Children's College as a Saving Goal

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Abstract

In 2013, less than 15% of households with at least one own child under 18 reported saving for college as the most important saving goal, and just over 27% reported saving for college as one of their saving goals. Based on a logistic regression, we found that income, marital status, health status, and homeownership were not related to having the goal, but the likelihood of having the goal was higher for those with a college degree than for those without a high school degree. The likelihood of having the goal was highest for those with zero net worth.

Introduction

The undergraduate enrollment in U.S. colleges and universities increased by 32% between 1998 and 2008 (NCES, 2010), so US colleges have made great achievements in expanding college access. However, the cost of higher education is also growing even faster. According *to Trends in College Pricing 2014* report, the average published in-state tuition and fee price for undergraduates at a public school about $7,968 to a non-profit private school at $27,594 a year, which means the real tuition and cost in private and public four-year colleges has risen over 25% during past ten years.

As parents and students must finance the substantial portion of college cost, parental wealth plays a strong predictor of enrollment in college and also affects the completion of college (Conley 2001). Students from wealthy families tend to have more available liquid assets, which make them more likely to enter college (Nam & Huang 2008). On the other hand, students from lower income families may qualify for more need-based financial assistance, which leave middle-income families having the biggest challenge in financing college. For middle-income families, whether planning in advance to save enough college funds can be a key factor whether their kids can enter college. This group of people concerns the most about saving for college.

Many financial professionals suggest that parents start saving as early as possible for college for children (Cha & Reynolds, 2005). However, our analysis of the 2013 Survey of Consumer Finances shows, most parents do not report that saving for their children's education is an important savings goal. Ascertaining factors related to whether parents have their children's education as a saving goal might be useful for financial planners, as well as for financial educators. This paper provides a preliminary investigation of causes related to parent saving for children's education. The results should assist financial planners, educators and potentially relative government agencies in helping families to save for college.

Literature Review

Lee, Hanna and Siregar (1997) found that in 1992, only 28% of parents with children under 18 had saving for children's education as a goal. They used a logistic regression, and found that only a few variables significantly affected the likelihood of parents having children's education as a savings goal, with parent education, having a retirement account being positively related, and Hispanics and Asian/others being more likely that similar White parents to have the goal. Income was not significantly related to having the goal, and age of the head had an irregular pattern of effects, with those under 30 being less likely than those ages 30-39, and those 50 and over being more likely to have the goal. The number and gender of the children, and household composition (married couple versus single mother versus single father) were not significantly related to having the goal.

In 2008, only 30% of parents knew the amount to save for college, and 63% of parents expected their children to shoulder debt themselves (College Board, 2014). Only 17.4% of parents had saved more than $5,000 for their children's education (College Board, 2014). From these studies, parental saving behavior appeared to be a significant determinant of the parent contribution to their children's education costs.

Using data from 1983-1986 Survey of Consumer Finance (SCF), Yilmazer investigated the expected expenditures on parents' savings. She found that mean parental support for children's college expenses was $2,000, and 86% of parents reported that it was acceptable to borrow money for education expenses.

Cha and Reynolds(2005) used 1992-1993 dataset to investigate the parental decisions to borrow for dependent children's college education. They found that the age of the student, dependent students' income and parents' cash and savings were negatively related to borrowing, while home equity was positively related. Those with higher college costs borrowed more, but grants decreased borrowing.

Previous surveys come up with different results, might because of different methods and observed different factors. Lee, Hanna and Siregar (1997) analyzed information from parents who have children younger than 18. Yimazer (2008) focused on parents with children who may or may not attending college, and Cha & Reynolds (2005) used households with children enrolling in college.

The purpose of this study is to conduct an analysis similar to the Lee et al. (1997) study that used the 1992 Survey of Consumer Finances, to ascertain the factors related to whether parents have saving for their children's education as a saving goal.

Theoretical Perspectives

Parents play a significant role of their children's college education. They have many options to help their children with education costs, including investing a variety of financial assets, financing, and pay out of current income. As the main assumption of the life cycle model is to maximize utility from consumption over a lifetime (Hanna, Fan&Chang 1995), saving is not necessarily the optimal way for college fund saving. Assuming parents want to help with a child's college costs, whether they will use saving may depend on the number of years until the

parents will retire after the children will start college. For instance, if parents' real incomes are increasing while their children attend college, it is very likely that parent loan can be a more rational option than saving, as they would be able to maintain a higher consumption level overall. Feldstein (1995), suggested that even if the costs of education are not subsequently met by scholarship aid or students loans, it is better for the family to borrow at that time than to save in advance. However, saving for college fund is considered as a more conservative way to ensure college education to most families.

Methodology
Data and Sample
The dataset for this study was the 2013 Survey of Consumer Finances (SCF), with the analytic sample consisting of 1,933 households with at least one child under age 18.

Variables
Dependent Variable We followed the Lee et al. (1997) research in defining the dependent variable as based on the answer to the question:
"What are your family's most important reasons for saving?"
Households who answered "children's education" to the question are considered as having children's education as a saving goal. As Lee and Hanna (2015) discussed, some researchers have analyzed savings goals in the Survey of Consumer Finances by considering only the first response, on the assumption that it is probably the most salient goal, while other researchers have considered a household to have a goal whether it was mentioned first or second or third or fourth or fifth or sixth. We present descriptive analyses of both the first response rate of having the college saving goal and the any response rate, but our multivariate analysis is only of the any response rate.

Independent Variables The explanatory variables include marital status, health, age, and education of the head, racial/ethnic self-identification of the respondent, and home ownership, income, and net worth. Net worth was specified as spline variables for the natural log of net worth for positive net worth (set to log of 0.01 for zero or negative net worth) and the natural log of -net worth for negative net worth (set to log of 0.01 for zero or positive net worth)

Analysis
As the dependent variable was dichotomous, a logistic analysis was used to examine the probability of having college as a saving goal. The 2013 SCF consists of five complete data sets as a result of the procedure used to handle missing data.

Results
In the 2013 SCF, of the 1,997 households with at least one own child under the age of 18, less than 15% reported saving for children's college as a saving goal, and just over 27% of sample reported the goal as one of their goals (Table 1). Table 2 shows patterns of having college saving as the first goal or as any goal, by selected household characteristics. Only 19% of households with less than a high school degree, but almost 34% of households with a post-bachelor degree reported having college saving as a goal. There was not a strong pattern by age of the head of the household, for having the goal, though having college saving as the first goal was very low for households with the head age 50 to 59, only about 8%, presumably because many of those

households listed retirement as the most important goal. Households with a White respondent had the lowest rate of having the goal, only 19%, compared to about 34% of Hispanics, 33% of Asians, and 31% if Blacks. There was not a strong pattern by marital status. For net worth categories, the lowest rate was for those in the top 1% of households, above $7,676,999, with a rate of 24%, compared to 32% for those in the second quartile of net worth.

Table 3 shows the results of a logistic regression, with the dependent variable being a dichotomous variable of whether the household listed saving for children's college as one of their saving goals. The combined effect of the age of the head and age squared implies that the likelihood of having the goal increases with age up to age 35, then decreases. The health of the household, marital status, homeownership, and household income were not related to having the goal. The racial/ethnic identification of the respondent was somewhat related, with Hispanics more likely than similar Whites to have the goal. Households with a bachelor degree or more were more likely than those with no high school degree to have the goal. As net worth increased from zero, households were less likely to have the goal, and also, as net worth decreased from zero, households were less likely to have the goal. In other words, the households most likely to have the goal had zero net worth.

Conclusions
In 2013, only 27% of households with children under 18 reported saving for college to be an important saving goal, which doesn't seem to be high considering the importance of higher education. However, as the effect of educational expectation, college cost and potentially financial assistance were not considered, it is very likely that well educated parents have their own plan to help their children attend college. In addition, the dependent variables were focused on parents' opinions of saving for their children, not the exact amount they actually have saved. Therefore, it is necessary to compare the results from this study to those from using the exact amount of saving for children as the dependent variables in the further study.

We can interpret the negative effect of net worth as meaning that to some extent, households are less likely to list a saving goal as important if it has been met, for instance, by having higher net worth that could be used to help with a child's education.

References

Cao, H. (2008). Credit constraints and human capital investment in college education. *Journal of Family and Economic Issues*, 29(1), 41-54.

Cha, K. W., Weagley, R. O., & Reynolds, L. (2005). Parental borrowing for dependent children's higher education. *Journal of Family and Economic Issues*, 26(3), 299-321.

College Board (2014). Trends in college pricing 2014. Trends in higher education series. https://secure-media.collegeboard.org/digitalServices/misc/trends/2014-trends-college-pricing-report-final.pdf

Conley, D. (2001). Capital for college: Parental assets and postsecondary schooling. *Sociology of Education*, 59-72.

Dick, A. W., Edlin, A. S., & Emch, E. R. (2003). The savings impact of college financial aid. *Contributions in Economic Analysis &Policy*, 2(1).

Dynarski, S. (2000). Hope for whom? Financial aid for the middle class and its impact on college attendance. National Bureau of Economic Research, (No. w7756).

Dynarski, S. M. (2004). Who benefits from the education saving incentives? Income, educational expectations, and the value of the 529 and Coverdell. National Bureau of Economic Research, (No. w10470).

Edlin, A. S. (1993). Is college financial aid equitable and efficient? *The Journal of Economic Perspectives*, 143-158.

Feldstein, M. (1995). College scholarship rules and private saving. *American Economic Review*, 85(3), 522-66.

Nam, Y., & Huang, J. (2009). Equal opportunity for all? Parental economic resources and children's educational attainment. *Children and Youth Services Review*, 31(6), 625-634.

Hanna, S., Fan, X.J. & Chang, Y. R. (1995). Optimal life cycle savings. *Financial Counseling and Planning*, 6, 1-15.

Lee, S., Hanna, S. & Sirigar, M. (1997). *Children's college as a saving goal. Financial Counseling and Planning*, 8(1), 33-36.

Lee, J. M. & Hanna, S. D. (2015). Savings goals and saving behavior from a perspective of Maslow's Hierarchy of Needs. *Journal of Financial Counseling and Planning*, 26(2), in press.

National Center of Education Statistics (2013). Percentage of 18- to 24-year-olds enrolled in degree-granting institutions, by level of institution and sex and race/ethnicity of student: 1967 through 2012, table 302.60. https://nces.ed.gov/programs/digest/d13/tables/dt13_302.60.asp

Richard, F. (2012). A record one-in-five households now owe student loan debt. *Social & Demographic Trends*, 1-36.

Souleles, N. S. (2000). College tuition and household savings and consumption. *Journal of Public Economics*, 77(2), 185-207.

Yilmazer, T. (2008). Saving for children's college education: An empirical analysis of the tradeoff between the quality and quantity of children. *Journal of Family and Economic Issues*, 29(2), 307-324.

Endnotes

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Table 1
Proportion of Households Having College Saving Goal for Own Children, as First or as Any
Goal Among Households with at Least One Child Under 18, 2013 SCF

Listed as first goal	14.65%
Listed as first or other goal	27.21%

Unweighted N = 1,997

Table 2

Distribution of Having College Saving Goal for Own Children, as First or as Any Goal, by Household Characteristics, Among Households with at Least One Child Under 18, 2013 SCF

Characteristic	% distribution	% listing as first goal	% listing as any goal
Age of the head			
Under 30	16.67	12.65	26.41
30-39	29.03	21.55	32.17
40-49	31.33	13.05	23.58
50-59	18.95	7.87	25.35
60-69	4.02	17.58	31.80
Education of household			
< high school degree	6.79	11.45	19.33
High school diploma	22.20	18.34	28.31
Some college or AA degree	33.21	17.10	26.63
Bachelor but not graduate degree	20.41	10.79	23.80
Graduate degree	17.39	11.05	33.99
Race			
White	61.32	11.73	23.97
Black	17.94	16.32	30.81
Hispanic	14.69	25.04	33.96
Asian and others	6.05	14.02	32.93
Marital Status			
Married	57.08	13.40	27.24
Unmarried	12.19	15.56	26.89
Single male	5.22	15.70	30.04
Single Female	25.51	16.80	26.71
Homeowner			
Rent	40.60	19.91	32.31
Homeowner	59.40	11.05	23.72
Household Net Worth			
< 0	13.61	16.03	28.04
0 to 5519	11.36	20.06	28.66
5520 to 43,119	25.03	21.96	32.34
43,120 to 224,599	25.00	15.56	28.79
224,600 to 7,676,999	24.00	11.83	28.01
>7,676,999	1.01	19.18	24.40

Weighted analyses by authors, N= 1.997.

Table 3
Logistic Regression on Whether Household Listed Saving for Children's College as a Savings Goal

Variable	Coefficient	Odds ratio	p
Age of head	0.068	1.07	0.0897
Age of head squared/10000	-9.706	<.01	0.0418
Excellent health	-0.1074	0.90	0.7165
Good health	0.1091	1.12	0.6945
Fair health	0.1470	1.16	0.6107
Single female	-0.2480	0.78	0.1185
Single male	0.0259	1.03	0.9336
Unmarried couple	-0.0982	0.91	0.5905
Black	0.2273	1.26	0.1486
Hispanic	0.3389	1.40	0.0363
Asian/other	0.3693	1.45	0.0752
High school degree	0.3624	1.44	0.1433
Some college	0.4387	1.55	0.0828
Bachelor degree	0.5184	1.68	0.0581
Post-bachelor degree	0.6894	1.99	0.0143
Log (income)	-0.00008	1.00	0.9983
Log (positive net worth)	-0.0600	0.94	0.0090
Log (-negative net worth)	-0.0730	0.93	0.0046
Homeowner	-0.0713	0.93	0.5992
Intercept	-2.2132		0.0209
Percent Concordant	59.3		

Unweighted analysis of all implicates by authors, with sample restricted to households with at least one own child under the age of 18, N= 1.997.