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Investment Decisions and Offspring Gender

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Abstract

Economic research has documented many economic affects of offspring gender on parental behavior. However, an open question exists as to whether offspring gender has any influence on parental investment decision making. Specifically, I investigate whether female offspring have an impact on investment decisions with respect to stock and bondholding. Using a panel data set, I find that for male respondents, having only female offspring increases the probability of stockholding by over 17%. In contrast, a relationship between stockholding and offspring gender was not at all present for female respondents. (JEL: G11, D14)

1   Introduction

*There are two kinds of fathers in traditional households: the fathers of sons and the fathers of daughters.....**Letty Cottin Pogrebin (20th Century Writer)***

Most any person with a sibling of a different gender can attest to the fact that occasionally specific parental decisions *seem* to be influenced by the gender of the child affected by the decision. Downey, Jackson, and Powell (1994) document that generalized views on parenting are developed through maternal experiences in the family which are shaped by the sex composition of progeny. More rigorously, within the economics literature, offspring gender has been shown to affect many aspects of parental behavior: views on issues related to gender equity (Warner & Steel, 1999, Warner, 1991); Congressional voting (Washington, 2008); divorce, fertility, and marriage (Dahl & Moretti, 2004); parental labor supply (Lundberg & Rose, 2002); investment in child education (Parish & Willis, 1993).

Within the area of finance, gender in general has been shown to be a key issue. For example, psychologists have demonstrated that in historically male dominated arenas, such as finance, men generally exhibit more overconfidence than women. Barber and Odean (2001) document that this overconfidence specifically affects male trading and investment behavior. Correspondingly, they show that marriage ameliorates some of the behavioral biases males express with respect to investment decisions. There also is evidence that women exhibit relatively more risk aversion in financial decision making than men (Jianakoplos & Bernasek, 1998).

For several decades, finance scholars have been investigating the determinants of investment decisions and attempting to reconcile observed investment behavior with theoretical asset pricing models. The determinants of stock market participation has been one of the key questions of interest. For example, with regard to stockholding behavior, individual stock market participation is much lower than would be predicted by the consumption Capital Asset Pricing Model (CCAPM) and other models, given the risk-adjusted expected returns from holding stock. The issue of low household stock market participation has been intensely studied for a number of reasons. Chief

among these reasons is that many policy debates depend critically on the particular reason identified for why so many households choose not to hold stock.

Several determinants of household stock market participation have been well established. Stock market participation is strongly increasing in wealth, increasing in household education, sensitive to transaction costs (Bogan (2008); Bertaut and Haliassos (1997); Haliassos and Bertaut (1995)), and influenced by neighbor and peer effects (Brown, Ivković, Smith, and Weisbenner (2008); Hong, Kubik, and Stein (2004)). Simulations of a calibrated life-cycle model, described in detail in Bertaut and Haliassos (1997), show that participation costs are affected by level of education, the degree of risk aversion, labor income risk, and a bequest motive. Behavioral factors also have been empirically identified as having an impact on stockholding decisions. Malmendier and Nagel (2007) found behavioral effects on stockholding and bondholding decisions due to birth timing with respect to macroeconomic shocks.

In this paper, I attempt to add to this area of research by considering the possibility that children, much like neighbors (Brown et al., 2008) or peers (Hong et al., 2004), can influence parental portfolio allocation. Specifically, I test the hypothesis that stockholding and bondholding decisions are influenced by offspring gender. This would seem a reasonable hypothesis, given the expanding body of literature that documents evidence of gender linked biases that influence investment behavior and the literature that documents offspring gender linked biases which influence parental behavior.

To the best of my knowledge offspring characteristics have not been previously linked to parental stockholding or bondholding. Yet, this paper connects with several strands of current finance and economics literature. Many elements of family structure have been linked to other aspects of financial decision making behavior (See for example, Keister, 2003; Smith & Ward, 1980; Browning, 1992, and Hao, 1996). The number of children a couple has, the average spacing between siblings and the timing of births within a marriage all have been purported to have important impacts on family savings. This relationship between family size and household savings has long been a popu-

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lar theme in the demographic and development literature and the postulated negative correlation between them is thought to be a contributing factor in limiting capital formation and economic growth. Others have demonstrated that family size is not the relevant constraint and that any savings effects are related primarily to the age of children (Espenshade, 1975). Smith and Ward (1980) found that young children depress savings for young families but increase savings for marriages of duration greater than five years. The principal channel through which children act to reduce savings is the decline in female earnings associated with the child-induced withdrawal of wives from the labor force. For families in which the wife does not work, the estimates suggest that savings may actually increase with children.

Other closely related work involves investigations of U.S. data and have indicated that rapid child-bearing early in marriage inhibits asset growth and that these effects persist over a couple's lifetime (Freedman & Coombs, 1966; Coombs & Freedman, 1970). Chitegi and Stafford (1999) find that a young family's likelihood of owning transaction accounts and stocks is affected by whether parents held these financial assets. Keister (2003) explores the relationship between family size in childhood and adults' wealth accumulation patterns. She shows that siblings reduce the material and nonmaterial resources available for each child in a family and that this diminishment of resources reduces educational attainment and direct intergenerational financial transfers. Hao (1996) found that family net wealth varies with family structure along three lines, marriage-remarriage, marriage-cohabitation, and male-female single parenthood and that marriage is a wealth-enhancing institution. He also shows that wealth accumulation also depends on saving behavior, which is a function of income and consumption. Saving behavior, inheritance, and transfers are ultimately determined by the family background and the socioeconomic and demographic characteristics of the parents. Race, sex, age, and education of the parents and community conditions of the residence are measures of these factors. In addition, family composition, including the number and ages of children, may also affect saving and the accumulation of wealth.

This paper is designed to shed light on the issues related to offspring gender and investment decision making with respect to stockholding and bondholding. With regard to household portfolio

allocation, there is at least one broad outlet through which offspring gender could influence household portfolio allocation; through an influence on risk aversion. Most traditional economic models assume that individuals are endowed with stable risk preferences that cannot be altered by experiences. However, there is recent evidence to suggest that this is not the case (Malmendier & Nagel, 2007). A question exists as to if offspring gender can alter risk preferences and in what way. Many different stories could be told to explain why parents may be more/less risk averse with respect to male/female children. However, this paper will remain relatively agnostic on the mechanisms by which children specifically sway their parents' risk preferences. Rather, it aims to illuminate the modelling of risk-taking by investigating the influence of family structure on investments in risky (and riskless) securities. The remainder of the paper proceeds as follows. Section 2 reviews the data and methodology used in the empirical analysis. Section 3 presents the econometric analysis and discusses the main results. Section 4 summarizes key findings and provides concluding remarks.

2 Data and Methodology

2.1 Overview

I use data from the National Longitudinal Survey of Youth 1979 (NLSY79) which is a nationally representative sample of 12,686 young men and women who were 14-22 years old when they were first surveyed in 1979. These individuals were interviewed annually through 1994 and are currently interviewed on a biennial basis. Since their first interview, many of the respondents have made transitions from school to work, and from their parents' homes to being parents and homeowners. These data provide an opportunity to study a large sample that represents American men and women born in the 1950s and 1960s, and living in the United States in 1979. Although a primary focus of the NLSY79 survey is labor force behavior, the content of the survey is considerably broader. The survey contains questions on income and assets, earnings, occupation, marital status, fertility, family structure, child characteristics, computer use, and educational attainment. These types of data make the NLSY79 a good survey to use to address issues relating to portfolio allocation and

Table 1: Summary Statistics – Respondent Characteristics (2004)

	Mean
Average Age	43.16
Avg. Years of Education	12.44
Percent Male	50.47
Percent White	59.20
Average Net Income	$64,700
Average Net Worth	$208,300
Average Savings	$18,200
Percent that Have Voluntary Contribution Pension	68.79
Percent that Own Stock	15.97
Percent that Own Bonds	10.84
Percent that Own Mutual Funds	13.46
Percent that Use Computers	65.85
Average Number of Children	1.98
Respondents	7660

family structure. I use data collected in the 1979, 1998, and 2004 surveys since those survey years contain the variables relevant to my analysis.

2.2 Descriptive Statistics

Tables 1, 2, and 3 provide 2004 summary statistics of the data used. From Table 1, one can see that the average age of the respondent in our sample is 43. Approximately half of the sample is male, over 59% of the sample is white, and respondents have an average of 12 years of education. The average net income is $64,700 and the average net worth is $208,300. Each respondent has an average of approximately 2 children.

Table 2 shows the mean and median asset values for respondents by offspring gender. Table 3 shows the mean and median asset values for male respondents and female respondents by offspring gender. Figure 1 shows the distribution of total number of children, number of sons, and number of daughters. Over 95% of the sample has four or fewer children. Figure 2 shows the percent

Table 2: Summary Statistics – Assets, Respondent Characteristics, and Family Structure (2004)

| | TOTAL RESPONDENTS WITH | | | |
	No Children	Male and Female Children	Male Children Only	Female Children Only
Net Worth				
Mean	188,500	223,400	209,200	192,900
Median	70,500	82,000	87,400	80,000
Net Income				
Mean	56,500	67,800	65,000	65,300
Median	43,000	53,000	52,900	50,800
Savings				
Mean	22,500	17,800	16,300	16,500
Median	5,000	4,000	5,000	4,000
Home Value				
Mean	213,700	218,400	206,200	211,800
Median	160,000	150,000	150,000	150,000
Stock Value				
Mean†	78,700	132,500	63,100	93,000
Median†	10,000	15,000	10,000	10,000
Bond Value				
Mean†	7,400	7,800	7,200	9,000
Median†	1,500	2,000	2,000	1,000
Average No. of Children	–	3.04	1.80	1.80
Percent Male	56.57	43.21	48.42	49.79
Percent Married	35.45	65.29	62.74	59.83
Percent Risk Averse	66.20	69.96	70.51	68.33
Observations	1430	3242	1578	1410

of respondents displaying risk aversion.[1] From Figure 2, one can see that respondents with only male children are more risk averse and that female respondents generally are more risk averse than male respondents. Table 4 summarizes stockholding and bondholding for respondents by offspring gender. From Table 4, one can see that for female respondents, those with no children have the highest percentage of stockholding and for male respondents, those with only female children have the highest percentage of stockholding. For both male and female respondents, those with only male children have the highest percentage of bondholding.

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[1]I classify a respondent as risk averse if (s)he prefers a certain salary to a lottery between a 50% chance of doubling his/her salary and a 50% chance of getting his/her salary cut by $\frac{1}{3}$.

†Includes zero values.

Table 3: Summary Statistics – Assets and Family Structure by Gender of Respondent (2004)

	FEMALE RESPONDENTS WITH				MALE RESPONDENTS WITH			
	No Children	Male and Female Children	Male Children Only	Female Children Only	No Children	Male and Female Children	Male Children Only	Female Children Only
Net Worth								
Mean	216,000	202,100	201,900	180,200	167,600	250,500	216,700	204,900
Median	98,000	76,600	81,000	74,200	54,900	91,000	93,000	87,000
Net Income								
Mean	60,500	63,700	61,000	59,900	53,500	73,100	69,200	70,700
Median	46,500	59,400	46,000	46,900	39,000	57,000	57,000	55,200
Savings								
Mean	21,200	16,900	14,000	15,800	23,600	18,900	18,600	17,100
Median	5,000	3,000	3,600	3,000	5,000	5,000	5,000	5,000
Home Value								
Mean	217,800	208,800	203,300	206,800	210,000	230,600	209,000	216,900
Median	160,000	150,000	150,000	150,000	160,000	165,000	150,000	170,000
Stock Value								
Mean[†]	114,700	115,300	80,700	77,500	41,500	149,900	48,400	104,100
Median[††]	10,000	15,000	10,000	8,000	10,000	20,000	10,000	10,000
Bond Value								
Mean[†]	3,800	6,300	7,700	2,400	11,100	9,300	6,700	14,700
Median[††]	1,200	1,500	1,100	1,000	1,500	2,000	2,000	2,000
Average No. of Children	–	3.01	1.81	1.78	–	3.08	1.79	1.76
Percent Married	40.10	62.25	59.09	57.85	31.89	69.29	66.62	61.82
Percent Risk Averse	67.12	72.12	74.16	72.88	65.49	67.13	66.71	63.80
Observations	621	1841	814	708	809	1401	764	702

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Figure 1: Number of Children per Respondent (2004)

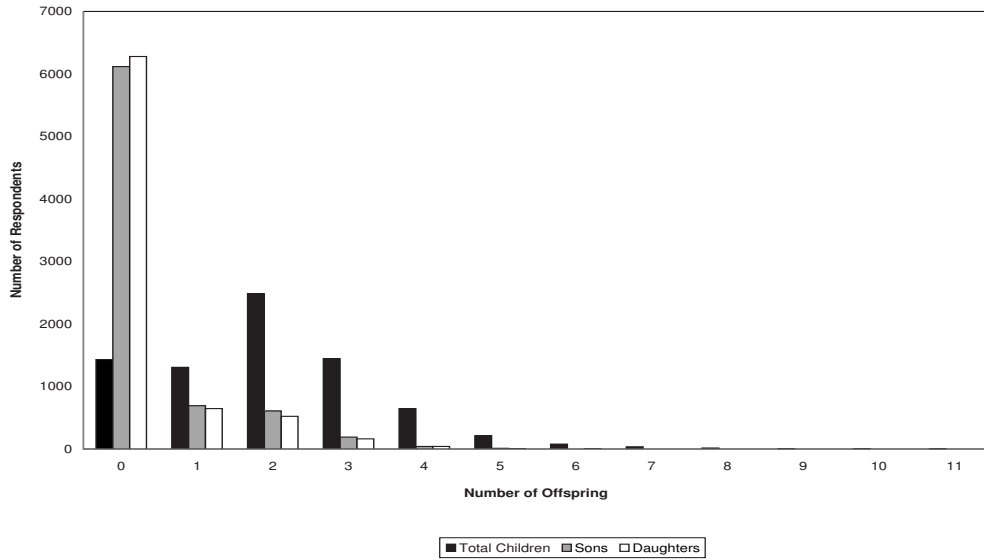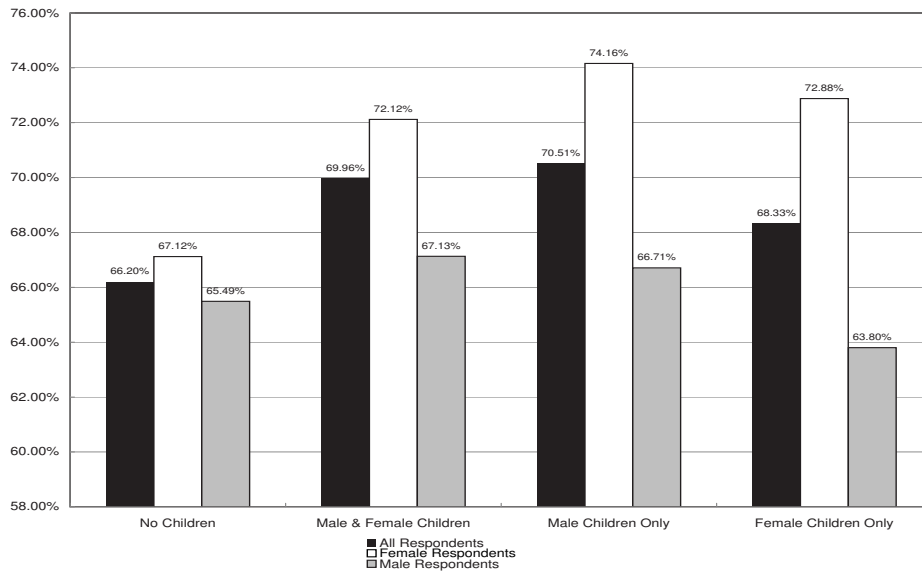## Figure 2: Percent Risk Averse Respondents (2004)

Table 4: Summary Statistics – Stockholding and Bondholding (2004)

	No Children	RESPONDENTS WITH Male and Female Children	Male Children Only	Female Children Only
Total Respondents				
Percent Holding Bonds	9.90	10.47	12.44	10.86
Percent Holding Stock	17.44	14.97	16.51	16.21
Female Respondents				
Percent Holding Bonds	11.56	9.95	12.34	11.01
Percent Holding Stock	20.60	14.77	16.45	15.09
Male Respondents				
Percent Holding Bonds	8.57	11.14	12.55	10.71
Percent Holding Stocks	14.90	15.21	16.58	17.35

2.3 Empirical Framework

In a standard frictionless CCAPM, agents maximize expected utility. I consider a model that incorporates offspring gender effects through an influence on risk aversion. The individual agent utility $U(c_t)$ is affected by offspring gender through the risk aversion coefficient in the utility function. This paper conjectures that, behavioral biases with respect to offspring gender may affect portfolio allocation decisions. If this is the case, we should expect that households with only female children will hold different portfolios than households with only male children.

The empirical analysis below tests this hypothesis utilizing probit models to understand, at a micro level, stock market participation, bond market participation, and offspring gender, while controlling for other factors that are known to impact stock market participation. The models are similar to those used by Bogan (2008) and Hong, Kubik, and Stein (2004). The dependent variable is a binary variable for (stock or bond) market participation in 2004, and the independent variables include dummy variables for offspring gender, other child characteristic variables, and respondent characteristic control variables. Notably, I control for inertia in stockholding with a dummy variable indicating if the respondent held stocks or bonds in a previous year, the effects of information and transaction costs with a computer usage dummy (See Bogan, 2008), and aspects of the respondents' occupation or training that could lead to increased market participation.[2]

3 Econometric Analysis and Results

3.1 Probit Model Specification

To properly document the effect of offspring gender on household portfolio allocation it is necessary to establish clearly a link between offspring gender and stock market participation or bond market participation in the sample. I relate stockholding and bondholding decisions to offspring gender

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[2]The education, income, and voluntary contribution pension variables also serve to control for aspects of a household head's occupation or training that could lead to increased stock market participation.

controlling for wealth, income, education, age, and a number of socio-economic characteristics. I use univariate probit models where the dependent variable is a binary variable for (stock or bond) market participation in 2004, and the independent variables include dummy variables for offspring gender, other child characteristic variables, and respondent characteristic control variables. A detailed description of all of the variables used and how they are constructed can be found in the Appendix.[3] The model specification is:

$$
\begin{aligned}
OWNSTK_i \;=\; & \beta_0 + \sum_{j=1}^{J} \beta_j CHILDRENGENDERDUMMIES_{ij} \\
& + \sum_{k=4}^{K} \beta_k X_{ik} + \sum_{l=10}^{L} \beta_l Z_{il} + \epsilon_i,
\end{aligned}
\tag{1}
$$

where X_{ik} is the set of child characteristic variables and Z_{il} is the set of respondent characteristic control variables.

Since the gender of one's biological offspring is exogenous, this model specification is advantageous in that causality can be established. While, the gender of an individual's offspring could influence investment decisions, it strains credibility to think that investment decisions determine the gender of an individual's offspring. In the first column of Table 5, we see that in addition to the usual suspects affecting stockholding behavior (net worth, income, pension plan participation, computer usage,etc.) having only female children increases the probability of holdings stock by over 11% with a p-value of 0.0780. The having only male children variable and the male and female children variable are not significant. When an income risk aversion variable is added to the model specification, the significance of the only female children variable declines but the point estimate is relatively stable.

When the sample is divided based upon gender of the respondents, we see even more striking results (Table 6). For male respondents, having only female children increases the probability of holding stock by over 17% with a p-value of 0.0550. For female respondents, the only female children variable is not at all significant. The only male children variable and the both male and

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[3]The probit models contain those variables previously shown to be significant in explaining the probability of holding stock in the U.S. (See, for example, Bogan (2008), Hong, Kubik, and Stein (2004), and Bertaut (1998)).

Table 5: Probit Regressions - Marginal Effects of Key Variables

	Stock Ownership		Bond Ownership	
Own Stocks or Bonds in 1998	0.1666***	0.1647***	0.0670***	0.0702***
	(0.0223)	(0.0224)	(0.0180)	(0.0183)
Log of Net Worth 2004	0.0626***	0.0608***	0.0214***	0.0209***
	(0.0093)	(0.0093)	(0.0071)	(0.0072)
Log of Net Income 2004	0.0374**	0.0395**	0.0108	0.0115
	(0.0168)	(0.0170)	(0.0133)	(0.0136)
Log of Savings 2004	0.0146***	0.0136**	0.0142***	0.0139***
	(0.0057)	(0.0057)	(0.0048)	(0.0049)
Pension Plan Participation 2004	0.0354**	0.0375**	0.0408***	0.0410***
	(0.0172)	(0.0173)	(0.0144)	(0.0146)
Own Home 2004	-0.0865***	-0.0900***	0.0215	0.0196
	(0.0308)	(0.0310)	(0.0214)	(0.0217)
Male and Female Children Dummy	0.0630	0.0619	-0.0124	-0.0129
	(0.0565)	(0.0562)	(0.0502)	(0.0508)
Male Children Only Dummy	0.1032	0.0925	-0.0095	-0.0111
	(0.0699)	(0.0686)	(0.0527)	(0.0531)
Female Children Only Dummy	0.1166*	0.1015	-0.0231	-0.0184
	(0.0736)	(0.0718)	(0.0501)	(0.0518)
Respondent Characteristic Controls	Yes	Yes	Yes	Yes
Income Risk Aversion Control	–	Yes	–	Yes
Child Characteristic Controls	Yes	Yes	Yes	Yes
Observations:	2485	2435	2486	2436
Log likelihood:	-1025.92	-1002.43	-935.55	-918.14

female children variable are not significant in either the female respondent or the male respondent subsamples. Again, when the income risk aversion variable is added, the significance declines with a p-value of 0.0660 but the point estimate is relatively stable.

With regard to bondholding, none of the children gender variables are significant in the full sample, the male respondent subsample, or the female respondent subsample.

***Significant at the 1% level.
**Significant at the 5% level.
*Significant at the 10% level.

Table 6: Stockholding: Marginal Effects of Key Variables - Male Respondent and Female Respondent Subsamples

	Female Respondents		Male Respondents	
	Stock Ownership		Stock Ownership	
Own Stocks or Bonds in 1998	0.1055***	0.1031***	0.2195***	0.2183***
	(0.0310)	(0.0311)	(0.0320)	(0.0323)
Log of Net Worth 2004	0.0470***	0.0434***	0.0812***	0.0817***
	(0.0123)	(0.0122)	(0.0136)	(0.0138)
Log of Net Income 2004	0.0755***	0.0736***	-0.0097	-0.0052
	(0.0247)	(0.0253)	(0.0215)	(0.0217)
Log of Savings 2004	0.0059	0.0063	0.0230***	0.0203***
	(0.0077)	(0.0077)	(0.0081)	(0.0082)
Pension Plan Participation 2004	0.0375	0.0420	0.0290	0.0304
	(0.0245)	(0.0245)	(0.0240)	(0.0241)
Own Home 2004	-0.0484	-0.0513	-0.1254***	-0.1281***
	(0.0395)	(0.0396)	(0.0476)	(0.0481)
Male and Female Children Dummy	0.0407	0.0425	0.0732	0.0693
	(0.0818)	(0.0819)	(0.0744)	(0.0742)
Male Children Only Dummy	0.0674	0.0568	0.1194	0.1100
	(0.0997)	(0.0979)	(0.0915)	(0.0902)
Female Children Only Dummy	0.0577	0.0384	0.1709*	0.1629
	(0.0995)	(0.0958)	(0.1020)	(0.1011)
Respondent Characteristic Controls	Yes	Yes	Yes	Yes
Income Risk Aversion Control	–	Yes	–	Yes
Child Characteristic Controls	Yes	Yes	Yes	Yes
Observations:	1190	1163	1290	1272
Log likelihood:	-498.13	-484.21	-505.55	-502.22

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4 Concluding Remarks

Recent advances in behavioral finance have demonstrated that investors do not always behave rationally but often deviate from rationality in very systematic ways; overconfidence, excessive optimism, loss aversion. This paper demonstrates the existence of another type of bias related to gender roles. The empirical tests provide support for a behavioral finance model with incorporates gender biases associated with offspring. These biases are evident with respect to stockholding and seem to be more pronounced in male respondents. In the full sample, having only female children increases the probability of holdings stock by over 11% while the other children gender dummies are not significant. For male respondents, having only female children increases the probability of holding stock by over 17%. In contrast, the only female children variable is not at all significant for female respondents. With regard to bondholding, none of the children gender variables are significant in the full sample, the male respondent subsample, or the female respondent subsample.

This "father-daughter stockholding effect" indicates that offspring gender may influence risk aversion behavior with respect to investment decisions. This paper suggests that standard models which assume that individuals are endowed with stable risk preferences may be incomplete and identifies a previously omitted factor in the household portfolio allocation literature. Within the domain of behavioral biases (like gender biases) and environmental effects (such as peer effects), there is evidence that we also should included offspring gender effects.

The paper has remained silent as to the precise mechanism through which the identified father-daughter stockholding effect is generated. However, I find that the effect disappears in an all adult children subsample of the data set. This narrows the field to a few potential explanations. One explanation is that individuals who have female children accept additional risk due to a temporary desire to achieve a higher average return on the household portfolio while the children are part of the family. This could be due to the need to pay for an expensive wedding or dowry. Alternatively, the effect could be driven by a desire for parents with male children to invest relatively more

conservatively in order to finance male offspring educational expenses. There has been documented evidence of the tendency for families to invest more in the education of male children and it also has been shown that parents can be more conservation with the funds that are earmarked for education. Thus, having male children could decrease the probability of stockholding relative to having female children. Both of these explanations would mean that the effect would disappear once all offspring have reached adulthood. Although not a focus of this paper, the specific mechanism(s) by which the father-daughter stockholding effect is created is a potentially fruitful area for further research.

Appendix

A   Description of Variables Used in Analysis

Asset, Income and Wealth Variables

- Own Stock Dummy Variable - A dummy variable that is given a value of 1 if the respondent owns stock in 2004 and is set to 0 otherwise. Stock ownership includes owning shares of stock in publicly held corporations or investment trusts. It does not include assets in IRA accounts, Koegh accounts, 401Ks or similar defined contribution pension plans.

- Own Bonds Dummy Variable - A dummy variable that is given a value of 1 if the respondent owns bonds in 2004 and is set to 0 otherwise.

- Owned Stocks and Bonds Previously Dummy Variable - A dummy variable that is given a value of 1 if the respondent owned stocks or bonds in 1998 and is set to 0 otherwise. Stock ownership includes owning shares of stock in publicly held corporations or investment trusts. It does not include assets in IRA accounts, Koegh accounts, 401Ks or similar defined contribution pension plans.

- Log of Net Income - The natural logarithm of the respondent net income. Net income includes salary, wages, investment income, and other income. (Base year 2004 $s)

- Log of Net Worth - The natural logarithm of the respondent net worth. Net worth includes financial assets, non-financial assets, and retirement accounts. (Base year 2004 $s)

- Log of Savings - The natural logarithm of savings. (Base year 2004 $s)

- Own Home Dummy Variable - A dummy variable that is given a value of 1 if the respondent owns a home in 2004 and is set to 0 otherwise.

Respondent Characteristic Variables

- Age of Respondent - The age of the respondent.

- Years of Education - The years of education of the respondent.

- Male Dummy Variable - A dummy variable that is given a value of 1 if the respondent is male in a given year and is set to 0 otherwise.

- African American Dummy Variable - A dummy variable that is given a value of 1 if the respondent is African American and is set to 0 otherwise.

- Married Dummy Variable - A dummy variable that is given a value of 1 if the respondent is married in a given year and is set to 0 otherwise.

- Managerial and Professional Occupation Dummy Variable - A dummy variable that is given a value of 1 if the respondent has an occupation that has a 1980 census code of managerial/professional specialties. The variable is set to 0 otherwise.

- Voluntary Contribution Pension Dummy Variable - A dummy variable that is given a value of 1 if the respondent has a voluntary contribution pension and is set to 0 otherwise.

- Computer User Dummy Variable - A dummy variable that is given a value of 0 if the head of the household indicated that he/she did not work with computers. The variable is set to 1 otherwise.

- Not Risk Averse Dummy Variable - A dummy variable indicating if the respondent indicates risk aversion. The variable is given a value of 0 if the household head would prefer a certain salary to a lottery between a 50% chance of doubling their salary and a 50% chance of getting their salary cut by $\frac{1}{3}$. The variable is set to 1 otherwise.

Child Characteristic Variables

- Number of Children Dummy Variables - Dummy variables for the respondent's number of children (One Child Dummy, Two Children Dummy, Three Children Dummy, Four Children Dummy). Dummy variables for only one, two, three, and four children are used since over 95% of the sample has four or fewer children.

- Only Female Children Dummy Variable - A dummy variable that is given a value of 1 if the respondent has only female children and is set to 0 otherwise.

- Only Male Children Dummy Variable - A dummy variable that is given a value of 1 if the respondent has only male children and is set to 0 otherwise.

- Male and Female Children Dummy Variable - A dummy variable that is given a value of 1 if the respondent has both male and female children and is set to 0 otherwise.

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