economic landscape.

### **Research Questions**

Four research questions guided the investigation: (a) To what degree has financial satisfaction changed over time?; (b) To what degree has college degree attainment changed over time?; (c) To what degree has the relationship between financial satisfaction and college graduates changed over time?; and (d) To what degree does the financial satisfaction of college graduates vary as a function of age, gender, or race?

## Methods

Data from the nationally representative 1972-2012 General Social Survey (GSS) Datafile from the National Opinion Research Center were utilized [27]. Online data access and analysis was through the Computer-assisted Survey Methods Program at the University of California, Berkley. The survey is second only to the Current Population Survey (United States Census) as the most popular data set in top sociology journals [28]. The GSS contains 1,427 variables, with more than 230 trends and over 20 data points, to track opinions, beliefs, and behaviors of non-institutionalized, English speaking Americans 18 to 89 years or older [29]. Block quota sampling (1972 and 1974 surveys) and full-probability sampling (surveys 1976 and after) promote generalizations to the United States population. Alaska and Hawaii were not included, and Spanish speaking Americans have been surveyed since 2006. The GSS response rate is over 70% [27]. All GSS variables used in the present study were included in the GSS core and asked each survey year (1972-2012). Total population was 57,061, but population size varied according to the weights and variables used in analyses.

## Variables

Financial satisfaction was the dependent measure. The social survey variable for financial satisfaction held the advantage of directly observing relationships between an individual's financial satisfaction and an individual's educational attainment level over time, rather than measuring associations indirectly with employment or economic data. Response categories of financial satisfaction were on a three-point scale of satisfied, more or less satisfied, and not at all satisfied. The survey prompt for financial satisfaction read:

We are interested in how people are getting along financially these days. So far as you and your family are concerned, would you say that you are pretty well satisfied with your present financial situation, more or less satisfied, or not satisfied at all? [27]

Decade, degree, age, gender, and race were independent and/or filter variables. Degree was also a dependent measure in preliminary analyses where financial satisfaction was not a factor. Survey years were controlled for decade as follows: 1970s (1972-1979), 1980s (1980-1989), 1990s (1990-1999), 2000s (2000-2009), and 2010-2012. Degree measured respondents' highest degree level. Response categories were no degree, high school diploma, associate degree, bachelor degree, and graduate degree. Age was controlled for a category of young adults (18 to 34-years) and a category of older adults (35 years and older). Extending the age of young adults to 34 years was based on an upper boundary of the late adult transitioning stage [9; 14] and gave enough time for young Americans to attain bachelor and graduate degrees. Race categories were White, Black, and Other. Measures, categories for recoding and dichotomizing, unweighted frequencies, and descriptive statistics for study variables were reported (Table 1 and Table 2).

Table 1

*Descriptive Statistics for Continuous and Ordered Categorical Variables*

Measure	Description	<i>n</i>	<i>M</i>	<i>SD</i>
Age	Age in years	56,859	45.70	17.47
	Young adults	18,405	32	
	Older adults	38,454	68	
Decade	Survey years	57,061	1,992.08	11.72
	1970s	10,652	19	
	1980s	14,241	25	
	1990s	13,223	23	
	2000s	14,927	26	
	2010-2012	4,018	7	
Degree	Highest degree	56,896	1.32	1.16
	None	12,667	22	
	High School	29,287	51	
	Associate	3,070	5	
	Bachelor	8,002	14	
	Graduate	3,870	7	
Financial Satisfaction	Satisfaction with financial situation	52,454	1.97	.75
	Satisfied	15,344	29	
	More or less	23,176	44	
	Not at all	13,934	27	

*Note.* Americans over 89 years were coded as 89 years in GSS. First year of survey was 1972. Totals may not equal 100 due to rounding.

Source: General Social Survey (1972-2012). Accessed through Computer Assisted Survey Methods Program, University of California, Berkeley.

### Analysis

Frequency cross-tabulations and independent logistic regressions were employed. A stratified cluster sample design with stratum and cluster variables in a Taylor series approximation were applied to cross-tabulations. Regression coefficients measured one unit change effect of the independent variable (college degree) on the dependent variable logit (financial satisfaction). Independent logistic regressions with college degree on financial satisfaction were repeated in multivariate analyses with year (decade) filters or product term filters (year and categories of age, gender, and race).

Percentages were charted (Figure 1 and Figure 2), and Pearson Chi-Squares and significance levels were noted in figures and Table 6. Probability levels in cross-tabulations were obtained from *F*-values. Regression coefficients and level of statistical significance

were reported in Table 4, Table 5, Table 7, and Table 8. Regression coefficients, level of statistical significance, standard errors, *Exp (B)*, *t*-test, and pseudo-*R*<sup>2</sup> were reported in Table 5, Table 7, and Table 8. A survey weight was applied to all analyses. A 95% confidence level was applied throughout, and a threshold of .05 determined statistical significance.

Bi-variate relationships between interval-scaled study variables were presented in a correlation matrix (Table 3). Financial satisfaction was reverse coded. Intercorrelations were very low (Cronbach's alpha = .22; *SE* = .004; Average Correlation = .07). As expected, although weak, positive correlations were observed between decade and degree and between degree and financial satisfaction. A weak positive Pearson correlation was also observed between age and financial satisfaction.

Table 2

*Descriptive Statistics for Categorical Variables*

Measure	Category	<i>n</i>	%
Gender		57,061	
	Men	25,146	44
	Women	31,915	56
Race		57,061	
	White	46,350	81
	Black	7,926	14
	Other	2,785	5

*Source.* General Social Survey (1972-2012). Accessed through Computer Assisted Survey Methods Program, University of California, Berkeley.

Table 3

*Correlation Matrix: Pearson Correlation Coefficient*

	Age	Year (Decade)	Degree	Financial satisfaction
Age	1.00			
Year (Decade)	.05	1.00		
Degree	-.08	.19	1.00	
Financial satisfaction	.15	-.03	.12	1.00

*Note.* Missing data excluded Listwise. COMPWT applied. Financial satisfaction was reverse coded.

*Source:* General Social Survey (1972-2012). Accessed through Computer Assisted Survey Methods Program, University of California, Berkeley.

## Results

### To What Degree Has Financial Satisfaction Changed Over Time?

Proportions of financially satisfied U.S. adults were charted in Figure 1. Overall American financial satisfaction dropped 7%age points in 2010-2012 (25%) from a 1970s high of 32%. Cross-tabulations were controlled for (displayed by) age, gender, or race. Financial satisfaction was at lowest levels for all groups in 2010-2012. Older, men, and White were sub-groups with financially satisfied proportions equal to or above a U.S. trend line in every decade. Financial satisfaction was lower for young U.S. adults than older U.S. adults in each decade, with a decade gap of difference in financial satisfaction by age group ranging from 5%age points (2010-2012) to 11%age points (1980s). The gap of difference in financial satisfaction by gender was minimal, ranging from 0 to 1%age point. The Other sub-group of race realized the steepest drop in financial satisfaction, with an 18%age point drop between the 1970s (37%) and 2010-2012 (19%). For White individuals, financial satisfaction decreased by 7%age points between the 1970s (34%) and 2010-2012 (27%).

### To What Degree Has College Degree Attainment Changed Over Time?

Proportions of U.S. adults with any college degree (i.e., associate, bachelor, and graduate) were observed by cross-tabulation analysis and charted in Figure 2. The proportion of college-degreed U.S. adults increased 20%age points between the 1970s (15%) and 2010-2012 (35%). In other words, 15 out of 100 random U.S. adults held a college degree in the 1970s, but this proportion doubled to 35 out of 100 in 2010-2012. Cross-tabulations were filtered for age, gender, or race, and *p* values remained statistically significant for all sub-groups except Other. Older, men, and White were sub-groups with college degree proportions equal to or above a U.S. trend line in every decade (Figure 2).

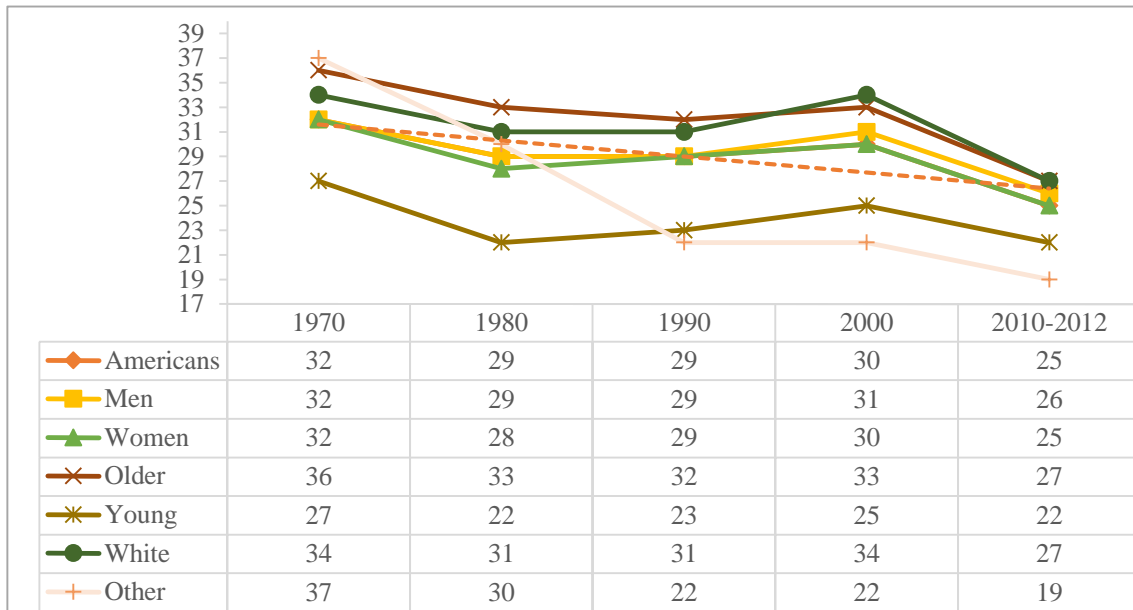
The proportion of older U.S. adults with a college degree increased 25%age points between the 1970s (13%) and 2010-2012 (38%), compared to the 10%age point increase between the 1970s (18%) and 2010-2012 (28%) for young adults. The proportion of young U.S. adults with a college degree was 5%age points larger than that of older adults in the 1970s. By 2010-2012, however, the proportion of older college-degreed U.S. adults was 10%age points larger than young adults.

Figure 1 and Figure 2 analyses paint a backdrop of decreasing American financial satisfaction (-7%age points) and increasing college degree attainment (+20%age points) between the 1970s and 2010-2012. Relationships between financial satisfaction and college degree were investigated in the following analyses. The question was not one of relationships between increased educational attainment level or years of schooling and financial satisfaction, but an inquiry of change over time in the strength and direction of associations between financial satisfaction and a college degree. For this reason, independent (level of educational attainment) and dependent (is financially satisfied) variables were dichotomized in the following series of independent logistic regressions.



Figure 1

American Financial Satisfaction by Year (Decade): Displayed by Gender, Age, and Race

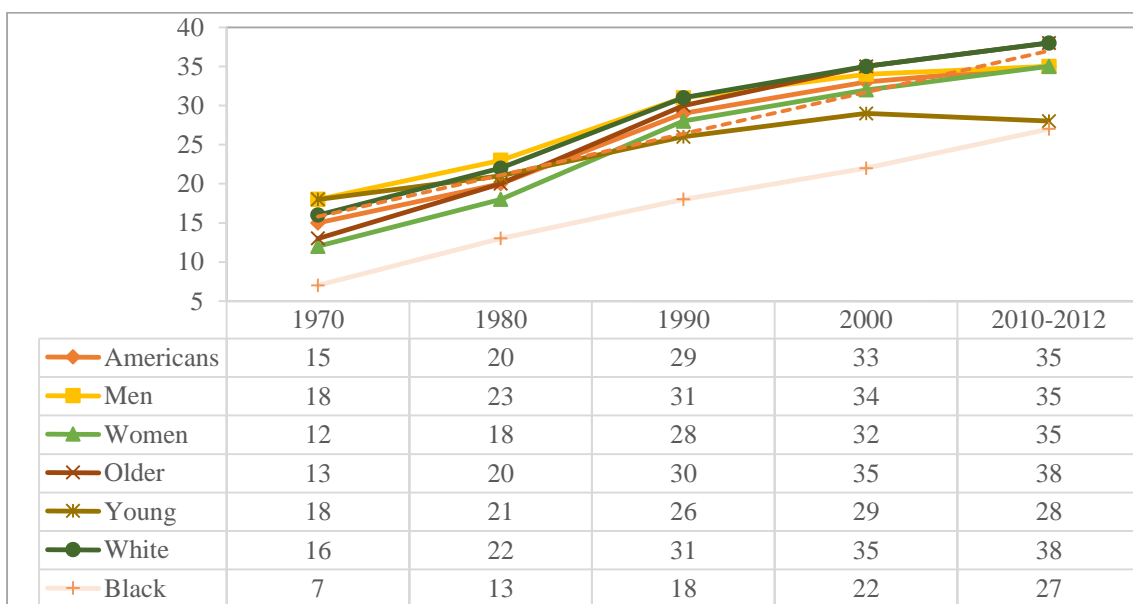


Note:  $\chi^2 = 88.25, p < .0001$  (Americans, Gender, Race);  $\chi^2 = 87.30, p < .0001$  (Age). Analyses filtered for the Black race subgroup were not significant. WTSSALL applied.

Source: General Social Survey (1972-2012). Accessed through Computer Assisted Survey Methods Program, University of California, Berkeley.

Figure 2

College Degree Attainment by Year (Decade): Displayed by Gender, Age, and Race



Note:  $\chi^2 = 1,597.74, p < .0001$  (Americans, Gender, Race);  $\chi^2 = 1,516.54, p < .0001$  (Age). Analyses filtered for the Other race subgroup were not statistically significant. WTSSALL applied.

Source: General Social Survey (1972-2012). Accessed through Computer Assisted Survey Methods Program, University of California, Berkeley.

### **To What Degree Has the Relationship Between Financial Satisfaction and College Graduates Changed Over Time?**

Logistic regressions were performed to observe the strength and direction of associations between financial satisfaction and educational attainment levels. Regressions were repeated for any college degree (i.e., associate, bachelor, and graduate) and each category of degree. Considering the increase in the number of college graduates (Figure 2), devaluation of the economic worth of a college degree because of oversupply was one study proposition. Did the flood of college graduates in the labor market and demand for skilled (but not necessarily degreed) laborers devalue the currency of a college degree? This hypothesis was not supported by data analysis. As shown on Table 4, any college degree was a statistically significant predictor of financial satisfaction in each decade, with these associations growing stronger in each consecutive period.

By degree type, associate degree was inversely correlated with financial satisfaction in all statistically significant time measures, but these associations grew more weakly inverse over time (Table 4). Bachelor degree was a significant predictor of financial satisfaction in each decade. Associations between bachelor degree and financial satisfaction grew stronger over time, but bachelor degree was an equally strong predictor of financial satisfaction in the 2000s and 2010-2012. Graduate degree was a stronger predictor than was bachelor degree at each measure, and graduate degree became a stronger predictor of financial satisfaction in each consecutive time period. The strongest association observed was between financial satisfied and graduate degree in 2010-2012.

Table 4 appears to answer the question of whether a college degree remained as strong a predictor of financial satisfaction for young adults today as it was for their parents in previous decades. Data revealed bachelor degree and graduate degree were stronger predictors of financial satisfaction in 2010-2012 than in the 1970s, 1980s, and 1990s. However, parents of young adults today were young adults in previous decades. Multivariate analyses with age factored in the decade, degree, and financial satisfaction equation were needed to answer the question of whether a college degree remained as reliable a predictor of financial satisfaction for young adults in recent data as it was for their parents in previous decades.

### **To What Degree Does the Financial Satisfaction of College Graduates Vary as a Function of Age, Gender, or Race?**

Each category of age, gender, and race was combined with year/decade to create product term filters (e.g., 2000-2010 male) for use in the following series of multivariate regressions. Only bachelor and graduate categories of degree were collapsed for variable predictors because previous regressions revealed inverse and insignificant associations between associate degree and financial satisfaction. Independent logistic regressions with college degree on financially satisfied were repeated for each combination of year (decade) and age, gender, or race categories. Associations between financial satisfaction and college degree were slightly stronger for young adults in 1980s and 1990s data, but stronger for older adults in the 1970s, 2000s, and 2010-2012 (Table 5). The strength of college degree as a predictor of financial satisfaction increased each decade for older adults, but was strongest for young adults in the 1990s. College degree was a stronger predictor of financial satisfaction for young adults in the 2000s and 2012 than in the 1970s, but a weaker predictor of young adult financial satisfaction in more recent data than it was in the 1980s and 1990s (Table 5). The gap of difference by age group in the strength of college degree as a predictor of financial satisfaction was wider in data from the 2000s and 2010-2012 than in 1980s and 1990s data.

Table 4

*Categories of College Degree on is Financially Satisfied by Decade*

Logit coefficients test that each coefficient = 0						
	Any College Degree	No Degree	H.S. Diploma	Associate	Bachelor	Graduate
1970s	.346***	-.119*	<i>ns</i>	<i>ns</i>	.340***	.432***
1980s	.385***	<i>ns</i>	-.216***	-.322**	.396***	.668***
1990s	.462***	-.153**	-.312***	-.282**	.466***	.682***
2000s	.543***	-.394***	-.310***	-.190*	.510***	.737***
2010-2012	.701***	-.486**	-.436***	<i>ns</i>	.510***	.979***

*Note:* Associate, bachelor, and graduate categories collapsed for college degree. *ns* = *p* values not statistically significant. COMPWT applied.

Source: General Social Survey (1972-2012). Accessed through Computer Assisted Survey Methods Program, University of California, Berkeley.

\*\*\**p* < .001

\*\**p* < .005

\**p* < .05

Table 5

*Logistic Regressions for College Degree on is Financially Satisfied with Year and Age Product Filters*

Logit coefficients test that each coefficient = 0						
	<i>B</i>	<i>SE (B)</i>	<i>Exp (B)</i>	<i>t</i> -test	<i>p</i>	Pseudo- <i>R</i> <sup>2</sup>
College graduate: Young adult						
1970s	.316	.098	1.371	3.227	.001	.002
1980s	.561	.083	1.752	6.728	.000	.008
1990s	.605	.087	1.830	6.922	.000	.010
2000s	.435	.099	1.544	4.376	.000	.006
2010-2012	.522	.168	1.685	3.114	.002	.008
College graduate: Older adult						
1970s	.491	.076	1.635	6.438	.000	.005
1980s	.524	.058	1.690	9.071	.000	.007
1990s	.587	.051	1.799	11.548	.000	.012
2000s	.751	.054	2.120	13.951	.000	.020
2010-2012	.924	.088	2.520	10.530	.000	.033

*Note.* Bachelor and graduate categories collapsed for college degree. COMPWT applied. Product term filters for year (decade) and age (life stage) utilized. *p* = level of statistical significance.

Source: General Social Survey. Accessed through Computer Assisted Survey Methods Program, University of California, Berkeley.

Determining whether a college degree was a stronger predictor of financial satisfaction for young adults today than it was when their parents were young adults depends on ages and birth years, but interpretation of the *Exp (B)* statistics on Table 5 offer some support for this proposition. A 26-year-old with a college degree in 2012 who was born in 1982 from a 30-year-old parent, for example, was 68% more likely to be financially satisfied, while the college-degreed parent who was 26 in 1978 was 37% more likely to be financially satisfied.

Cross-tabulation analysis supported a related proposition of a college degree's economic worth holding more value at later ages. The *Exp (B)* statistics on Table 5 indicate older Americans with a bachelor or graduate degree in 2010-2012 were 152% more likely to be financially satisfied, compared to 68% more likely for young counterparts. Proportions of Americans who were financially satisfied were shown on Table 6 in year spans correlating to decades of life. Analyses were displayed by college degree attainment and by years representing first and last survey years. In the 1970s, the gap of difference by degree attainment in proportions financially satisfied ranged from 5%age points for 18-29-year-olds to 14%age points for 50-year-olds. In 2010-2012 data, the gap of difference by degree attainment in proportions financially satisfied ranged from 9%age points for 18-29-year-olds to 25%age points for 50-year-olds. It is not simply a story of larger proportion of financially satisfied college graduates at later ages because the proportion of Americans financially satisfied without a college degree is also larger at later ages. The economic worth of a college degree today may be realized best by comparing financially satisfied proportions with and without a college degree over time. In the 1970s, 35% of 50-year-olds and 38% of 60-year-olds without a college degree were financially satisfied. In 2010-2012, the proportions of Americans without a college degree who were financially satisfied fell to 11% for 50-year-olds and 23% for 60-year-olds.

Logistic regressions were performed in the next series of analysis to investigate a hypotheses of differences in the economic worth of a college degree by gender. The association between college degree and financial satisfaction was stronger for females than for males in the 1970s, 1980s, and 2010-2012, but stronger for males in the 1990s and 2000s (Table 7). The relationships between college degree and financial satisfaction more than doubled between the 1970s and 2012 for both genders. The increase over time in the strength of college degree as a statistically significant predictor for financial satisfaction was somewhat greater for women. Although the association between college degree and financial satisfaction was weakest for men in the 1970s, the association between college degree and financial satisfaction was stronger for women in 2010-2012.

In the final series of analysis, logistic regressions were performed to investigate differences in the economic worth of a college degree by race. Associations between financial satisfaction and college degree were not statistically significant for Black individuals in these analyses by decade. Between the 1970s and 2012 associations between financial satisfaction and college degree grew stronger at each measure for White individuals (Table 8). Associations between financial satisfaction and college degree were only statistically significant for Other individuals in the 2000s and 2010-2012. Having a college degree was a stronger predictor of financial satisfaction for Other individuals than for White individuals in 2010-2012 data. The relatively large drop over time in financial satisfaction for Other individuals (Figure 1) gives contextual significance to this finding.

Table 6

*Proportions Financially Satisfied by Age Group in Survey Years*

Age	% (frequencies)			
	Year			
	1972-1979		2010-2012	
	No College degree	College degree	No College degree	College Degree
18-29 years	27 (640)	32 (127)	22 (141)	31(42)
30-39 years	24(377)	37 (121)	14(63)	29(65)
40-49 years	29(448)	38 (102)	20(83)	31(80)
50-59 years	35(549)	49 (100)	11(50)	38(81)
60-69 years	38(433)	62 (61)	23(71)	48(86)
70 years and older	45(354)	57 (39)	38(117)	58(60)

Note. No degree: little high school or high school diploma; College degree: bachelor or graduate. COMPWT applied.  $\chi^2 = 186.54, p < .0001$  (1972-1979);  $\chi^2 = 109.82, p < .0001$  (2010-2012).

Table 7

*Logistic Regressions for College Degree on is Financially Satisfied with Year and Gender Product Filters*

Logit coefficients test that each coefficient = 0

	<i>B</i>	<i>SE (B)</i>	<i>Exp (B)</i>	<i>t-test</i>	<i>p</i>	Pseudo- <i>R</i> <sup>2</sup>
College graduate: Male						
1970s	.389	.082	1.476	4.741	.000	.004
1980s	.484	.080	1.623	6.031	.000	.007
1990s	.711	.065	2.037	10.972	.000	.017
2000s	.756	.087	2.129	8.712	.000	.020
2010-2012	.805	.124	2.237	6.499	.000	.024
College graduate: Female						
1970s	.408	.100	1.503	4.096	.000	.003
1980s	.573	.080	1.773	7.134	.000	.008
1990s	.521	.067	1.683	7.780	.000	.008
2000s	.634	.077	1.886	8.280	.000	.013
2010-2012	.880	.137	2.411	6.410	.000	.028

Note: Bachelor and graduate categories collapsed for college degree. COMPWT applied. Product term filters for year (decade) and gender applied. *p* = level of statistical significance.

Source: General Social Survey. Accessed through Computer Assisted Survey Methods Program, University of California, Berkeley.

Table 8

*Logistic Regressions for College Degree on is Financially Satisfied with Year and Race Product Filters*

Logit coefficients test that each coefficient = 0

	<i>B</i>	<i>SE (B)</i>	<i>Exp (B)</i>	<i>t</i> -test	<i>p</i>	Pseudo- <i>R</i> <sup>2</sup>
College graduate: White						
1970s	.375	.066	1.455	5.643	.000	.003
1980s	.508	.063	1.661	8.040	.000	.007
1990s	.608	.054	1.837	11.212	.000	.012
2000s	.679	.057	1.972	11.891	.000	.017
2010-2012	.874	.104	2.397	8.380	.000	.029
College graduate: Black						
1970s	.132	.272	1.141	.486	.627	.000
1980s	.138	.267	1.148	.518	.605	.000
1990s	.363	.235	1.438	1.547	.122	.002
2000s	.438	.235	1.549	1.860	.063	.004
2010-2012	.208	.314	1.231	.660	.509	.001
College graduate: Other						
1970s	-.277	.733	.758	-.377	.706	.003
1980s	.735	.487	2.086	1.509	.132	.015
1990s	.366	.266	1.442	1.377	.169	.004
2000s	.446	.222	1.562	2.007	.045	.006
2010-2012	.967	.252	2.630	3.834	.000	.030

*Note.* Bachelor and graduate categories collapsed for college degree. COMPWT applied. Product term filters for year (decade) and race applied. *p* = level of statistical significance.

*Source.* General Social Survey. Accessed through Computer Assisted Survey Methods Program.

### Discussion and Conclusion

In an investigation of Hispanic upward mobility, Rumbaut and Komaie [14] commented on the work of Tienda and Mitchell [30] in a reflection on the price of not pursuing a college education: “The amount of Hispanic upward mobility that can be expected from future educational investments may be uncertain, but a sustained presence in low-wage jobs in the absence of significant educational improvement is a virtual certainty” [14<sup>42</sup>]. Data analysis revealed proportions of U.S. adults with any college degree increased 20% age points between the 1970s (15%) and 2010-2012 (35%). This finding is in line with previous observations noted in the literature regarding rising educational attainment levels. Interestingly, the proportion of young U.S. adults with a college degree was larger than that of older U.S. adults in the 1970s and 1980s, but the proportion of older U.S. adults with a college degree was larger than the proportion of young U.S. adults in 1990s through 2012 data (Figure 2). The cumulative effect of increases in educational attainment over time is evident in data. A U.S. adult without a college degree in the 1970s was part of the 85%, but a

U.S. adult in 2010-2012 without a college degree was part of the 65%. Considering the 20%age point increase in college degree attainment, 50% of U.S. adults might be college graduates in the not-too-distant future, and the negative consequences of not having a post-secondary degree might be steeper. Indeed, analysis of the current study revealed only 11% of 50-year-old Americans without a college degree in 2010-2012 reported being financially satisfied. The growing inverse relationships over time between no degree and financial satisfaction and high school diploma and financial satisfaction (Table 4) paint reverse images of other study findings, and similar to the sentiments of Rumbaut and Komaie, underscore the economic importance of a college degree.

Study findings revealed that a college degree became a stronger predictor of financial satisfaction over time (Table 4), even as U.S. financial satisfaction dwindled (Figure 1) and the proportion of U.S. adults with post-secondary degrees increased (Figure 2). This research finding supports that of a 2011 Pew Research Center survey (Taylor et al., 2011) where 86% of college graduates believed that their college degree was a good financial investment. Findings were not supportive of a hypothesis of oversupply devaluing a college degree. One consideration is that employers use the post-secondary degree to limit hiring pools as college degreed job applicants become more numerous (Murray, 2009). Candidates without a college degree may be weeded out of applicant and promotion pools.

A limitation of the current study is that the data were self-reported. Self-reported data might not represent a respondent's actual level of educational attainment or reflect educational attainment as reliably as do educational data. Another potential limitation is a projection of the economic worth of educational attainment for an individual.

A caveat of the present study is the risk involved with predicting the amount of financial satisfaction an individual should reliably expect from his or her college degree. No guarantees exist regarding particular opportunities available to individuals or what types of skills and knowledge societies will value in the future. The skills, talents, and aptitudes that set a young adult apart from other qualified candidates, an advantage in competitive job markets, depend on the individual and cannot be reasonably compared to the statistical effect of a college degree on financial satisfaction. As globalization increased the need to remain competitive in a worldwide economy, the needs of tomorrow's society might be different. For example, if rural America becomes revitalized out of necessity, community-sustaining skills, such as agriculture, may become more valued than technical skills—the types of skills traditionally learned locally and on farms, not in universities.

Study findings contribute to the knowledge base of career planning and college and career readiness. Findings may be informative to young adults as they plan their futures and be of interest to stakeholders committed to supporting independent adult transitions. Descriptions of associations between a college degree and financial satisfaction join discussions on linkages between high school and higher education. One implication for post-secondary programming is to increase opportunities for students to combine paid employment with coursework. Flexible programming that links school and work, such as practicum stipends, paid internships, and graduate assistantships, might enable more students to balance economic and academic responsibilities and to complete degree programs. Working at a trade while going to college part-time is also a viable step-by-step plan for paying skyrocketing tuition, gaining valuable work experience, and attaining a bachelor or graduate degree by middle age when the economic worth of the degree is likely to be higher.

## References

1. Graves L. Obama's pledge "eight million more graduate by 2010". The Huffington Post 2010. Retrieved from [http://www.huffingtonpost.com/2010/08/09/obamas-pledge-eight-million\\_676022.html](http://www.huffingtonpost.com/2010/08/09/obamas-pledge-eight-million_676022.html)
2. U.S. Department of Education. Race to the Top Program Executive Summary. 2009. Washington, DC. Retrieved from <http://www2.ed.gov/programs/racetothetop/executive-summary.pdf>
3. U.S. Department of Education [Office of Planning, Evaluation and Policy Development]. 2010. ESEA Blueprint for Reform. Washington, DC. Retrieved from
4. <http://www2.ed.gov/policy/elsec/leg/blueprint/blueprint.pdf>
5. Arnett JJ. Emerging adulthood: The winding road from the late teens through the twenties. 2004. New York, NY: Oxford University Press.
6. Furstenberg FF, Kennedy S., McCloyd VC. Rumbaut R., & Settersten RA. Between adolescence and adulthood: Expectations about the timing of adulthood (No. 1) 2003. Research Network Working Paper. Retrieved from <http://transitions.s410.sureserver.com/wp-content/uploads/2011/08/between.pdf>
7. Furstenberg FF, Rumbaut R G, & Settersten, RA. On the frontier of adulthood: Emerging themes and new directions. On The Frontier of Adulthood: Theory, Research, and Public Policy; 2005; 1: 3-25.
8. Lloyd CB, National Research Council (U.S.), & Institute of Medicine (U.S.). Growing up global: The changing transitions to adulthood in developing countries: selected studies. 2005. Washington, DC: National Research Council.
9. Rumbaut RG. The coming of the second generation: Immigration and ethnic mobility in Southern California. The Annals of the American Academy of Political and Social Science 2008; 620(1): 196-236.
10. Blackwell L, & Bynner JM. Learning, family formation and dissolution. 2002. Centre for Research on the Wider Benefits of Learning. Retrieved from <http://www.learningbenefits.net/Publications/ResReps/ResRep4.pdf>
11. Arnett JJ, & Fishel E. When will my grown-up kid grow up?: Loving and understanding your emerging adult. 2013. New York, NY: Workman Publishing Co, Inc.
12. Arnett JJ, & Schwab J. The Clark University Poll of Emerging Adults, 2012: Thriving, struggling, and hopeful. 2013. Retrieved from <http://www.clarku.edu/clark-poll-emerging-adults/pdfs/clark-university-poll-emerging-adults-findings.pdf>
13. Taylor P, Parker K, Fry R, Cohn D, Wang W, Velasco G, & Dockterman D. Is college worth it? College presidents, public assess value, quality and mission of higher education. 2011. Pew Research Center. Retrieved from <http://www.pewsocialtrends.org/files/2011/05/higher-ed-report.pdf>
14. Rumbaut R., & Komaie G. Young adults in the United States: A mid-decade profile. 2007. Retrieved from [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1887844](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1887844)
15. Hamilton SF, & Hamilton MA. Book review: On your own without a net: The transition to adulthood for vulnerable populations. Journal of Adolescent Research 2006; 21(5): 569-571.
16. auhor
17. Murray CA. Real education: Four simple truths for bringing America's schools back to reality. 2008. New York, NY: Crown Forum.
18. Lewis LD. Laid off now what: Surviving unemployment. 2010. Los Angeles, CA: Couples Company.



19. Shin A. College Degree No Shield As More Jobs Are Slashed. Washington Post. 2009. Retrieved from [http://articles.washingtonpost.com/2009-01-04/business/36930852\\_1\\_unemployment-rate-alan-b-krueger-college-degree](http://articles.washingtonpost.com/2009-01-04/business/36930852_1_unemployment-rate-alan-b-krueger-college-degree)
20. Sullivan B. College grad: I wish I'd gone to prison instead. Red Tape Chronicles: MSNBC. 2009. Retrieved from <http://www.nbcnews.com/technology/college-grad-i-wish-id-gone-prison-instead-6C10406425>
21. Slaughter, S, & Rhoades G. Academic capitalism and the new economy: Markets, state, and higher education. 2004. Baltimore, MD: Johns Hopkins Univ. Press.
22. Bruner JS. The relevance of education. 1973. New York, NY: Norton.
23. Bruner JS. The process of education. 1977. Cambridge, MA: Harvard University Press.
24. Author. Disaster preparedness and educational attainment. *Journal of Emergency Management* 2011; 9(4): 45-52. doi:10.5055/jem.2011.0066
25. Tyack D. Public school reform: Policy talk and institutional practice. *American Journal of Education* 1991; 1(100): 1-19.
26. Parker W. Educating the democratic mind. SUNY series, democracy and education. 1996. Albany, NY: State University of New York Press.
27. Smith TW., Marsden P, Hout M, & Kim J. General social surveys [machine-readable data file; NORC ed. Chicago]. 1972-2012. Tom W. Smith [Principal Investigator]; Peter V. Marsden [Co-Principal Investigator]; Michael Hout [Co-Principal Investigator]. National Science Foundation. National Opinion Research Center, Storrs, CT [producer]; The Roper Center for Public Opinion Research, University of Connecticut [distributor].
28. National Science Foundation. The General Social Survey (GSS) the next decade and beyond. 2007. (An Overview of the General Social Survey [summarizing material]). Retrieved from [http://www.nsf.gov/pubs/2007/nsf0748/nsf0748\\_3.pdf](http://www.nsf.gov/pubs/2007/nsf0748/nsf0748_3.pdf)
29. Smith TW, Marsden P, Hout M, & Kim J. General social surveys: Appendix A (sampling design and weighting). 2011. Tom W. Smith [Principal Investigator]; Peter V. Marsden [Co-Principal Investigator]; Michael Hout [Co-Principal Investigator]. National Opinion Research Center (National Data Program for the Social Sciences Series, no. 21). [Appendix A]. Retrieved from <http://publicdata.norc.org:41000/gss/Documents/Codebook/A.pdf>
30. Tienda M, & Mitchell F (Ed.). Multiple origins, uncertain destinies: Hispanics and the American future. 2006. Washington, DC: National Academies Press.