

INTERGENERATIONAL EXCHANGES AND ECONOMIC SECURITY:  
EVIDENCE FROM THE UNITED STATES

DISSERTATION

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By

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## ABSTRACT

Scholars have shown that intergenerational transfers positively affect the recipient's wealth. However, no one had considered how these types of transfers affect the wealth of the donor. The purpose of my dissertation was to determine if parents compromise their own economic well-being as a result of having children and engaging in financial transfers to them. I defined economic well-being as overall net worth, financial assets, and housing net worth. Financial transfers to children are defined as investments in children's education. By examining the effects of a relatively common and discretionary transfer to children, we gain a broad understanding of the effects of transfers on wealth, a previously overlooked topic in the sociology of wealth. I use the Health and Retirement Survey (1992), a nationally representative biennial longitudinal survey of person born between 1931 and 1941, to examine these relationships. Comparing wealth outcomes for households with and without children I was able to demonstrate that there are no long-term negative financial consequences associated with having children. Shifting the focus to differences among parents in their level of financial support of their children, I found that investing in children's education has positive effects on overall net worth and housing net worth. Finally, I examined these relationships separately for white, black, and Hispanic households in order to determine if

there were racial or ethnic differences in the effects of having children and investing in their children's education on wealth. I found that while there were no substantive differences in the effects of having children on wealth by race or ethnicity, there differences in the effects of educational expenditures.

Dedicated to my mom

Jan Willis Adkison

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## FIELDS OF STUDY

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## **CHAPTER 1**

### **INTRODUCTION**

Most research on intergenerational exchanges has focused on the transmission of financial and emotional resources from parents to children. Status attainment research has clearly shown that parent's material and non-material resources directly influence children's psychological well-being and educational attainment and indirectly affect children's occupational outcomes and earning potential. In addition, research on inter-vivo transfers (exchanges between living persons) and inheritances suggests that the positive effect of parent's wealth on the adult child's wealth is significant throughout the child's adult life (Cooney and Uhlenberg 1992; Engelhardt and Mayer 1998; Ioannides and Sato 1987; Kotlikoff and Summers 1981; Modigliani 1988; Keister 2002b).

Efforts have been made over the last fifteen years to understand reciprocal exchanges between adult children and aging parents (Hoyert 1991; Lye 1996; Mancini and Blieszner 1989; Spitze and Logan 1990). As parents live longer, children are often faced with providing financial and emotional resources to parents. Obligations to parents may have negative consequences for adult children. For example, women often leave the labor force in order to care for an aging parent

(Gibeau & Anastas 1989; Pavalko & Artis 1997; Scharlach & Boyd 1989). This is particularly problematic because these women rarely return to work-even when their care giving responsibilities have ceased. As a result, the caregivers economic security and the financial security of their household is often sacrificed (Harrington & Pavalko 1996; Kingston & O'Grady-LeShane 1993; Pavalko & Artis 1997).

While scholars have made attempts to measure the effects of care giving for an aging parent on economic outcomes, researchers have not considered the economic costs to parents that engage in inter-vivo transfers to children. The costs associated with raising children result from children's additional consumption needs and also lost income from time not spent in the paid labor force (Espenshade 1984). Clearly, the decision to have children results in economic sacrifices that parents knowingly accept. However there is a great deal of variation among parents in the degree to which their own standard of living and economic security will be affected.

Variation among parents in the costs associated with children can be measured according to differences in inter-vivo transfers. While inter-vivo transfers between parents and children can be defined as any measurable expense, it most often refers to transfers that help pay for education, durable goods (e.g., cars), real estate, or to celebrate life events (e.g., weddings, graduation, births). These types of planned transfers are used by children to gain additional human capital or to begin establishing long-term wealth. Rather than establishing or securing wealth, inter-vivo transfers might also occur during a period of unemployment or after unexpected medical bills. Children who received these transfers are often able to avoid negative financial repercussions.

The most common type of transfer between parents and children is investments in education. Investments in children's education and financial transfers to children are generally not required of parents. While some parents feel obligated to provide their children with as many opportunities as they are able, other parents believe children should earn what they have. As a result, financial transfers should be evaluated as optional expenses that parents choose to incur.

Complicating matters is the fact that parents make financial decisions about how much to invest in children's education without knowing their own future financial needs. Parents who give too generously might find their own economic well-being compromised while other parents may, in hind sight, wish that they had given more. Despite the variability in parental actions (resulting from differences in orientation or financial ability), it is often assumed that parents give generously to their children. Therefore, understanding how parental investment in children's education affects wealth will allow us to consider the relationship between one of the largest and most discretionary investments parents can make-investments in education-and its effect on a critical resource-wealth.

A great deal of public and academic attention has recently focused on the level of economic security individuals have as they prepare to retire. Concerns over the financial well-being of retired persons have increased as individuals live longer, health care costs rise, pension and annuity levels decline, and a larger proportion of the population have invested in stock and real estate markets. The importance of wealth becomes more

apparent as people age (Henretta and Campbell 1976). Wealth insures better health care, an increased ability to maintain an independent life-style, and opportunities to take advantage of new consumer markets and service industries emerging for retirees.

Similar to intergenerational transfers, researchers studying wealth have largely ignored the consequences associated with giving. While previous research demonstrates the importance of *receiving* inter-vivo transfers and inheritances on accumulated wealth, we do not understand how inter-vivo transfers affect wealth of the donor. Studies suggest that households motivated or obliged to provide for children's education and or aging parents save at a higher rate (Wakita et al 2000). However, nobody has measured the effect of actual behaviors (i.e. the amount spent or given) on wealth.

In my dissertation, I address limitations in previous research on intergenerational transfers and wealth by answering several interrelated questions. First, does having children affect parent's wealth outcomes? Second, do parents who invest in their children's education experience negative economic outcomes as a result of these financial investments? Finally, are there racial differences in the effects of the number, timing, and spacing of children on wealth outcomes?

### *Overview of My Dissertation*

In Chapter 2 I review previous research on wealth. I begin by discussing general theories of wealth accumulation and the major trends characterizing the distribution of wealth in the United States. Next, I focus on the effects of individual and household characteristics on wealth. I divide this discussion into four categories: demographic characteristics, resources, background, and life-style. I conclude this chapter with a brief discussion of my expected contribution to the literature on wealth.



In chapter 3 I provide a general description of the data from the Health and Retirement Survey used in these analyses. I review the methods used in my analysis in comparison to those used by other researchers. I pay particular attention to the advantages associated with using structural equation modeling techniques, such as full information maximum likelihood to estimate missing data and multiple group analysis. Finally, I describe how I construct variables used in the analyses and provide descriptive statistics for the two samples of households used in the analysis.

In chapter 4 I answer the following questions: Does having children negatively affect overall net worth, financial assets, and housing net worth? To what extent does the timing and spacing of children affect wealth and its components? I begin by reviewing previous research on the relationship between fertility and saving behaviors. I develop and test hypotheses on the differential effects of having children on overall net worth, financial assets, and housing net worth.

In chapter 5 I ask the following question: Do planned intergenerational transfers affect wealth? Specifically, do parental investments in children's education negatively affect parental wealth? This chapter reviews research on transfers to children in general but focuses on investments in children's education. I hypothesize that investment in children's education mediates the relationships between household characteristics and wealth.

In chapter 6 I model group differences in the effects of household characteristics on intergenerational transfers and wealth. I extend previous research on racial differences in wealth outcomes by including Hispanic households. I begin by examining racial differences in the likelihood of asset ownership and then I test for differences in the effects of household characteristics across white, black, and Hispanic households.

Finally, in Chapter 7, I offer a brief discussion of how the findings presented here contribute to research on wealth. Next I review auxiliary and preliminary analyses not formally presented in the dissertation. I then identify the limitations of my findings and conclude with a discussion of future extensions of this research project.

## **CHAPTER 2**

### **ACCUMULATION OF WEALTH**

In the current chapter I review previous research on wealth. I begin by discussing household budgets and the role of savings behaviors. Next, I discuss general theories of savings followed by a discussion of aggregate trends. After that I focus on the effects of individual and household characteristics on wealth. I divide this discussion into four household characteristics: demographics, resources, background, and life-style. Finally, I conclude the chapter with a brief discussion of my expected contribution to the literature on wealth.

#### **Household Budget: Saving versus Spending**

Household financial decisions are constrained by four factors. The first and primary constraint is the amount of financial resources available to the family. Second is the number of persons relying upon the resources. The third constraint is the standard of living that a family has adopted. The choice between having discretionary income and saving for immediate and long-term economic needs is the fourth and final constraint. These constraints vary according to the socio-economic characteristics of the households and the larger economic conditions in society.

“Family economists generally agree that the two most important goals held by individuals and families are (a) maintaining or improving the level of living; and (b) maintaining or increasing financial security. Choices regarding how to use resources ultimately relate to one or both of these goals” (Wakita et al 2000: 388). Household budgets are spent on: (1) fixed costs, such as home mortgages, car loans, and insurance premiums; (2) variable costs, such as expenditures on food, clothing, and relaxation; (3) savings; and (4) discretionary income. A lack of financial resources to cover fixed and variable costs characterizes some households while a surplus of resources in other households makes it possible to not only meet basic needs but also save for the future and still have discretionary income. The trade-off between spending discretionary income versus saving is becoming increasingly important as people live longer, have higher expectations for the quality of life in retirement, and find their expected retirement income from Social Security to be unsuitable to meet their needs and preferred standard of living.

Understanding what motivates households to save money is the key to understanding wealth accumulation over the life course. As early as 1936, economists were formally concerned with why people saved money (Keynes 1936). Over the years the three reasons consistently identified are for retirement, for unforeseen events, and for dependents, in particular children’s education and bequests upon one’s death (Ferber 1973; Katona 1975; Keynes 1936).<sup>1</sup> Even among the

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<sup>1</sup> It is important to note though that upon reviewing several of these studies Modigliani 1988 concludes that the bequest motive is not particularly important to all households in fact it is only commonly mentioned among the wealthiest households.

poorest households there is evidence that saving is occurring (Beverly and Sherraden 1999). It is also important to note that the reasons for saving change over the life course.

### **Theories of Savings**

The life-cycle hypothesis, a classic theory of saving, hypothesizes that consumption and saving reflect an individual's or household's stage in the life cycle. Young households are expected to have negative savings since they have relatively low earnings and are incurring debt for the purchase of homes, consumer goods, and other expenses. In the middle period of life, savings begin to be positive as earnings increase, debts decrease, and saving for retirement begins. The period prior to retirement is characterized by a high degree of intense saving. Finally, after retiring savings are depleted as earnings are no longer sufficient and savings are used to meet daily needs (Modigliani and Brumberg [1954] 1980).

A more recent, and some would argue a more realistic, model of saving is referred to as the "buffer-stock" model (Carroll 1997; Carroll and Samwick 1997). This model assumes that, until around age fifty, households save only for precautionary reasons. In other words households accumulate small amounts of assets in case of fluctuations in earnings but do not begin saving for retirement until late in their life cycle. As individuals approach retirement, they redirect a larger proportion of their current income into savings.

While the accuracy of the buffer-stock model has received relatively little attention from empirical researchers, the degree to which the life-cycle model actually approximates reality has been questioned by a number of researchers (see Keister and Moller 2000 for review). At issue is the rate at which savings begins to decline. According to the life-cycle hypothesis this should occur after retirement. However, this does not appear to be the case. In fact, after controlling for status attainment indicators Land and Russell (1996) found that savings does not begin to decline until after the normal age of retirement. Some have speculated that one of the primary motivations for not spending wealth during retirement is the bequest motive (Cheal 1983, Davies 1982).

Interestingly, neither the life-cycle hypothesis nor the buffer-stock model pays much attention to the role of intergenerational transfers over the life-course. Yet inheritance research has found that inter-vivos transfers and bequests account for between 50% (Gale and Scholz 1994) and 80% (Kotlikoff and Summers 1981) of net worth. Research on inheritances is based on the assumption that having children motivates individuals to reduce consumption in order to provide financially for children. If this is the case then having children should have a positive effect on wealth.

### **Aggregate Trends and Structural Factors**

The distribution of wealth is more unequal than the distribution of income in all Western industrialized nations. Beginning in the 1990's the United States achieved the distinction of having the most unequal distribution (Wolff 1998). For the last 80

years the top 1% of wealth holders have owned an average of 30% of total household wealth. In the late 1980's and 1990's the top 1% of wealth owners owned almost half of all financial assets (Keister and Moller 2000). Even more startling is that the top 20% of households hold 84% of all household wealth (Wolff 1998).

Researchers have found that the periods when wealth is most equally distributed tend to be periods of economic downturn in the overall economy. In other words, it is not that the bottom 80% of society gains more wealth it is that the value of the wealth of the top 20% of wealth holders has decreased because of fluctuations in stock and real estate markets (Keister and Moller 2000). So when the stock market booms the concentration of wealth increases (Wolff 1992). As the percent of American households investing in the stock market increases we should expect a decrease in the relationship between stock market value and the distribution of wealth.

Even though importance of home ownership as a component of wealth has declined over time for many families (Levy and Michel 1991) it still comprises a substantial portion of wealth for many (Wolff 1998). Therefore, fluctuations in real estate values can also have a tremendous effect on the distribution of wealth. In fact, Oliver and Shapiro (1995) have argued that one reason for the wealth disparity between white and black households is due to dramatic differences in rates of home ownership and real estate values.

This draws our attention to the immense racial disparity in wealth holdings (Oliver and Shapiro 1995; Wolf 1998; Conley 1999; Sherraden 1991). In 1995, the median net worth of black households relative to whites was 12% (Wolff 1998). The

structural reasons for this disparity included the historical legacy of slavery, limited success as small and large business owners, and state policies that differentially benefit racial and ethnic groups in society. These forces will be reviewed in greater detail in Chapter 6. While less is known about the extent of the disparity between white and other racial and ethnic households it is clear that non-white households have a considerably lower median net worth (\$16,900) than white (\$71,700) households (Kennickell and Starr-McCluer 1994).

Another distinguishing feature of the wealth distribution is the importance of inter-generational transfers. Estimates of the proportion of wealth resulting from inheritance ranges from a low of 20% (Modigliani 1988) to a high of 80% (Kotlikoff and Summers 1981). As baby boomers begin to receive inheritances from their parents the importance of intergenerational transfers is expected to increase. However, I believe that an interesting shift may be occurring in today's society. As our society has aged our attitude towards retirement and appropriate behaviors for retirees has changed and as a result retirees may begin spending a larger proportion of their hard earned savings.

For example, rather than giving grandchildren extravagant financial gifts grandparents may choose to take grandchildren on extravagant vacations or attend intergenerational summer camps. There is now a consumer market created to provide seniors with household items designed with them in mind. Work by Schervish and Havens (2003) finds that the children of very affluent families will only receive a proportion of the parent's wealth upon their death while a substantial proportion will go towards charitable giving. If as a society we have adopted more post-modern



values isn't it possible that our attitudes towards intergenerational giving are experiencing a shift as well? Two other considerations that might limit future transfers are the increased costs of health care and lower than expected pensions and returns on investment.

### **Individual Factors**

Having described aggregate trends in wealth ownership and identifying the structural forces that limit accumulation I now turn my attention to factors that affect household behaviors regarding savings and consumption. While one dimension of wealth, home ownership and equity, has received consistent theoretical and empirical attention from sociologists (Flippen 2001; Jackman and Jackman 1980; Krivo 1982, 1995; Parcel 1982) *overall net worth* has been largely ignored (Keister and Moller 2000; Spilerman 2000). One of the few studies published before 1990 in a top sociological journal acknowledged that sociologists tended to ignore wealth as a measure of economic status (Henretta and Campbell 1978). Another explanation for the lack of attention is that researchers have been severely hampered by a lack of data (Spilerman 2000; Juster, Smith, Stafford 1999). However, because our society is aging and wealth is becoming increasingly necessary and more importantly less evenly distributed sociologists have become more interested in wealth as an outcome. As a result research on the topic is consistently being published in some of the top sociological journals (i.e. Avery and Rendall 2002; Hao 1996; Keister 2000, 2003;

Spilerman 2000; Wilmoth and Koso 2002). This prior research has clearly established the importance of household characteristics such as, demographics, resources, family background, and lifestyle in determining wealth outcomes.

### *Household Demographic Characteristics*

The structure and composition of households will naturally change over time. Changes in marital status produce some of the more dramatic changes in the accumulation of wealth. In a recent analysis, Wilmoth and Koso (2002) clearly show that marital history rather than current marital status is essential in predicting total net worth for people approaching retirement. While the negative effect of divorce on wealth is firmly established, whether men or women are disproportionately affected by divorce is a contentious issue (Holden and Smock 1991; Hao 1996; Oliver and Shapiro 1995). Wilmoth and Koso (2002), who model marital history rather than marital status, conclude that divorce is only worse for women if they do not remarry. In addition to the accepted negative effects of divorce, becoming a widow also negatively affects the accumulation of wealth.

While some research has shown a negative relationship between number of children and total wealth (Wilmoth and Koso 2002), other research has found a positive relationship (Blau and Graham 1990). Furthermore it appears that the number of children differentially affects asset ownership (Keister 2000) and operates differently for racial and ethnic groups and married and unmarried households (Campbell and Kaufman 2000, Blau and Graham 1990). In addition, the effect of children on wealth has been shown to vary based on the ages of children (Hao 1996).

It is important to note that none of these studies were focused on the effects of children - the number or presence of children was merely a control. As a result, conclusions about the effects of children on households should be viewed cautiously. Yet these differences are intriguing and beg the question: how do children affect wealth accumulation? A question I will be answering in chapter four of my dissertation.

Prior research has attempted to explain racial differences in wealth ownership as resulting from differences in labor-force earnings, investment behavior (Blau and Graham 1990), family background (Keister 2002a), and inheritances (Keister 2003). While much of the relationship is explained by these variables, a considerable amount of racial variation is left unexplained (Scholz and Levine 2003). Therefore, non-white households are expected to have lower levels of wealth than white households.

An interesting finding in Campbell and Kaufman's research is a positive effect of mixed race marriages on net worth (2000). Controlling for mixed race marriages is particularly important when rates of inter-marriage vary across the groups being studied. This finding was not integral to their research and therefore received little attention but it demonstrates that there is an effect of mixed race marriages on net worth.

The research by Campbell and Kaufman (2000) is also the first to consider the importance of immigrant status on net worth. They argue immigrants should have lower levels of net worth as a result of the disadvantages associated with migration (i.e. language proficiency) and because of discrimination in the labor market. In

addition, the need to send financial resources to kin in their country of origin might also lower levels of net worth. Prior research has found mixed findings for the effects of immigrant status on wealth (Campbell and Kaufman 2000; Keister 2002b).

### *Household Resources*

The majority of Americans lack the financial knowledge and ability to make basic economic calculations that might help them plan for their future (Bernheim 1994). Prior research has shown that having a college education increases net worth (Campbell and Kaufman 2000; Hao 1996; Wilmoth and Koso 2002) and ownership of assets that generate additional income and capital (Campbell and Henretta 1980; Oliver and Shapiro 1995; Keister 2002). Oliver and Shapiro (1995: A4.3) found that the median net worth of households with a college degree was \$63,000 while the median net worth of those with a high school degree was \$33,000. Furthermore, housing and vehicle equity represent 98% of net worth held by the poorly educated. Therefore, education is expected to positively affect net worth and its components.

While education is consistently considered in previous research, researchers use a variety of different occupational characteristics. However, certain aspects of current employment status and work characteristics have been found to influence net worth and portfolio characteristics. For instance, benefit packages that include employee pension plans or matched funds in retirement accounts have been found to positively affect net worth (Henretta and Campbell 1978; Wilmoth and Koso 2002). In addition to benefits packages there is evidence that union membership positively influences wealth (Wilmoth and Koso 2002). Prior research has also found that

wealth varies by types of occupations (Oliver and Shapiro 1995) or the status of jobs (Henretta and Campbell 1978; Land and Russell 1996). In fact while the median net worth of upper white-collar workers was \$60,000 the median net worth of upper blue-collar workers was \$28,000 (Oliver and Shapiro 1995: A4.4). In addition, home equity accounts for almost all wealth for blue-collar workers.

Most research predicting wealth controls for persons who are self-employed, business or farm owners (Keister 2002; Oliver and Shapiro 1995; Wilmoth and Koso 2002). Persons who are self-employed or business owners will invest a great deal of their wealth in their companies and as a result net worth, if operationalized as including business equity, is positively influenced. However, financial resources being reinvested in company assets might negatively affect some dimensions of wealth, such as home equity or savings accounts. As a result, self-employment is expected to positively affect overall net worth but to negatively affect financial assets and housing equity.

Various dimensions of employment history have also been found to influence levels of wealth. Even after controlling for age, Oliver and Shapiro (1995) find that time spent in the labor force positively affects wealth accumulation. Persons who maintained stable employment have had more discretionary income and have been less likely to rely on the savings for unforeseen events. Therefore, time spent in labor force is expected to positively affect the accumulation of wealth.

The relationship between retirement status and wealth is complicated. First, the age at which people retire varies tremendously. Through early savings, a relatively young person might be able to retire early. On the other hand, those who

have not accumulated enough resources may be forced to stay in the labor force beyond the average age of retirement. Under this scenario retirement status could indicate higher levels of net worth. On the other hand, having retired one often begins to spend down accumulated resources therefore retirement status could indicate lower levels of net worth. Therefore, competing hypothesis make it difficult to predict the effect of retirement on wealth.

The final household resource discussed here is household income. Earnings are expected to positively affect wealth. Ideally one would be able to control for earnings over the life course. However, only current income is generally available. When current earnings are used to predict wealth, one must interpret current earnings as reflecting previous earnings. Fortunately, both the life cycle and buffer-stock hypothesis suggest that retirement savings do not begin until later in the life course. Therefore, using earnings when one is close to retirement, rather than early in their career, might be a more reliable predictor of wealth immediately prior to retirement. As a result I expect household income to positively affect wealth accumulation.

### *Family Background*

Households also have resources obtained through intergenerational exchanges. Intergenerational exchanges can come in the form of inter-vivos transfers or inheritances upon a person's death. Inter-vivos transfers are defined as transfers between living persons and generally occur at key stages in the life-cycle (i.e graduation, marriage, purchase of the first home). While only a small percent of households actually receive inheritances, financial resources given to adult children

from parents are extremely important (Hao 1996; Keister 2002). For example, one in five first time home buyers receives a financial transfer from a friend or relative to help pay for the down payment (Englehardt and Mayer 1994). In addition these types of transfers often result in larger down payments that result in better mortgage terms (Englehardt and Mayer 1998).

The importance of family background matters not only because of financial transfers but also because of the transmission of human and cultural capital (Conley 1999; 2001). Rumberger concludes among relatively young households, “the amount of variance in wealth explained by family background is more than twice that explained in earnings” (Rumberger 1983:765). Keister (2002a) specifically finds that there is a negative relationship between number of siblings in the family of origin and wealth. Therefore, I expect the number of siblings in the family of origin to negatively affect wealth accumulation.

### *Life-style and Opportunities*

Religious affiliation and religiosity in adulthood and childhood have also been found to influence the accumulation of wealth (Keister 2003). Religious affiliation affects various outcomes including wealth through the values instilled, norms and behaviors characterizing the group, and access to social capital (Kesiter 2003; Sherkat and Ellison 1999). According to these theories and based on research by Keister (2003) we would expect conservative Protestants to accumulate the lowest levels of resources in comparison to other groups, such as mainline Protestants and Catholics. Church attendance is also expected to positively affect wealth. Attendance is distinct

from affiliation because it is a more precise indicator of access to social networks. To control for possible differences in costs of living and profitable residential markets access, I expect city size and region of the country to also affect wealth accumulation.

While sociologists interested in wealth have clearly established the importance of household demographics, resources, family background and certain dimensions of life-style on wealth other predictors have received considerably less attention. While economists have included controls for levels of consumption sociologists have not. With the exception of Wakita, Fitzsimmons, and Lao (2000) there has also been too little consideration of the effect of intergenerational exchanges on wealth. In their research they find that a desire to provide for aging parents and one's children positively affects change in savings.

On the other hand, after completing interviews with families living in Los Angeles and Boston, Oliver and Shapiro (1995: 80) conclude, "everyone we interviewed who had children told us of the way in which they expended assets at critical junctures in their children's lives to enhance their social and educational well being." While these authors were not able or interested in quantitatively studying the relationship between investments in children's education and parental wealth they clearly suggest that investments in children compromise the economic security of parents. These two pieces of evidence suggest that research on wealth needs to consider how intergenerational exchanges affect the donor's well being.



### *Intergenerational Transfers*

The primary goal of my dissertation is to answer the following question: do parents compromise their own economic position in order to provide additional opportunities to their children? As mentioned earlier, previous research has clearly shown that receiving intergenerational transfers (inter-vivo transfers and inheritances) positively affects the economic well-being of recipients. Yet little attention has been paid to the effects of these transfers on the donor's well-being. To my knowledge my dissertation will be the first example of research based on a nationally representative sample that examines the relationship between intergenerational exchanges and the donor's economic well-being. I will specifically examine the long-term economic consequences of investments in children's education on parent's economic security.

It is important to make a distinction between planned and unplanned inter-vivo transfers. While planned transfers are more likely to include things like investments in children's education and down-payments for homes unplanned transfers are more likely to occur when a child experiences a period of unemployment or unexpected medical expenses. Even though parents are expecting planned transfers I assume that there is greater variability in their likelihood than unplanned transfers holding all else equal. In other words, I assume that to the best of their ability all parents will help their children to during times of crises while not all parents feel obligated or inclined to invest in children's education or provide them with money to help purchase their own home. Therefore, focusing on planned transfers rather than

unplanned transfers provides an opportunity to consider if parents consciously choose to compromise their own economic well-being by providing their children with additional opportunities.

Taking into consideration that most American's believe educational credentials are a key to success (Kluegel and Smith 1986) I focus on investments in children's education rather than other types of planned inter-vivo transfers (i.e. down payment to purchase a home) that are less salient or realistic for most parents. In addition by focusing on a behavior rather than an attitude or intention I am able to examine what actually occurred and the resulting consequence.

All households have a finite amount of income that can be used for consumption and savings. As a result, any money directed toward children's education is money that could have been saved. Therefore, one would naturally assume a negative effect of intergenerational exchanges on wealth.

Alternatively, the money directed toward children's education may result from reduced consumption in other dimensions of the household budget (i.e. a reduction in luxuries) rather than reducing the rate of savings. Upon completion of contributions to children's education, parents may maintain the reduced levels of consumption and redirect the money previously spent on children's education towards savings, or they may increase levels of consumption. The effect of investments in children's education is therefore expected to depend upon parent's subsequent actions.

Even though the analyses in my dissertation will not model changes in the household budget as parents shift from paying for children's education to not paying I will be able to examine the overall effect of educational expenditures on wealth and

determine to what extent planned transfers to children affect parental wealth. Considering the positive outcomes received by children who receive parental transfers it seems only appropriate that we consider if parent's experience a negative outcome as a result of these transfers. In addition, when you take into consideration that parents make these transfers without knowing if they will have a surplus of economic resources as they age there is a certain degree a risk associated with inter-vivo transfers.

## CHAPTER 3

### DATA, VARIABLE CONSTRUCTION, METHODS

#### Health and Retirement Survey

The data for the empirical analyses are drawn from the first wave (1992) of the *Health and Retirement Study* (HRS). The HRS is a nationally representative biennial longitudinal survey of persons born between 1931 and 1941.<sup>2</sup> The HRS collects a range of social, economic, and health information from both an age-eligible respondent and a co-resident spouse or partner when applicable. In addition, HRS data can be linked to the Social Security Administration Master Earnings and Master Beneficiary files, to employer health insurance plans and to employer provided pension plans, which improve the quality of the HRS data.

The HRS sample was selected under a multi-stage area probability sample design. In addition, to the nationally representative sample the HRS design included three oversamples of age-eligible persons living in Florida, African Americans, and Hispanics. Upon determining if one person in the household was age-eligible the HRS next identified a primary and a secondary respondent. The individual deemed most knowledgeable about the family's assets, debts, and retirement planning was named the

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<sup>2</sup> Households were selected based on at least one person being born between 1931 and 1941 while the age of the husband, wife, or long-term partner was not taken into consideration.

primary respondent and his or her spouse or partner was referred to as the secondary respondent. Primary respondents answered questions regarding housing, net worth, and income for both themselves and their spouse or partner. For those households with both a primary and secondary respondent only the female spouse/partner was asked about family relationships and intergenerational transfers of time and money.

The overall response rate for the initial wave of data was 82% and resulted in 12,562 respondents residing in 7,702 households. While an 82% response rate is rather good for a survey of this kind, researchers affiliated with the HRS were especially concerned with the possible effects of nonresponse bias on data quality. As a result, HRS researchers engaged in extra efforts to convert households that had initially refused to participate in the study. In fact, approximately 8% of individuals participating required extra effort to obtain interviews. These individuals lived in households that were more likely to have married couples, to be working, to be White, to have a stable job, and most importantly had a higher net worth (by about 25%) and household income (by about 12%) (Juster and Suzman 1995).

The HRS is particularly well suited for examining the relationships among educational expenditures and wealth for three reasons. First, respondents were asked to identify the total amount of money spent on children's education and money spent in the past year. In addition, the HRS collected basic demographic information about both biological and stepchildren, which allows me to control for specific characteristics of the children, such as educational achievement. Second, extensive information was gathered regarding wealth ownership. While previous studies have had a difficult time gathering data on those at the extremes of the wealth distribution this is not the case with the HRS.

The methodological techniques used insure reliable and valid data that captures the full distribution of wealth ownership (Juster and Suzman 1995). Finally, separate analyses by race are permissible because of the over representation of African American and Hispanic populations.

### **Sample Selection**

My analyses will be conducted upon two samples of respondents. Both samples exclude households based on race and failure to answer questions regarding wealth ownership. Race and ethnicity were derived for both the primary and secondary respondent using the following sets of questions. Respondents were first asked if they considered themselves to be Hispanic or Latino. Those answering “yes” were asked, “Would you say you are Mexican American, Puerto Rican, Cuban or something else?” Those answering “no” were asked, “Do you consider yourself primarily White or Caucasian, Black or African American, American Indian, or Asian?” Based on these responses, respondents in the HRS can be identified based on race and ethnicity for Hispanics and Latinos.

Given the small number of respondents identifying themselves as American Indian, Asian, or other I excluded these households. Therefore, households examined in these analyses can be classified as Caucasian, African-American, Hispanic, or a combination of Caucasian and African-American or Caucasian and Hispanic. Households comprised of both a Hispanic and African-American respondent were excluded as well. These decisions resulted in a loss of 222 households or 2.9% of the total households resulting in 7,480 households.

Households were also excluded if they failed to provide information regarding wealth ownership. Extensive measures, such as unfolding brackets, were used to reduce item nonresponse that traditionally plagues research on wealth (Moon and Juster 1995; Smith 1995). As a result only 148 households, or 2%, of the 7,480 households available after excluding race have missing data on wealth. Therefore, the maximum number of cases available for my analyses is 7,332.

These 7,332 households will hereafter be referred to as the *full sample*. The distinction between the full and restricted sample is the absence of having children (biological, adopted, or stepchildren) or having dependent children. Excluding households without children results in a loss of 698 households or 10.5% of the full sample and excluding households with dependent children results in a loss of 2,666 or 36% of the full sample. Therefore the *restricted sample* with 3,968 households only includes those households that no longer have dependent children.

## **Methods**

It is well known that while net worth is positively skewed (small number of people with substantial wealth) in the average population there is also a substantial proportion of the population that have zero or negative net worth. Researchers differ with respect to the methodological approaches they use to correctly estimate this type of distribution. The most basic approach is to use the unadjusted estimate and apply ordinary least squares regression to estimate the coefficients (Blau and Graham 1990). However this approach ignores the skewed distribution of wealth and most likely results in biased estimates. A more appropriate basic approach is to use the square root of net

worth and then apply ordinary least squares regression (Campbell and Kaufman 2000). By transforming net worth in this way this method produces accurate estimates. An alternative approach is to use a Tobit regression to model “positive net worth” and use logistic regression to model “zero” and “negative” net worth (Land and Russell 1996). However the limitation of this method is that you are unable to consider the full wealth distribution simultaneously. Therefore I have chosen to follow the example of Campbell and Kaufman (2000) and first transform wealth in nominal dollars by using the absolute value of the square root. By using this transformation I can confidently use structural equation modeling techniques.

I have chosen to use structural equation modeling (SEM) techniques for three reasons. First, since I hypothesize that intergenerational expenditures mediate the relationship between household characteristics and wealth, this technique allows for the easy calculation of indirect, direct, and total effects. Second, I am able to use full information maximum likelihood (FIML) available through the AMOS program to estimate missing data. Finally, I am able to test for differences in effects across groups, such as race and occupational class. In the following sections I review maximum likelihood estimation (MLE) in general, FIML as a technique for dealing with missing data, and multiple group analysis in the context of structural equation models.

### *Missing Data and Maximum Likelihood Estimation*

Maximum likelihood estimation (MLE) is the most common method of estimating coefficients in structural equation models. The name “maximum likelihood” describes the statistical principle that underlies their derivation: if they (the estimates) are assumed



to be population values, they are ones that maximize the likelihood (probability) that the data (the observed covariances) were drawn from this population (Kline 1998:125). ML uses an iterative process and calculates estimates for all parameters simultaneously.

While the basic assumptions underlying MLE are the same as multiple regression there are two important exceptions. First, MLE does not assume uncorrelated error terms between variables within equations which means it can be used with both non-recursive and recursive models. Second, MLE assumes a normal distribution for endogenous variables and continuous exogenous variables.

While missing data is not a substantial problem in my analysis it is present. There are a variety of methods for dealing with incomplete data. The most extreme is the listwise deletion of cases with missing values on either the endogenous or exogenous variables. This method results in the loss of any case that has a missing value on either the endogenous or exogenous variables. This method is criticized because information provided by the person that could be used to estimate relationships among variables is lost.

In contrast to listwise deletion is a technique based on maximum likelihood estimation, called Full Information Maximum Likelihood (FIML). FIML estimates use any data that is specified in the model to estimate missing data. As a result all cases are retained despite their having missing data. It has been suggested by several that FIML is the recommended estimation method when the data is missing at random and is not a bad choice when the missing data are non-ignorable (Little and Rubin 1989; Schafer 1997; Muthen, Kaplan, Hollis 1987). Since there is evidence of both missing at random and

possibly nonignorable missing data in my sample, I use FIML estimates to deal with missing data as suggested by several authors (Allison 2002; Little and Rubin 1989; Schafer 1997; Muthen, Kaplan, Hollis 1987).

While structural equation programs can be used to specify hypothesized relationships among the exogenous variables I do not. I correlate all exogenous variables. Coefficient estimates produced under these conditions should be identical to those produced using Ordinary Least Squares (OLS) regression estimation. However, since I am estimating the values for the missing data my results will not be identical to those produced using another technique to deal with missing data and OLS regression.

#### *Multiple Group Comparisons*

Multiple group comparisons allow for interactions between the grouping variable and all parameters simultaneously. SEM programs, such as AMOS, allow the researcher to evaluate which paths in the model vary between groups and which paths do not. By setting some paths to be equal across groups and allowing others to vary, the researcher can further assess and model group differences. My analyses will focus on racial and ethnic differences between Whites, Blacks, and Hispanics and also between professional and working class households.

In the following section, I describe how endogenous and exogenous variables were constructed. In addition, I provide basic distributional information for both the full and restricted samples as well as differences between racial groups when relevant.

## Variable Construction and Distribution

### *Endogenous Variables*

The value of the family's *total net worth* for 1991 is the difference between the sum of total assets and the value of total debts<sup>3</sup>. Total assets are calculated as the sum value of all real assets (including primary residence, business, farm, real estate investment, and vehicles) and financial assets (including stocks and mutual funds; IRA and Keogh account; Certificates of Deposit, government bonds, T-bills; bonds and bond funds; checking and savings accounts). Assets do not include income from social security, employer pensions, or other annuities. Total debts are calculated as the sum of housing debt (including home mortgages and equity loans) and financial debt (including credit card, medical bills, loans from relatives). Based on this calculation this measure of wealth would be classified as “marketable wealth” rather than “augmented wealth” (Wolff 1996; Spilerman 2000). Marketable wealth is the equivalent of net worth while augmented wealth adds to marketable wealth pension and Social Security wealth.

Given the sensitivity of structural equation methods to continuous variables that are not normally distributed, the fact that total net worth, measured in dollars, had a skewness coefficient of 7.35 indicated that the variable should be transformed. The square root of net worth resulted in an acceptable distribution.<sup>4</sup> Therefore, the square root of household net worth is used in all analyses. Figure 3.1 compares the distribution

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<sup>3</sup> I use the wealth variables already constructed in the RAND HRS data file rather than recreating these same variables from the 1992 raw HRS data file. The advantage to using the RAND constructed wealth variables is two-fold: (1) there is less missing data and (2) differences in data collection across waves have been addressed (RAND 2002).

<sup>4</sup> In order to get the square root for households with a negative net worth I took the square root of the absolute value of net worth and then multiplied by -1 for those households originally with a negative value.

of net worth in dollars to the square root of net worth for the restricted and full samples. As shown in the histograms using the square root of net worth results in a fairly symmetrical distribution and an acceptable skewness coefficient of 1.9.

*Housing net worth* is the difference between the estimated present value of the home and the total amount of all loans against the primary residence (including home equity loans). Also having a skewed distribution I used the square root of housing net worth in all analysis. *Household financial assets* is the differences between liquid financial assets, such as stocks, cds, bonds, money market, and savings accounts, and financial debt (including credit card, medical bills, loans from relatives). Note that this excludes the value of IRA's, real estate wealth, and vehicles or businesses.

In Table 3.1 I provide the mean, standard deviation and the percent of cases with missing values for the full sample overall and by race. In addition to providing these statistics for total net worth in dollars and as a square root I also provide values for financial assets and housing net worth. On average these households have almost \$200,000 in total net worth. They have \$45,000 on average in financial assets. The net value of their primary residence is \$58,000. The value of the remaining assets can be attributed to business assets, other real estate investments, and the value of vehicles. There are no striking differences between the full and restricted samples. A more thorough discussion of the distribution of wealth will be presented in the following chapters.

Turning our focus to the basic distributional characteristics for the three racial groups in the full sample the results are as expected. As prior research has shown Whites with a net worth of \$253,000 have considerably more financial resources than do African

Americans with a net worth of \$62,000 and Hispanics with an average net worth of \$93,000. As with all racial and ethnic groups the differences among members within a group can often be as great as the difference between the groups. Hispanic households are a perfect example. Within the HRS there are 7 distinct Hispanic ethnicities whose average net worth ranges from \$158,901 for those from Spain to \$19,460 for those from the Dominican Republic. Unfortunately, there are not enough cases within these categories to meaningfully divide them however the ethnic distinctions within the Hispanic community should be acknowledged.

In Figure 3.2, I provide the distribution of the standardized square root of net worth for each racial group. As shown the distribution for Blacks and Hispanics is negatively skewed with the majority of cases having below average levels of net worth. Two other points should be made regarding racial differences in wealth. First, the net value of housing for Whites is considerably higher than for Blacks and Hispanics. Second, the distribution of missing values across racial groups suggested that Hispanics were more likely to refuse or be unable to discuss their levels of wealth as compared to Whites and Blacks.

The basic household characteristics of parents who are no longer supporting their children are presented in Table 3.2. I provide the mean, standard deviation and the percent of cases with missing values for the full sample overall and by race. *Total expenditure on education* is based on the primary respondent's calculation of money spent on all biological, adopted, and stepchildren at all stages of children's education. Interestingly, almost 30 percent of households spent no money on their children's education and the average amount spent was \$15,400 dollars among all households.

In Figure 3.3, I provide the distribution of the standardized square root of educational expenditures for the three racial groups. What is interesting is that the basic shape of the distribution is the same for the three groups. Two points should be made. Even though white households spent on average \$2500 more than black households the two groups are similar in the proportion that spent no money on children's education (26% and 32% respectively) and in the proportion of households (12%) with the highest educational expenditures (above \$50,000). Hispanic households are unique in that they spent considerably less on average than whites (\$5000), 39% of Hispanic households spent no money on children's education, and only 7% of households were in the highest educational expenditure bracket.

Of note in Table 3.2, is the substantial number of cases, almost 8%, unable or unwilling to answer the question regarding children's educational expenses. After further investigation of these cases, I find that households not answering have a significantly higher net worth, a higher proportion of children completing post-secondary education, and are more likely to have completed post-secondary education themselves than households that provided the information<sup>5</sup>. In addition, Whites (9.3%) were more likely to refuse or be unable to answer this question as compared to Blacks (7.3%) and Hispanics (3.8%).

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<sup>5</sup> It's important to note these are the same types of households that were the most difficult to recruit for the study. I suspect there are two types of households within this group those that had considerable resources and did not generously invest in their children's education and those that invested very generously and did not want to disclose the amount.

### *Explanatory Variables*

The explanatory variables have been divided into five groups: (1) household demographic characteristics (2) characteristics of children (3) household resources (4) family background (5) and life-style. An overview of variable construction is provided in Table 3.3 and specifics are discussed below. Since there are few substantial differences between the two samples and the majority of analyses will be conducted on the restricted sample I limit my discussion of the distributional properties of the variables to the restricted sample.

#### *Household Demographic Characteristics*

*Average age* is measured in years and is derived from either the age of the primary respondent in single person households or is the average age of both persons in a two-person household. The average age of the primary and secondary respondent in the household is 55 years old. Using the average age rather than the age of the oldest person in the household is more appropriate given the age differences that exist between some spouses.

Current marital status of the household is operationalized with dummy variables for three categories, *married or living together*, *single men*, and *single women*. While 24% of households are single women, 8% are comprised of single men, and 68% percent are currently married or living together. While more than 65% of White and Hispanic households are comprised of two people only 45% of Black households are classified as married or living together. Marital history is measured with two variables *previously divorced* and *previously widowed*. If any person in the household was previously

divorced or widowed the household is coded with a value of 1 on the respective variables. In two person households if either the primary or secondary respondent failed to answer questions regarding marital history the household is coded based on the respondent who did answer. There is no missing data for marital history. Slightly more than 40% of households have a person who experienced divorce and 16% were widowed at some point. A slightly smaller percentage of Hispanic households are identified as previously divorced while a slightly larger percent of Black households are identified as widowed in comparison to the average.

Racial and ethnic composition of the household is operationalized with four dummy variables, *White*, *Black*, *Hispanic*, and *inter-mixed*. The racial identity of single person households is straightforward; however, racial composition of two person households is more complex. If both persons are of the same race the household is coded accordingly as White, Black, or Hispanic. In two person households, if either respondent is Black or Hispanic and currently living with or married to a White respondent the household is coded as Black or Hispanic and is also coded as being inter-mixed. If either person in the household refused to answer questions regarding their race and ethnicity, then the household was coded according to the race of the person who did respond. There are 36 households in which neither the primary nor the secondary respondent answered regarding their race or ethnicity. Therefore they are coded as missing. 19 percent of households in the restricted sample are classified as Black and 8 percent of households are Hispanic. Only 2 percent of the households are classified as inter-mixed with the majority between Hispanic and white partners. *Immigrant status* is coded as 1 if



either the primary or secondary respondent was not born in the United States. While only 5% of White and Black households have at least one person who is an immigrant, 47% of Hispanic households do.

### *Characteristics of Children*

Basic information was collected on all children born to or adopted by either the primary or secondary respondent. The following types of information are available for each child: age, sex, relationship to primary respondent, whether or not they are still living at home or being supported by their parents while they are away at school, level of education completed, if they are currently employed, marital status, and number of their own children. By aggregating the characteristics of children I was able to create the following variables.

The *number of children* is measured in three different ways (1) dichotomous variable where a value of 0 indicates no biological or step-children, (2) a continuous variable ranging from 0 to 19<sup>6</sup>, and (3) an ordinal variable with 6 categories, ranging from 0 to 5, where 5 denotes five or more children. Among couples, children include both those that are shared by the couple (biological and adopted) and those related to only one person in a couple. Among single persons children include all those identified as such by the respondent, regardless of biological relationship. Approximately 10% of the full sample does not have children and the average number of children in the restricted sample is 3.3.

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<sup>6</sup> There is one household with 19 children ranging in age from 11 to 43. This is the third marriage for both partners. The primary respondent has 11 biological children and the secondary respondent has 8 children.

*Pre-marital birth* is a dichotomous variable where “1” indicates the oldest child’s age is greater than the number of years married among couples married only once. All other households are coded as “0.” Unfortunately, I am not able to discern births outside of marriage for persons who are currently single or remarried. Among households 4% of whites, 28% of black, and 16% of Hispanics had a pre-marital birth. *Age difference between siblings* measures the number of years between the oldest and youngest child with single child households coded as 0. The average age difference between the youngest and oldest child is 8 years. An alternative measure of the spacing of children would be the average number of years between children. However, this conceptualization is not as appropriate for households with non-biological children.

Using the primary respondent’s relationship to the child, I identified the number of shared biological and adopted children in two person households and the number of biological and adopted children in single parent households. I then divided the number of children biologically related to both parents by the total number of children to construct the *proportion of biological children*. On average half of the children in a household were either biologically related to the parents or were adopted by the parents. Black households were distinct in that 30% of children in the household were biologically related to the parents. In a similar fashion I divided the number of daughters by the number of children to derive *proportion of daughters*. On average half of all children in households were daughters.

With respect to children’s educational achievements I first determined the number of children who completed post-secondary education, as defined by a four-year or advanced degree. This number was then divided by the total number of children to obtain

*the proportion completing post-secondary education.* On average 40% of children in households obtained a post-secondary education. *Time since dependency* is measured by the number of years since the parents were no longer financially supporting their children. On average, 5 years have passed since families were directly financially responsible for their children.

### *Household Resources*

In order to determine the level of education achieved by the primary and secondary respondents, the *Health and Retirement Survey* began by asking what is the highest grade of school or year of college you completed. Based on these answers respondents were then asked follow-up questions pertaining to type of high-school degree, vocational training, or type of college degree earned. Using a combination of responses to these questions I measured household education in two ways, as two dichotomous variables and the average years of education. A household is defined as having *completed post-secondary education* if 1 or more persons in the household received a four-year or advanced degree. A household is defined as *never completed high school* if all persons failed to secure a high-school diploma or an equivalent G.E.D. To be clear, in a two-person household both the primary and secondary respondent must have failed to finish high school or earn a GED in order for the household to be coded as never having completed high school. Only one person was required to earn a college degree in order for a two-person household to be coded as having completed a post-secondary education. On average 22% of the sample never completed high school and

16% completed post-secondary education. Among Black households 40% never completed high school and 8% completed a post-secondary education and among Hispanic households 55% never completed high school and 6% completed post-secondary education. The average years of education attained for the full sample is 11.7. In most analyses average years of education will be used rather than the two dichotomous indicators. I would argue average years of education might be more appropriate for this cohort (born between 1931-1941) because educational credentials would have been less important as they entered the labor market than they are today. However, the dichotomous variables are useful in their substantive interpretation.

*Average household income* is based on current earnings, monies received from pensions, Social Security, and other government transfers. Since the HRS identifies either the primary or secondary respondent as the most “financially knowledgeable” that person answers all questions pertaining to his or her wages and pensions as well as those of the person they are living with. Household income is the sum of the primary and secondary respondent’s individual wages/salaries, bonuses, tips, or commissions from a primary or secondary job as well as their payments from employer pensions, Social Security, and other government transfers<sup>7</sup>. In a single person household the value of household income is based solely on the primary respondent and in a two-person household the average earnings for both persons is determined. Since average household income was highly skewed I use the square root of average household income.

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<sup>7</sup> I use the household income and occupation variables already constructed in the RAND HRS data file. Again the advantages to using these already constructed variables pertain to lower levels of missing data and a higher reliability. For instance, the household income variable is derived from more than 30 questions, each with a methodological control.

Occupational status is measured with three variables. The first indicates if either the primary or secondary respondent is *retired*. In 21% of White households and approximately 34% of Black and 39% Hispanic households either the primary or secondary respondent is retired.

The second indicator of occupational status indicates if either the primary or secondary respondent is *currently self-employed*. Approximately 20% of White household are classified as currently self-employed and 8% of Black and 12% of Hispanic households.

The third indicator of occupational status measures the type of work done by either the primary or secondary respondent. The HRS collected extensive data regarding the occupational history of both respondents. Since many of the respondents held multiple jobs over their careers, I use the job with the longest tenure to determine the type of work done by the respondent. Occupations were originally coded according to the 1980 census codes. Therefore, there are 17 possible job categories.

Similar to the measurement of education I created two measures of household occupation. In the first measure, if either respondent indicated that they were in the managerial (category 1) or professional (category 2) categories the household was coded as having *a professional occupation*. Again remarkable racial differences characterize households with 38% of White household coded as professional and 18% of Black and 13% of Hispanics. The second measure assigns a socioeconomic index score (SEI, Duncan 1961) to the primary and secondary respondents job with the longest tenure.<sup>8</sup> I

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<sup>8</sup> This measure was developed by Stevens and Cho (1985) and has been previously used in wealth research by Land and Russell (1996).

then use the average of the primary and secondary respondent's values to create *average occupational SEI*. The difference between these two measures is that average occupational SEI measures the relative status of the occupation in comparison to other households while, being a professional or not, is an indication of occupational class.

In addition, to these variables I also control for total *years in the labor force*. For single person households their individual value was used and for two-person households their average value was used. On average the primary and secondary respondents in households have spent 27 years in the labor force.

### *Family Background*

*Number of siblings* is either the actual number of living siblings for a single person household or the total number of siblings for both respondents in a two-person household. If either the primary or secondary respondent has received an inheritance or large sum in the form of a trust from anyone they are coded with a value of one for *received an inheritance*. Almost 20% of households had received an inheritance. However 25% of White households received one while only 5% of Black households and Hispanic households had received an inheritance. The *amount of the inheritance* received is based on the respondent's response when asked about the value of the largest inheritance or substantial gift in the form of a trust that they ever received. The average value of households receiving an inheritance or trust was \$7,300 dollars. However, given

a range of one dollar to a million dollars the highly skewed nature of the variable was problematic and as a result the logged value of the amount of the inheritance is used instead.

### *Life-Style*

Assigning religious affiliation to a household was a complex matter. Both the primary and secondary respondents were individually asked about their religious affiliation and attendance. These responses were then coded into 56 specific Judeo-Christian denominations and groups. Building on the previous work of Keister (2003) I first recoded these 56 categories into 6 groups: *mainline protestants*, *conservative protestants*, *Catholics*, Jews, Non-Judeo Christian groups, those without religious preference or belief. Given the small number of cases (all less than 2%) within the last three groups (Jews, Non-Judeo Christian groups, and those without religious preference or belief) they were collapsed into one group called *other religious affiliation*. Households were then assigned a religious affiliation based on the primary respondent's answer. For the majority of married households, approximately 85%, this does not present a problem because few are married or living with a person of a different religious affiliation once the large categories are used. Conservative protestants comprise the largest category of households, 32%, followed next by mainline protestants with 25%.

Religious attendance is an ordinal variable with 4 groups (0) those who never attend (1) those who attend on holidays or several times a year (2) those who attend

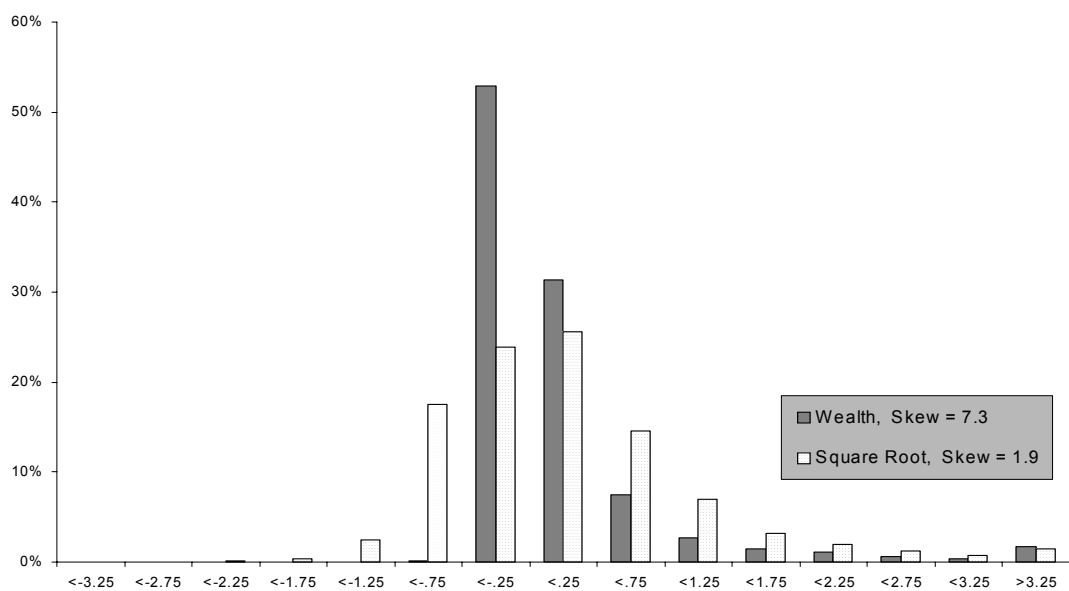
weekly (3) those who attend more than once a week. For households with single persons *religious attendance* is based on their response and for married households the average level of attendance reported by both the primary and secondary is used.

The current residential location of the household is measured as region of the country and urban or rural setting. Original state-level data was recoded into Census region and division categories for public release data files. Rather than using the 9 division codes I use the 4 region divisions coded as a set of categorical variables: Northeast, Midwest, South, and West. Households are distinguished by whether they are living in urban or rural areas. Those living in rural areas are coded as 1. Approximately 26% of the sample is living in what was defined by the HRS as a rural area.<sup>9</sup>

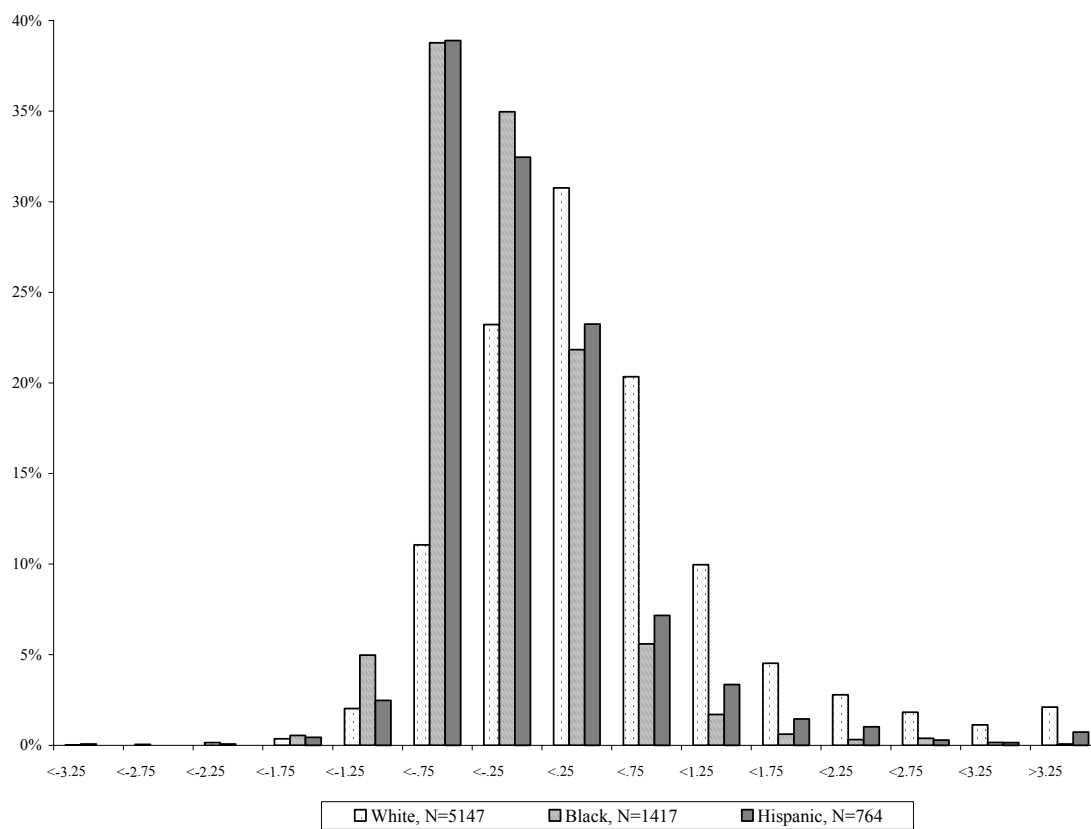
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<sup>9</sup> An additional file obtained from the HRS official webpage, can be used to identify households living in rural and non-rural areas.

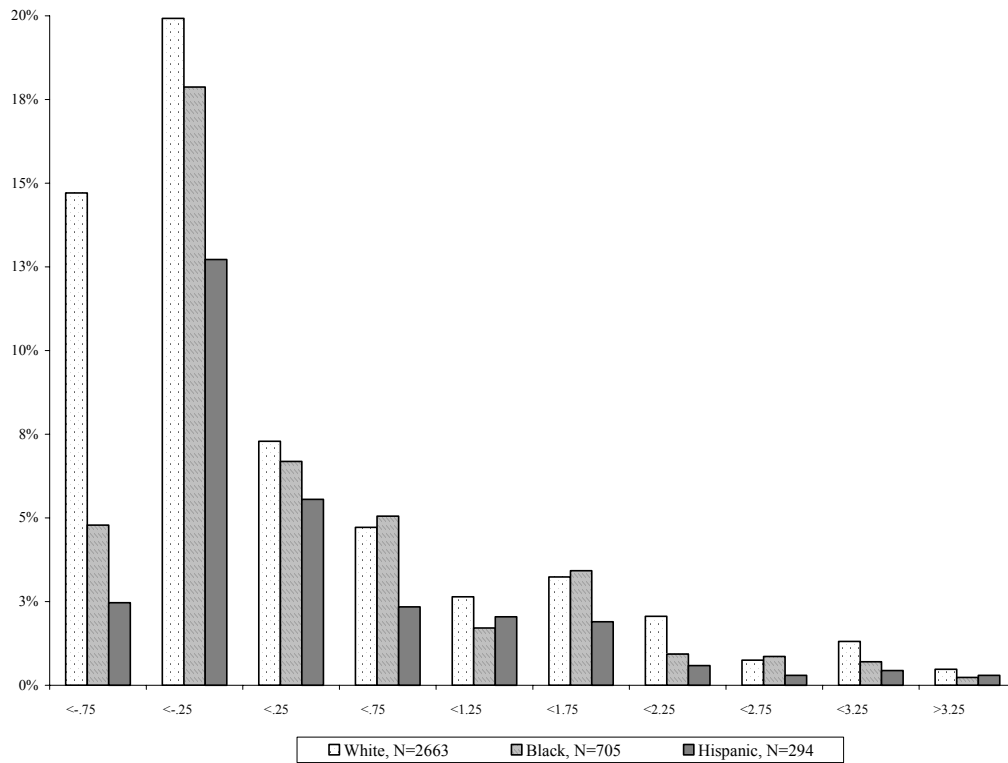




**Figure 3.1: Histograms of Wealth and the Square Root of Wealth (z-scores) for the Full Sample (N=7332)**



**Figure 3.2: Histograms of Wealth (Z-Scores) by Race for the Full Sample (N=7332)**



**Figure 3.3: Histograms of Educational Expenditures (Z-Scores) by Race for the Restricted Sample (N=3968)**

Variables	Mean	Total Standard Deviation	Percent Missing	Whites Mean (N=5147)	Black Mean (N=1417)	Hispanic Mean (N=764)
<i>Endogenous Variables</i>						
Total Net Worth (Dollars)	199539.02	437378.88	0.00	253187.18	62231.46	93184.83
Total Net Worth (Square Root)	331.11	303.06	0.00	393.75	170.71	206.58
Financial Assets (Dollars)	44871.08	168456.01	0.00	59894.81	8573.47	11162.33
Financial Assets (Logged)	5.10	7.11	0.00	6.49	1.76	1.99
Housing Net Worth (Dollars)	57950.80	88667.30	0.00	68888.27	28347.66	39011.39
Housing Net Worth (Square Root)	187.50	157.77	0.00	215.45	115.02	133.07
<i>Household Demographic Characteristics</i>						
Average Age	55.63	4.42	0.00	55.68	55.64	55.32
Single Male	0.10	0.30	0.00	0.09	0.14	0.09
Single Female	0.22	0.41	0.00	0.17	0.38	0.23
Previously Divorced	0.41	0.49	0.00	0.42	0.42	0.34
Previously Widowed	0.14	0.35	0.00	0.13	0.20	0.13
Black	0.19	0.39	0.05	---	---	---
Hispanic	0.10	0.31	0.05	---	---	---
Inter-Mixed	0.02	0.13	0.05	---	0.02	0.14
Immigrant Status	0.11	0.31	0.00	0.06	0.06	0.56
<i>Children's Characteristics</i>						
Number of Children	3.21	2.19	0.00	3.03	3.56	3.77
No Children	0.10	0.29	0.00	0.09	0.09	0.11
Time Since Dependency	3.01	4.24	0.00	3.11	3.20	1.94
Pre-Marital Birth	0.08	0.27	0.00	0.03	0.22	0.12
Age Difference Between Siblings	8.07	6.41	0.00	7.43	9.38	9.92
<i>Household Resources</i>						
Average Years of Education	11.97	3.07	0.00	12.66	11.19	8.79
Never Completed High School	0.20	0.40	0.00	0.12	0.35	0.49
Completed Post-Secondary	0.21	0.41	0.00	0.26	0.12	0.08
Household Income (Square Root)	187.42	91.63	0.00	204.30	150.30	142.65
Currently Retired	0.22	0.41	2.66	0.18	0.32	0.32
Average Years in Labor Force	26.98	10.60	0.00	28.21	25.66	21.09
Average Occupational SEI	34.39	12.89	4.64	36.65	29.21	27.88
Professional Occupation	0.37	0.48	4.03	0.43	0.21	0.16
Self-Employed	0.17	0.38	0.17	0.20	0.09	0.13
<i>Family Background</i>						
Received an Inheritance	0.19	0.39	0.67	0.25	0.05	0.06
Amount of Inheritance (Logged)	1.58	3.64	3.71	2.12	0.29	0.45
Number of Siblings	2.44	3.19	0.00	2.20	2.69	3.59
<i>Life-Style</i>						
Mainline Protestant	0.25	0.44	0.19	0.31	0.16	0.06
Conservative Protestant	0.32	0.46	0.19	0.25	0.65	0.10
Catholic	0.23	0.42	0.19	0.21	0.05	0.74
Other/No Religious Affiliation	0.20	0.40	0.19	0.23	0.14	0.10
Religious Attendance	1.50	0.93	4.27	1.37	1.84	1.72
Region--North	0.18	0.38	0.00	0.18	0.22	0.12
Region--Midwest	0.24	0.43	0.00	0.28	0.19	0.06
Region--South	0.42	0.49	0.00	0.39	0.54	0.43
Region--West	0.16	0.36	0.00	0.15	0.06	0.39
Rural	0.26	0.44	0.00	0.30	0.13	0.17

**Table 3.1: Descriptive Statistics for Full Sample from the 1992 Health and Retirement Survey (N=7,332)**

Variables	Mean	Total Standard Deviation	Percent Missing	Whites Mean (N=2903)	Black Mean (N=758)	Hispanic Mean (N=307)
<i>Endogenous Variables</i>						
Total Net Worth (Dollars)	195410.52	400599.89	0.00	241289.78	58521.39	99561.89
Total Net Worth (Square Root)	332.43	294.75	0.00	389.76	163.94	206.29
Financial Assets (Dollars)	43081.78	135018.47	0.00	55761.57	7484.20	11073.68
Financial Assets (Logged)	5.31	6.97	0.00	6.61	1.49	2.47
Housing Net Worth (Dollars)	57299.18	92329.88	0.00	66906.29	27834.30	39204.47
Housing Net Worth (Square Root)	189.70	154.14	0.00	215.30	115.05	131.90
Educational Expenditures (Dollars)	15413.42	20362.46	7.71	16288.55	13831.97	11278.95
<i>Household Demographic Characteristics</i>						
Average Age	56.73	4.06	0.00	56.78	56.51	56.87
Single Male	0.08	0.27	0.00	0.07	0.11	0.08
Single Female	0.24	0.43	0.00	0.19	0.44	0.28
Previously Divorced	0.41	0.49	0.00	0.41	0.41	0.38
Previously Widowed	0.16	0.37	0.00	0.15	0.21	0.13
Black	0.19	0.39	0.00	---	---	---
Hispanic	0.08	0.27	0.00	---	---	---
Inter-Mixed	0.02	0.13	0.00	---	0.02	0.17
Immigrant Status	0.08	0.27	0.00	0.05	0.04	0.47
<i>Children's Characteristics</i>						
Number of Children	3.26	1.84	0.00	3.13	3.57	3.70
Time Since Dependency	5.02	4.47	0.00	5.00	5.43	4.31
Pre-Marital Birth	0.09	0.29	0.00	0.04	0.28	0.16
Age Difference Between Siblings	6.37	5.06	0.00	6.08	7.09	7.34
Proportion Biological	0.49	0.49	0.00	0.55	0.28	0.49
Proportion Daughters	0.48	0.32	0.00	0.48	0.50	0.49
Proportion Completing Post-Secondary	0.40	0.41	0.00	0.44	0.32	0.26
<i>Household Resources</i>						
Average Years of Education	11.71	2.79	0.00	12.24	10.86	8.79
Never Completed High School	0.22	0.41	0.00	0.14	0.40	0.55
Completed Post-Secondary	0.16	0.36	0.00	0.19	0.08	0.06
Household Income (Square Root)	179.99	87.66	0.00	194.67	141.26	136.81
Currently Retired	0.24	0.43	1.36	0.21	0.34	0.39
Average Years in Labor Force	27.35	10.76	0.00	28.45	25.52	21.47
Average Occupational SEI	33.11	12.32	4.76	34.94	28.00	27.38
Professional Occupation	0.32	0.47	4.28	0.38	0.18	0.13
Self-Employed	0.16	0.37	0.13	0.19	0.08	0.12
<i>Family Background</i>						
Received an Inheritance	0.19	0.39	0.50	0.25	0.05	0.05
Amount of Inheritance (Logged)	1.59	3.63	3.76	2.08	0.30	0.34
Number of Siblings	2.28	3.05	0.00	2.12	2.46	3.29
<i>Life-Style</i>						
Mainline Protestant	0.26	0.44	0.15	0.31	0.15	0.07
Conservative Protestant	0.35	0.48	0.15	0.28	0.70	0.11
Catholic	0.21	0.40	0.15	0.20	0.04	0.73
Other/No Religious Affiliation	0.19	0.39	0.15	0.21	0.11	0.10
Religious Attendance	1.46	0.94	3.78	1.34	1.86	1.68
Region--North	0.18	0.38	0.00	0.18	0.19	0.15
Region--Midwest	0.24	0.43	0.00	0.28	0.17	0.05
Region--South	0.44	0.50	0.00	0.41	0.58	0.35
Region--West	0.15	0.36	0.00	0.14	0.06	0.45

**Table 3.2: Descriptive Statistics for Restricted Sample from the 1992 Health and Retirement Survey (N=3,968)**

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#### Dependent Variables

Net Worth:	Square root of the value of total assets minus the value of total debts.
Housing Net Worth:	Square root of the net value of the respondent's primary residence.
Financial Assets:	Logged net value of all financial assets in 1991.
Investments in Children's Education:	Primary respondent's calculation of money spent on all stages of children's education

#### Household Demographic Characteristics

Age:	<i>Average age</i> of primary and secondary respondent when applicable.
Current Marital Status:	<i>Single male, single female</i> , married or living together is reference category.
Marital History:	If either the primary or secondary respondent was previously divorced then <i>previously divorced</i> coded as 1. If either the primary or secondary respondent was previously widowed then <i>previously widowed</i> coded as 1.
Race/Ethnicity:	<i>Black, Hispanic</i> , white is the reference category. If either the primary or secondary respondent is White while the other is Black or Hispanic then <i>inter-mixed</i> is coded as 1.
Immigrant Status:	If either the primary or secondary respondent is not a native born citizen then coded as 1.

#### Children's Characteristics

Number of children:	Number of biological and stepchildren measured in three ways: (1) as a dichotomous variable where 0 indicates no children and 1 indicates having had children (2) as a continuous variable ranging from 0 to 19 (3) as an ordinal variable with 6 categories ranging from 0 to 5 where 5 denotes five or more children.
Time Since Dependency:	Number of years since parents stopped financially supporting children
Pre-marital birth:	Among couples married only once if the oldest child's age is greater than the number of years married then coded 1.
Age difference between siblings:	Age difference between the oldest and youngest child with single child households coded as 0.
Proportion biological:	Number of biological children divided by total number of children.
Proportion daughters:	Number of daughters divided by total number of children.
Proportion completing post-secondary:	Number of children who completed post-secondary education divided by total number of children
Average Occupational SEI:	Average SEI score for the primary and secondary respondent
Self-Employed:	If either the primary or secondary respondent is currently self-employed then coded as 1.

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Continued

**Table 3.3: Variable Construction**

Table 3.3 Continued

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Household Resources

Average Years of Education: Average years of education for primary and secondary respondent  
 Never Completed High School: If neither the primary nor secondary respondent completed high school then coded as 1.  
 Completed Post-Secondary Education: If either the primary or secondary respondent completed post-secondary education then coded as 1.  
 Average Income: Average previous year's income from all sources for primary and secondary respondent.  
 Currently Retired: If either the primary or secondary respondent is currently retired then coded as 1.  
 Average Years in Labor Force: Average number of years the primary and secondary respondent spent in the labor force.  
 Professional Occupation: If either the primary or secondary respondent identified the occupation they did for the longest tenure as professional then coded as 1.

Family Background

Number of Siblings: Total number of siblings for the primary and secondary respondent.  
 Received and Inheritance: If either the primary or secondary respondent received an inheritance  
 Amount of Inheritance: Logged amount of inheritances received.

Life-Style

Religious Affiliation: Religious affiliation was derived from 56 specific affiliations and recoded into Conservative Protestant, Catholic, Mainline Protestant, and Other/None which is comprised primarily of Jewish households and those without an affiliation.  
 Religious Attendance: Average level of attendance for the primary and secondary respondent  
 Region of Residence: Region was derived from census region and division categories and recoded into North, Midwest, South, and West  
 Rural: Households in rural areas coded as 1.

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## **CHAPTER 4**

### **EFFECT OF CHILDREN ON WEALTH**

In my dissertation, I focus on whether or not the costs associated with raising children affect the accumulation of wealth. It is important to begin this research endeavor with an obvious question since the decision to have children is no longer taken for granted. Are households that remain childless in a better or worse financial position compared to those that had children?

While remaining childless is not a new phenomenon, there has been a noticeable increase in the percent of women remaining childfree beginning in the late 1970s (Bloom and Trussell 1984; Morgan 1991; Morgan and Chen 1992). In fact 10% of women born in 1935 remained childless. By contrast, there is a projected childless rate of 22% for women born in 1962. Bloom and Trussell (1984) predicted that 20 to 25% of the baby boom cohort would remain childfree either by choice or because of problems with fertility associated with delayed childbearing (Seccombe 1991).

The decision to remain childfree is shaped by many factors (Friedman, Hechter, Kanazawa 1994; Heaton, Jacobson, Holland 1999; Hoffman and Manis 1979; Somers 1993). While economic considerations are not the most commonly identified reasons to remain childfree (Seccombe 1991; Schoen et. al. 1997), the resulting economic and



psychological advantages or disadvantages of such decisions have been considered. Prior research has suggested both long-term negative and positive economic consequences of having children for savings (Coombs and Freedman 1970; Smith and Ward 1980).

Because previous research has focused only on the effects of children on wealth accumulation while the children are still living in the home, my dissertation makes an important contribution. By focusing on households where at least one member is between the ages of 51 and 61 and the majority of children are no longer dependent upon their parents, I am able to determine if there are long-term economic consequences associated with childbearing. Recognizing that the timing and spacing of children have previously been found to affect savings, I also consider these effects.

This chapter provides a discussion of previous research that focuses on the effects of the number, timing, and spacing of children on wealth among those in the early- to mid-stages of asset accumulation. After that, I briefly review additional determinants of asset accumulation and portfolio allocation, which were discussed in greater detail in Chapter 2. I review data and methods and present results. The chapter concludes with a brief discussion of findings and conclusions that will be elaborated upon in the final chapter.

## **Children and Financial Assets: General Model**

### *Life Cycle Model of Asset Accumulation*

The accumulation of wealth occurs at different rates during different stages of the life-course. I use a life-cycle model of asset accumulation to understand how decisions made early in the life course, such as childbirth, affect economic outcomes at later stages.

In the life-cycle model, as proposed by Modigliani, households accumulate assets in working years and use these assets to support consumption in old age (Modigliani 1992). Empirical support for the assumption that dissaving occurs at a rapid rate after retirement is sparse (Keister and Moller 2000). However, there is strong evidence that households begin accumulating resources upon entering the labor force. Decisions that influence both the economic resources coming into the home as well as household expenses at early stages in the life cycle of asset accumulation, such as childbirth, should affect the amount saved at later stages of life.

One of the major findings regarding the effects of children on asset accumulation is that couples without children display a smooth rate of savings while couples with children experience periods of rapid savings followed by periods of no saving at all. It is important therefore to explicitly acknowledge that the effect of children on wealth accumulation varies over the life course (Douthitt and Fedyk 1988). For example, young children might depress earnings as less time is spent in the labor force in order to meet their additional needs. However, as children age and a desire to provide financial resources for children's postsecondary education takes hold, more time can be spent in the paid labor force in order to increase earnings (Espenshade 1975).

### *Economic Costs and Desired Family Size*

Desired family size and the likelihood of remaining childfree have varied tremendously during the twentieth century. The overall decline in childbearing is not unique to the United States and suggests what Van de Kaa (1987) refers to as the "second

demographic transition.” Given the increased availability of effective birth control and greater acceptance of alternative lifestyles, the factors shaping fertility decisions have also changed over time. Previous research has shown that fertility patterns vary significantly by race, socioeconomic status, religious beliefs, and other values and attitudes (Chen and Morgan 1991). In addition, the reasons given to postpone, forgo, or have children also vary among men and women, racial groups, and socioeconomic status (Hoffman and Manis 1979; Schoen et.al 1997; Seccombe 1991; Silka and Kiesler 1977). One reason provided is the economic cost of becoming a parent. Freedman and Coombs succinctly note this, “It is only when income is above what would be expected on the basis of education and occupation and there is, in a sense, something left over that increased income is translated into a desire for more children” (Freedman and Coombs 1966b: 211).

Cost is defined as both the direct expenses associated with raising children (Becker 1981) and also lost financial opportunities as a result of choosing to have children (Bianchi and Spain 1986). Actual costs of raising children vary tremendously in part because what is defined as necessary for some is considered a luxury for others. The desire to provide children with increased opportunities has been previously documented to negatively affect family size (Blake 1981). However, even providing children with the basic necessities is an expensive endeavor (Espenshade 1984).

Lost financial opportunities directly influence the supply of economic resources as parents make short-term and long-term work adjustments to accommodate the needs of children. In addition, investments in additional education or training might be postponed

as a result of children. Many women who choose to remain childfree do so exactly because they believe having children requires parents, mothers in particular, to sacrifice their own careers (May 1995).

It is important to acknowledge, however, that children can also decrease household expenses. In cases where parents previously spent considerable resources on activities outside the home, such as luxurious vacations or entertainment, household consumption may decline or remain at the same level as more time is spent at home with children. If the supply of income entering the home doesn't change and the increased costs associated with children are offset by decreased expenditures on other activities, the effect of children can be non-existent.

#### *Determinants of Net Worth*

Children have been hypothesized to both negatively and positively influence net worth. Intuitively one would probably argue that children negatively affect asset accumulation through the increased consumption of commodities associated with children. In fact, Douthitt and Fedyk (1989) found that over the 18-year life cycle of a child, families with children saved approximately \$34,000 less than families without children in order to meet the additional consumption needs associated with children.

While recent research on the determinants of wealth has included a control for the number of children, the effects of children on wealth have not received a great deal of attention. However the findings are pertinent. With the exception of Blau and Graham (1990) children have been found to negatively affect net worth for White and Black

households (Campbell and Kaufman 2000; Hao 1996; Oliver and Shapiro 1995). Among Asian and Hispanic households children were not found to significantly affect net worth (Campbell and Kaufman 2000).

While most research has concluded that children negatively affect total net worth, Smith and Ward (1980) found that after controlling for timing and sibling spacing, children positively affect net worth. They suggest the absolute number of children has produced mixed findings because children's effect on net worth varies by age. Recent research supports this assertion as well (Hao 1996). Generally speaking, children under the age of 6 have a negative effect on net worth (Douthitt and Fedyk, 1989; Espenshade 1975; Freedman and Coombs 1966; Holbrook and Stafford 1971; Smith and Ward 1980). However, if the child is born at least five years after the couple is married then young children do not significantly affect net worth (Holbrook and Stafford 1971; Smith and Ward 1980).

Older children have been found by some to negatively (Douthitt and Fedyk 1989) and by some to positively affect net worth (Espenshade 1975). It is important to note that increases in financial assets during the age in which children are approaching high school graduation are possibly the result of parents preparing to finance their children's post-secondary education rather than parents saving for their own economic situation. Unfortunately, no research has been able to tease out these differences.

As noted earlier the timing and spacing of children affect net worth. Child bearing outside of marriage and early in the marriage places additional constraints on the couple. Child bearing outside of marriage, especially among young persons, affects both men's and women's opportunities to acquire additional credentials or degrees necessary

for success on the job market. In addition, career choices might be made that maximize proximity to extended family rather than earning potential under these conditions. These constraints will inhibit initial asset growth and persist over an extended period of time (Coombs and Freedman 1970; Freedman and Coombs 1966a; Smith and Ward 1980).

The spacing of children is important because it affects women's ability to remain in the labor force or to return for a period of time between births. In addition, the spacing of children affects the families' ability to reduce consumption at the same time that economic resources have declined. A consistent finding is that longer intervals between first-born and last-born children are better for the couple financially (Freedman and Coombs 1966a; Smith and Ward 1980). This is due in large part to the fact that families that space children further apart consume resources at a much smoother pace and are therefore able to save at a more constant rate (Smith and Ward 1980).

### **Children and Financial Assets: Specific Models**

Variations in measurement (dichotomous variables versus a linear number of children), definitions (biological versus those through marriage), and in the characteristics of the sample being studied (a particular age cohort versus a full age range) are three explanations for the inconsistency in findings regarding children's effect on net worth. Another explanation is that the effect of children varies with respect to the different components of net worth, such as investment in the home and financial assets. In the following sections I review findings regarding the effect of children on the different components of wealth.

Prior research consistently finds that children inhibit the growth of financial assets and have a positive effect on the probability of purchasing a home and a negligible or positive effect on the rate at which equity in the home is accrued (Blau and Graham 1990; Bryant 1986; David 1962; Douthitt and Fedyk 1989; Jackman and Jackman 1980). Children have been found to negatively affect financial assets by many (Campbell and Henretta 1980; Keister 2002; Oliver and Shapiro 1995). Explanations for why children negatively affect the accumulation of financial assets include both postponed savings due to the direct costs of raising children as well as lost income from time not spent in the labor force.

Children have either been found to positively affect investment in the primary residence or to have no significant effect (Blau and Graham 1990; Jackman and Jackman 1980). Children positively affect housing investments in at least two ways. First, they affect housing through the purchase of a larger home to accommodate the needs of children. Second, in order to provide children with a high quality education some parents buy homes in communities with higher priced homes.

### **Additional Determinants of Asset Accumulation**

In addition to the number, timing, and spacing of children affecting asset accumulation, so do household demographic characteristics, resources, family background, and life-style.<sup>10</sup> With respect to household demographic characteristics, I expect age to positively affect net worth and its components. I expect being a single man or woman to negatively affect net worth as compared to being married or living with

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<sup>10</sup> For a review of the theoretical reasons for the following hypotheses see Chapter 2.

someone. The effect of at least one person having been previously divorced or widowed is expected to be negative. In addition I expect being a racial or ethnic minority to negatively affect net worth and its components. I expect inter-mixed households to have a positive effect while immigrant status will negatively affect net worth and its components.

Among household resources I expect the effect of years of education on net worth to be positive. Household income is also expected to positively affect net worth. At least one person being retired is expected to positively affect net worth as well as the average number of years in the labor force. I expect both occupational status and having one or more self-employed persons in the household to positively affect net worth.

The amount of money one has inherited is expected to positively affect net worth. The number of siblings is expected to negatively affect net worth. Conservative Protestants are expected to have lower levels of net worth than Mainline Protestants while I expect no difference between Catholics and Mainline Protestants (Keister 2003). Religious attendance is expected to positively affect net worth. Living in a rural area is expected to positively affect net worth and its components.

## **Review of Major Hypotheses**

H1A: Having children negatively affects net worth.

H1B: Having children positively affects net worth after controls for timing and spacing of children have been included.

H2: Having children positively affects housing net worth.



- H3: Having children negatively affects the accumulation of financial assets.
- H4: Time since dependency positively affects net worth and financial assets.
- H5: Having a pre-marital birth negatively affects net worth, investment in housing, and financial assets.
- H6: Increases in the age difference between the first born and last born positively affects net worth, investment in housing, and the accumulation of financial assets.

## **Data, Variable Construction, and Methods**

### *Health and Retirement Survey Data*

The data are drawn from the first wave (1992) of the *Health and Retirement Study* (HRS). The HRS is a nationally representative longitudinal sample of persons born between 1931 and 1941. Analyses presented in this chapter are based on the full sample that includes households without children described in chapter 3. This sample comprises 7,332 households. Descriptive statistics for the sample are provided in Table 3.1.

### *Variable Construction*

Given the highly skewed nature of net worth, *household net worth* is measured as the square root of the difference between the sum of total assets and the value of total debts.<sup>11</sup> Total assets are calculated as the sum value of all real assets (including primary residence, business, farm, real estate investments, and vehicles) and financial assets (including stocks and mutual funds; IRA and Keogh accounts; Certificates of Deposit,

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<sup>11</sup> I use the wealth variables already constructed in the RAND HRS data file rather than recreating these same variables from the 1992 HRS data file. The advantage to using the RAND HRS constructed wealth variables is two-fold. First, there is less missing data and second differences in data collection across waves have been addressed (RAND 2002).

government bonds, T-bills; bonds and bond funds; checking and savings accounts). Total debts are calculated as the sum of *housing debt* (including home mortgages and equity loans) and financial debt (including credit card, medical bills, loans from relatives). *Housing net worth* is measured as the square root of the net value of the respondent's primary residence. *Financial assets* are the logged net value of all financial assets in 1991.

The exogenous variables have been divided into five groups: (1) characteristics of children (2) household demographic characteristics (3) household resources (4) family background (5) life-style. The *number of children* is measured in three different ways (1) dichotomous variable where a value of "0" indicates no biological or step-children, (2) a continuous variable ranging from 0 to 19<sup>12</sup>, and (3) an ordinal variable with 6 categories ranging from 0 to 5 where 5 denotes five or more children. Among couples, children include both those that are shared by the couple (biological and adopted) and those related to only one person in a couple. Among single persons children include all those identified as such by the respondent, regardless of biological relationship. *Time since dependency* is measured by the number of years since the parents were no longer financially supporting the youngest child. *Pre-marital birth* is a dichotomous variable where "1" indicates the oldest child's age is greater than the number of years married among couples married only once. All other households are coded as "0."<sup>13</sup> *Age difference between siblings* measures the number of years between the oldest and

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<sup>12</sup> There is one household with 19 children ranging in age from 11 to 43. This is the third marriage for both partners. The primary respondent has 11 biological children and the secondary respondent has 8 children.

<sup>13</sup> Unfortunately, I am not able to discern nonmarital births for persons who are currently single or remarried. Therefore, this measure represents a very conservative approach.

youngest child with single child households coded as 0.<sup>14</sup> An overview of the measurement of additional exogenous variables is provided in Table 3.3 and a description is provided in Chapter 3 as well.

### *Missing Data and Method*

I use full information maximum likelihood (FIML) estimation available through the AMOS statistical program for all analyses.<sup>15</sup> While a variety of techniques have been used to estimate relationships among indicators of wealth, I have chosen this method primarily to address the issue of missing values on independent variables. As discussed in chapter three there is missing data on some of the independent variables, such as religious attendance and the amount of inheritances. FIML estimation allows me to estimate the missing data using information specified in the model.

While structural equation programs can be used to specify hypothesized relationships among the exogenous variables I do not. I correlate all exogenous variables. Coefficient estimates produced under these conditions should be identical to those produced using Ordinary Least Squares (OLS) regression estimation. However, since I am estimating the values for the missing data my results will not be identical to those produced using another technique to deal with missing data and OLS regression.

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<sup>14</sup> Time since dependency, pre-marital birth, and age difference between siblings are all coded “0” for households without children.

<sup>15</sup> For a full review of full information maximum likelihood see Chapter 3.

## Results

At the bivariate level it is clear that children affect total net worth, housing net worth, financial assets, and financial debt. Table 4.1 provides a simple comparison of unadjusted net worth and its components between households with children and without and it highlights the complexity of children's effect on asset accumulation.

The average net worth for the full sample in 1991 is \$199,539 and the median net worth is \$81,000. The mean net worth among households without children is \$206,501 and the mean for households with children is \$198,807 suggesting households without children have on average a higher net worth. However, when we examine the median for these two groups we come to the opposite conclusion. Households with children have a higher median net worth (\$82,000) than households without children (\$70,000). Given that the median value is the less biased distributional measure, it is more accurate at the bivariate level to conclude that households with children have a higher average net worth.

Figure 4.1 illustrates the distribution of household net worth for households with and without children. While the percent of households with a negative net worth is approximately the same for the two groups, there are considerably more households with children that have no net worth or a positive net worth of less than \$25,000. Households without children are more likely to be found in the higher wealth brackets. Interestingly though there is approximately the same percentage of households without children in the highest net worth bracket (exceeding \$750,000) as there are households with children. This graph suggests that outliers are probably not influencing the relative distributions for the two groups. Rather, it is differences in the middle of the distribution that explain the large difference in median net worth.

An exploration of the components of net worth in Table 4.1 demonstrates that children positively affect household net worth and negatively affect financial assets. Households with children have a higher median and mean net value for their home (\$40,000 and \$58,558 respectively) as compared to households without children (\$27,000 and \$52,178). A median difference of \$13,000 is considerable in comparison to the difference between the two groups with respect to financial assets. While median financial assets for those without children are \$5,275, it is only \$275 more than those with children. Households with children have, on average, \$1,000 more financial debt than households without children.

These bivariate findings lead to the conclusion that having children positively affects the investment of financial resources in the home while they have relatively little effect on the accumulation of financial assets. On the other hand, having children increases short-term financial debt considerably.

Households with children should be divided according to those with children still being supported by parents as compared to those with no dependent children. The last two columns in Table 4.1 indicate that there is only a \$1,300 dollar difference in the median net worth of households with and without dependent children. While median value of homes are exactly the same, households with dependent children have a lower median value of \$1,000 on financial assets. The findings in Table 4.1 do not support the argument that having dependent children in the home has a substantial or significant negative effect on net worth or its components.<sup>16</sup>

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<sup>16</sup> F-Statistic values of (.621 for net worth, .060 for financial assets and 1.974 for housing net worth).

Table 4.2 illustrates the relationship between the number of children and wealth. At the bivariate level the findings are very intriguing. To begin with there is not a linear association between number of children and net worth. Households with two children clearly have the highest median net worth \$110,150. The difference of \$40,150 between households with two children and those with none is substantial and surprising. Households with five or more children have the lowest median net worth with \$50,500 as expected. Further indication that households with two children appear to be somewhat better off financially is the relatively high median net value of their primary residence, \$50,000. In comparison households without children have a median net value of \$27,000 and households with five or more children have a median net value of \$28,000. Households with two children also have the highest median financial assets with \$10,000 while those with five or more children only have \$600. Households with one child have the highest average financial debt \$4,650 while households without children have the lowest average \$2,231.

The findings presented in Tables 4.1 and 4.2 substantiate the belief that having children shape the strategies used by households to meet long-term financial goals. If after controlling for additional factors households with two children continue to be at an economic advantage compared to households without children a more nuanced understanding of the relationship between children and wealth will need to be developed.

The conclusions drawn from the descriptive statistics are also present in the multivariate analyses. In a desire to increase our understanding of how children influence the accumulation of wealth considerable time was spent investigating if differences in the measurement of the number of children would affect the conclusions drawn regarding the

relationship between children and wealth. In these models I do not present the models that include controls for the timing and spacing of children since most data used by other wealth researchers would not allow them to control for such characteristics. It is important to note however that the conclusions would have been the same. These results are meant to be an opportunity to generally assess how the measurement of the number of children can affect the conclusions being drawn.

The maximum likelihood estimates presented in Table 4.3 clearly show that differences in the measurement of children affect the conclusions that are drawn. Since the focus here is on the contribution of different measures of children in explaining wealth outcomes I only present coefficients regarding children. The complete tables are available in appendices 1 through 3.

Table 4.3 organizes the results according to how having children were measured (Models 1 through 3) and for all three indicators of wealth (Panels A through C). Model 1 provides the simplest comparison, a distinction between households that have children and those that do not. Model 2 measures the number of children, which ranges from 0 to 19. Model 3 treats the number of children as a categorical variable and compares the effect of a particular number of children to those with no children.

In Model 1 where households are distinguished according to those having had children versus those never having had them, children do not significantly affect net worth. While children negatively affect financial assets they positively affect investment in housing. In Model 2 where the number of children is measured as a continuous variable, each additional child negatively affects net worth, financial assets, and housing net worth, net of other controls.

In Model 3, net of other controls, there are no significant differences on net worth between households without children and households with one to four children, yet having five or more children does negatively affect net worth. Having three or more children does negatively affect financial assets in comparison to those without but there is no significant difference between having one to two children and having none. Interestingly, the effect of children on housing net worth is positive with the exception of five or more children.

The additional variables predicting wealth, which are presented in the appendices, generally have consistent and expected effects across the three models and across the different components of wealth. The few exceptions are as follows. Catholics have a lower net worth than Mainline Protestants when a dichotomous or continuous variable measuring the effect of having children is included in the model. Using categorical variables, however, results in no significant difference between Catholics and Mainline Protestants. While the effect of widow is generally positive on housing net worth, net of other controls, when children are measured as a dichotomous variable there is no longer a significant effect. With respect to financial investments, the only notable difference is the positive significant effect of average years spent in the labor force, when children are measured as a dichotomous variable.

The fit of the three models for net worth and its components is adequate. Given the complexity of the model and the sample size it is not surprising that the Chi-Square statistic remains significant. The adjusted R squared indicates a reasonable amount of



variance is being explained in net worth (46%), financial assets (24%), and net value of the home (30%). Based on these results I will use number of children measured as a categorical variable in future analyses.

### *Timing and Spacing of Children*

While it is clear that the number of children significantly affects wealth outcomes, it is important to differentiate households with respect to the timing and spacing of children. Table 4.4 presents maximum likelihood estimates for net worth, financial assets, and housing net worth controlling for the number of children and the timing and spacing of children as well as additional control variables. Since neither a dichotomous or continuous variable accurately measures the affect of children I use number of children measured as categorical variables.

After including controls for timing and spacing of children I find that having two children as compared to none positively affects net worth. With each additional year since the last dependent child left home, *time since dependency*, there is a positive effect on net worth net of other controls. Furthermore, having a child outside of marriage has a negative effect on net worth. The difference in age between siblings is not found to have a significant effect on net worth.<sup>17</sup>

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<sup>17</sup> Since the spacing of children is assumed to affect both the labor earnings of parents and household expenditures a better way to measure the spacing of children would be to use the average number of years between the ages of children. However, measuring in this way is only appropriate for households where all children are biologically shared between the parents. Average years between each child are less appropriate for households with step-children. Therefore, I use the age difference between youngest and oldest child.

It is important to discuss the change in effects between this model in Table 4.4 and Model 3 in Table 4.3. Without controls for the timing and spacing of children, households with five or more children were found to have a lower net worth than households without children. However, after controlling for the timing and spacing of children I find that there are no significant negative effects of having children on net worth and in fact there is a positive effect for households with two children. In analyses not presented I found that this change in effect occurs after the control for time since dependent child left home is included in the model. This suggests that families with five or more children can overcome the financial costs of raising this number of children after the children are no longer dependent on the parents.

Focusing now on financial assets I find no change in the effects of number of children resulting from the inclusion of timing and spacing. Having four or more children as compared to none negatively affects financial assets while having one to three children has no significant effects. While timing and spacing do not change effects of number of children I do find a positive effect of time since dependency. This suggests once again that more financial assets are accumulated each year since the last child was no longer dependent on the parent.

I found a positive effect of having children on housing net worth. While time since dependency does not significantly affect financial assets having had a pre-marital birth has a negative effect on housing net worth. Considering that the average age of these households is 55 the fact that having had a pre-marital birth continues to negatively affect wealth accumulation is remarkable.

The effects of the household demographic indicators are generally as expected with the exception of two findings. Having been widowed does not significantly affect wealth. I expected a negative effect of having been widowed because of the economic consequences associated with losing someone so early in life. Even though only a small proportion of the sample was previously widowed (about 13 percent) this suggests that being widowed at a younger age does not have the same economic consequences of becoming a widow later in life. The other exception is the lack of a negative effect for immigrant status on wealth. The relationship between immigrant status and wealth is complicated though by the fact that 53% of all immigrants in this sample are Hispanic. In fact, if Hispanic is excluded from the model the negative effect of immigrant status on net worth is significant.

The effects of household resources on net worth, financial assets, and housing net are as expected. Years of education, household income, and occupational status all positively affect all three outcomes. Alternative measures of each were used and results remained the same. The effects of currently being retired, self-employed, and years in the labor force have different effects on the three outcomes. One of the most unexpected is the negative effect of years in the labor force on net worth. After further examination, I find that when current employment status (retired or not retired) is not in the model the effect of years in the labor force is positive and non-significant. So why does controlling for retirement status affect the relationship between years in the labor force and net worth? I believe this is because by controlling for retirement status a distinction is made between those households where retirement is not a financial option versus those who

held jobs with benefits that afford them the opportunity to retire. It is often forgotten that a substantial proportion of the American working-class is unable to retire and for these individuals years in the labor force does not accrue the same benefits as it does for others.

While the amount of the inheritance received positively affects all three outcomes the number of living siblings has no significant effect. This finding is intriguing because previous research examining the relationship between family background and household wealth on a sample of households in their twenties and thirties shows a strong effect of sibling size on wealth (Keister 2002a). Among other background factors I find that conservative Protestants have lower levels of net worth, financial assets, and housing net worth than mainline Protestants. In addition, religious attendance also has a positive effect on all three outcomes.

## **Discussion and Conclusion**

Recent research has clearly established that wealth ownership is among the most unequally distributed resource in the United States (Keister 2000; Wolff 1998). Most research has focused on the extent of racial and ethnic differences in ownership and the mechanisms through which wealth is accumulated (Campbell and Kaufman 2002; Conley 1999; Goldscheider and Goldscheider 1991; Oliver and Shapiro 1995). This prior research can be characterized as focusing on the structural conditions that shape historical and current levels of ownership of wealth as well as the effects of investment in human capital and labor market position on the accumulation of wealth.

A small but growing body of research is expanding our understanding of how wealth is accumulated by focusing on additional factors that influence the accumulation of capital. The study of inheritances and financial gifts from living relatives are obvious examples, but studies that consider the effects of family structure in childhood as well as adulthood (Keister 2002; Wilmoth and Koso 2002) and life-style, such as religious affiliation and health (Keister 2002; Smith 1999), have also contributed to our understanding. In this chapter I have tried to show how fertility affects long-term wealth accumulation.

Building on previous research, which generally concluded that children negatively affect the accumulation of wealth, I tested this first hypothesis. In an effort to understand why children were found to positively effect net worth in some studies while not in others the effect of having had children was measured in three different ways. Interestingly, these differences shed light on the mixed findings in previous research. A simple comparison of households having children with those that have not had children indicates that having had children does not significantly affect net worth. However, when the total number of children measured as a continuous variable is used, there is a negative effect on net worth. Finally, testing the possibility that the effect of children on net worth is non linear, is the most enlightening. Rather than concluding that any number of children negatively affects net worth, these results indicate only having five ore more children does. And if controls for timing and spacing are included, then there is actually a positive effect for households with two children as compared to none.

Even though the majority of previous research on wealth has ignored the possibility that the timing and spacing of children would affect the relationship between having had children and net worth there was evidence that supported the inclusion of these variables. My second hypothesis stated that I expected to find that having had children positively affects net worth after controls for timing and spacing are included. Comparisons of particular numbers of children to those that never had children indicates that having had two children has a significant positive effect while there are no significant differences between those with other numbers of children .

With respect to the specific components of net worth children were expected to positively affect housing net worth and negatively affect financial assets. This hypothesis was generally supported with important caveats. It is only households with four or more children that experience a negative effect on their financial assets. While having any number of children, as compared to having none, positively affects housing net worth.. This relationship probably has more to do with the likelihood of owning a home versus the value of the home.

In hypotheses 4 through 7 I expected differences in the conditions under which children were born to affect the accumulation of wealth. Determining if the change from a household with dependent children to an “empty nest” positively affects wealth accumulation is an important component of this analysis. I found that the positive effect of time since children left the home on net worth is primarily the result of increasing financial assets and not housing net worth. Children born outside of marriage were expected to negatively affect net worth because of financial strains early in the relationship that either postpones the buying of a home or eliminates the possibility

entirely. The results presented here indicate that out of wedlock births do negatively affect net worth as well as housing net worth even as couples are approaching retirement. The lasting economic consequence of out of wedlock births deserves additional attention in future research. Even though previous research found that households that spaced children further apart were better off financially, this advantage does not hold as the households approach retirement.

From these analyses we can conclude that households without children do not have a substantial financial advantage compared to households with children. In fact, some households with children are actually at a financial advantage. One explanation for this is parent's motivations to give generously to their children at critical stages in their lives, for example a financial gift to buy a home, establishing financial accounts for grandchildren, or inheritances upon the parent's death encourages saving above and beyond what is necessary for expected expenses as one ages.

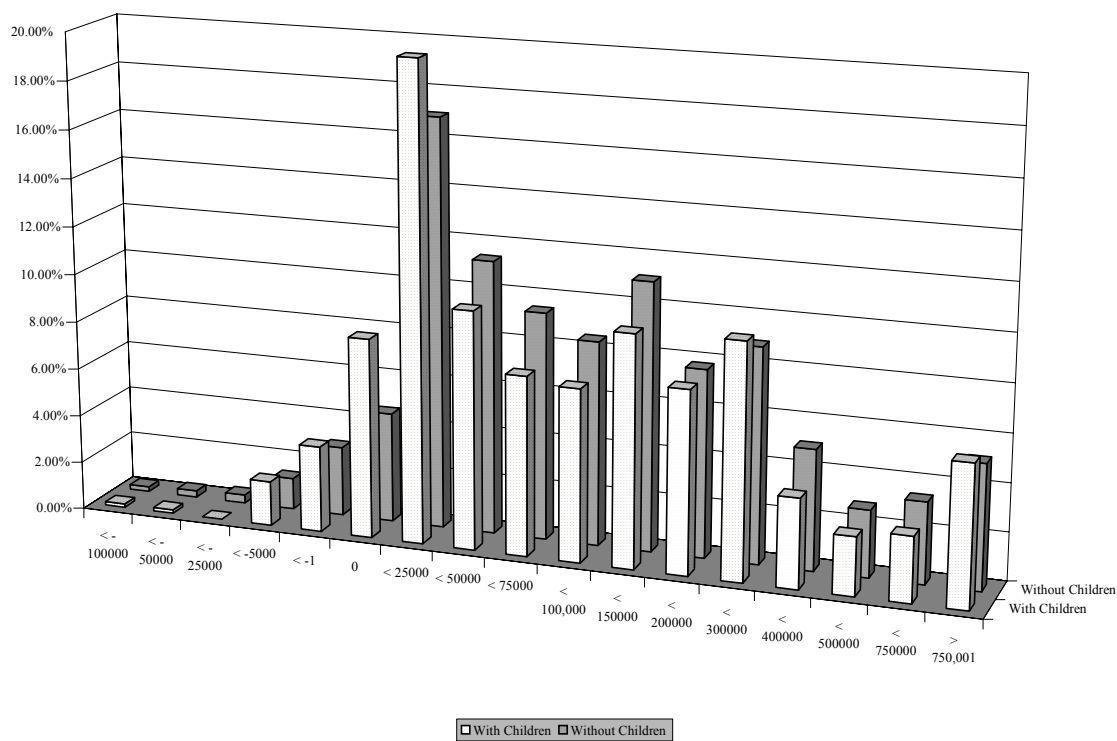
There are three issues future research should address. First, are households with children less likely to place resources in high risk investments versus more conservative options that would be available in an emergency? Second, how are financial resources previously directed towards the costs associated with raising children redirected after children leave the home? Third, do households with children have the same level of wealth as households without children as they approach retirement because of a more modest standard of living given their economic resources, differences in portfolio allocations, or is it a desire to give financial resources to children that motivates parents to save more than they need for their own financial well-being. Answering these questions would expand our understanding of how households with children are able to

make up for the lost savings that occurred as a result of fertility decisions. In the next chapter I consider the role of intergenerational transfers to children on parent's wealth. Specifically, I focus on variations among parents with respect to investments in children's education.

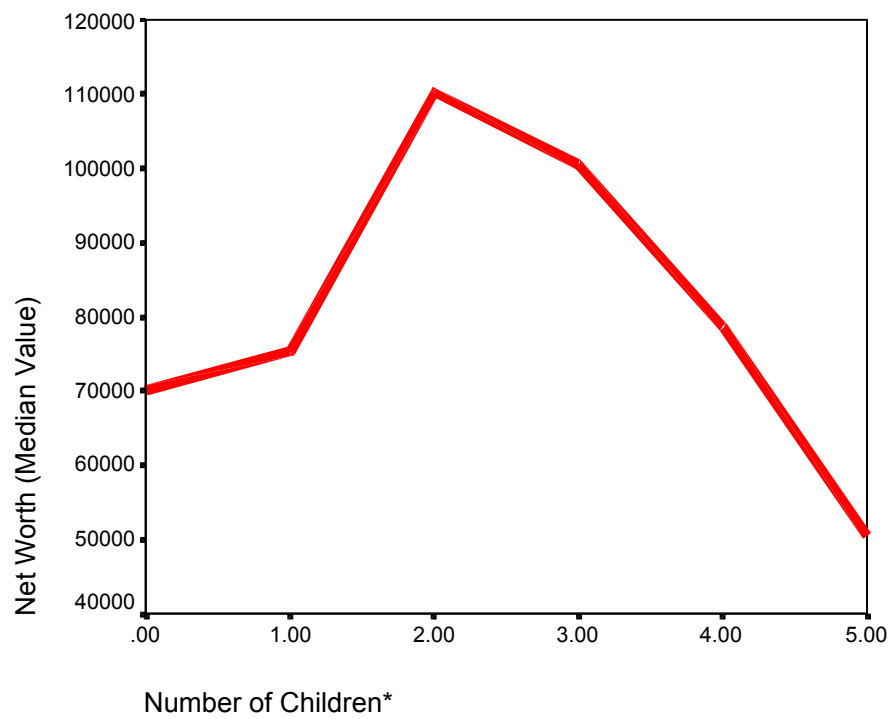


	All	Without Children	With Children	Without Dependent Children	With Dependent Children
<b>Number of Households</b>	7332	698	6634	3968	2666
<b>Mean Net Worth</b>	\$199,539	\$206,501	\$198,807	\$195,411	\$203,861
<b>Standard Deviation</b>	(\$437,379)	(\$517,832)	(\$428,075)	(\$400,600)	(\$466,010)
<b>Median Net Worth</b>	\$81,000	\$70,000	\$82,000	\$82,500	\$81,200
<b>Mean Net Value of Housing</b>	\$57,951	\$52,178	\$58,558	\$57,299	\$60,432
<b>Standard Deviation</b>	(\$88,667)	(\$84,796)	(\$89,049)	(\$92,330)	(\$83,911)
<b>Median Net Value of Housing</b>	\$40,000	\$27,000	\$40,000	\$40,000	\$40,000
<b>Mean Financial Assets</b>	\$44,871	\$57,963	\$43,494	\$43,082	\$44,106
<b>Standard Deviation</b>	(\$168,456)	(\$180,296)	(\$167,116)	(\$135,018)	(\$205,848)
<b>Median Financial Assets</b>	\$5,000	\$5,275	\$5,000	\$5,000	\$4,000

**Table 4.1: Wealth Accumulation Among Different Types of Households According to the Presence or Absence of All Children and Dependent Children, United States 1992**



**Figure 4.1: Household Net Worth According to Presence or Absence of Children**



**Figure 4.2: Median Net Worth According to Number of Children**

	All	None	One	Two	Three	Four	Five or More
<b>Number of Households</b>	7332	698	650	1722	1522	1099	1641
<b>Mean Net Worth</b>	\$199,539	\$206,501	\$183,976	\$244,528	\$229,561	\$181,731	\$139,614
<b>Standard Deviation</b>	(\$437,379)	(\$517,832)	(\$395,866)	(\$465,135)	(\$500,341)	(\$340,719)	(\$367,882)
<b>Median Net Worth</b>	\$81,000	\$70,000	\$75,275	\$110,150	\$100,500	\$78,637	\$50,500
<b>Mean Net Value of Housing</b>	\$57,951	\$52,178	\$53,498	\$71,108	\$65,066	\$59,517	\$40,715
<b>Standard Deviation</b>	(\$88,667)	(\$84,796)	(\$72,318)	(\$90,362)	(\$80,226)	(\$77,222)	(\$104,585)
<b>Median Net Value of Housing</b>	\$40,000	\$27,000	\$35,000	\$50,000	\$48,000	\$40,000	\$28,000
<b>Mean Financial Assets</b>	\$44,871	\$57,963	\$47,219	\$54,998	\$47,962	\$40,882	\$27,551
<b>Standard Deviation</b>	(\$168,456)	(\$180,296)	(\$169,905)	(\$158,007)	(\$133,887)	(\$167,051)	(\$199,000)
<b>Median Financial Assets</b>	\$5,000	\$5,275	\$4,450	\$10,000	\$7,000	\$3,000	\$600

**Table 4.2: Wealth Accumulation Among Households with Different Numbers of Children**

	Model 1			Model 2			Model 3		
	b	S.E.	B	b	S.E.	B	b	S.E.	B
<b>Panel A: Net Worth</b>									
Dichotomous	3.47	9.36	0.00						
Number				-4.41	**	1.31	-0.03		
One							11.07	12.35	0.01
Two							15.26	10.34	0.02
Three							6.39	10.59	0.01
Four							-6.98	11.26	-0.01
Five							-20.82	10.94	-0.03
<b>Panel B: Financial Assets</b>									
Dichotomous	-0.47	0.26	-0.02						
Number				-0.24	***	0.04	-0.08		
One							-0.17	0.34	-0.01
Two							0.19	0.29	0.01
Three							-0.49	0.30	-0.03
Four							-1.23	***	0.31
Five							-1.28	***	0.31
<b>Panel C: Housing Net Worth</b>									
Dichotomous	17.62	**	5.55	0.03					
Number				-2.27	**	0.77	-0.03		
One							17.70	*	7.31
Two							24.89	***	6.12
Three							19.69	**	6.27
Four							18.88	**	6.67
Five							-1.43		6.48

\*p<.05, \*\*p<.01, \*\*\*p<.001

**Table 4.3: ML Estimates of Net Worth and Components of Net Worth Comparing Different Measures of the Presence of Children**

	Net Worth			Financial Assets		
	b	S.E.	B	b	S.E.	B
<i>Children's Characteristics</i>						
One Child	14.63	16.65	0.01	-0.27	0.46	-0.01
Two Children	23.41	13.63	0.03	0.20	0.38	0.01
Three Children	17.85	12.83	0.02	-0.38	0.36	-0.02
Four Children	7.80	13.01	0.01	-1.05	** 0.36	-0.05
Five or More Children	-1.66	12.36	0.00	-0.99	** 0.35	-0.06
Time Since Dependency	2.88	** 0.83	0.04	0.05	* 0.02	0.03
Pre-Marital Birth	-24.86	* 10.94	-0.02	-0.26	0.31	-0.01
Age Difference Siblings	-0.07	0.65	0.00	-0.01	0.02	-0.01
<i>Household Demographics</i>						
Average Age	8.23	*** 0.76	0.12	0.19	*** 0.02	0.12
Single Male	-29.66	** 10.10	-0.03	-0.12	0.28	-0.01
Single Female	-44.77	*** 8.19	-0.06	-1.09	*** 0.23	-0.06
Previously Divorced	-45.26	*** 6.22	-0.07	-0.49	** 0.17	-0.03
Previously Widowed	13.59	8.40	0.02	0.30	0.23	0.02
Black	-74.30	*** 8.11	-0.10	-2.40	*** 0.23	-0.13
Hispanic	-47.49	*** 12.47	-0.05	-2.01	*** 0.35	-0.09
Inter-Mixed	15.50	21.19	0.01	0.77	0.59	0.02
Immigrant Status	6.90	9.86	0.01	0.00	0.28	0.00
<i>Household Resources</i>						
Years of Education	9.14	*** 1.26	0.09	0.25	*** 0.04	0.11
Household Income	1.41	*** 0.04	0.43	0.02	*** 0.00	0.22
Currently Retired	62.49	*** 7.51	0.09	0.04	0.21	0.00
Years in Labor Force	-0.52	0.29	-0.02	0.01	0.01	0.02
Occupational SEI	1.38	*** 0.28	0.06	0.03	*** 0.01	0.06
Self-Employed	176.90	*** 7.20	0.22	0.21	0.20	0.01
<i>Family Background</i>						
Amount of Inheritance	5.59	*** 0.77	0.07	0.12	*** 0.02	0.06
Number of Siblings	0.11	0.90	0.00	0.02	0.03	0.01
<i>Life-Style</i>						
Conservative Protestant	-37.63	*** 7.61	-0.06	-0.67	** 0.21	-0.04
Catholic	-12.56	8.26	-0.02	-0.01	0.23	0.00
Other/No Religious Affiliation	-4.93	8.10	-0.01	-0.10	0.23	-0.01
Religious Attendance	16.54	*** 3.13	0.05	0.39	*** 0.09	0.05
Region--Midwest	-4.82	8.33	-0.01	0.40	0.23	0.02
Region--South	-17.02	* 7.83	-0.03	-0.22	0.22	-0.02
Region--West	27.90	** 9.42	0.03	0.55	* 0.26	0.03
Rural	13.86	* 6.31	0.02	0.18	0.18	0.01
R Squared	.46			.24		

\*p<.05, \*\*p<.01, \*\*\*p<.001

Continued

**Table 4.4: ML Estimates of Net Worth and Components of Net Worth Controlling for the Number, Timing, and Spacing of Children**

Table 4.4 continued

	Housing Net Worth			
	b		S.E.	B
<i>Children's Characteristics</i>				
One Child	24.13	*	9.88	0.04
Two Children	30.85	***	8.09	0.08
Three Children	25.56	**	7.62	0.07
Four Children	24.89	**	7.73	0.06
Five or More Children	5.48		7.35	0.01
Time Since Dependency	0.26		0.49	0.01
Pre-Marital Birth	-25.39	***	6.48	-0.04
Age Difference Siblings	0.14		0.38	0.01
<i>Household Demographics</i>				
Average Age	3.95	***	0.45	0.11
Single Male	-70.90	***	5.98	-0.13
Single Female	-47.91	***	4.85	-0.13
Previously Divorced	-35.38	***	3.69	-0.11
Previously Widowed	4.40		4.98	0.01
Black	-38.08	***	4.81	-0.10
Hispanic	-43.24	***	7.39	-0.08
Inter-Mixed	23.68		12.56	0.02
Immigrant Status	5.72		5.84	0.01
<i>Household Resources</i>				
Years of Education	4.34	***	0.75	0.08
Household Income	0.41	***	0.02	0.24
Currently Retired	14.54	**	4.45	0.04
Years in Labor Force	0.27		0.17	0.02
Occupational SEI	0.54	**	0.16	0.05
Self-Employed	26.91	***	4.27	0.07
<i>Family Background</i>				
Amount of Inheritance	2.23	***	0.45	0.05
Number of Siblings	-0.37		0.53	-0.01
<i>Life-Style</i>				
Conservative Protestant	-9.79	*	4.51	-0.03
Catholic	7.39		4.90	0.02
Other/No Religious Affiliation	3.20		4.80	0.01
Religious Attendance	6.93	***	1.85	0.04
Region--Midwest	-25.12	***	4.94	-0.07
Region--South	-27.61	***	4.64	-0.09
Region--West	9.67		5.58	0.02
Rural	-8.27	*	3.74	-0.02
R Squared	.30			

	Model 1			Model 2			Model 3					
	b		S.E.	B	b		S.E.	B	b		S.E.	B
<i>Children's Characteristics</i>												
Dichotomous	3.47		9.36	0.00								
Number					-4.41	**	1.31	-0.03				
One Child									11.07		12.35	0.01
Two Children									15.26		10.34	0.02
Three Children									6.39		10.59	0.01
Four Children									-6.98		11.26	-0.01
Five or More Children									-20.82		10.94	-0.03
<i>Household Demographics</i>												
Average Age	9.26	***	0.68	0.14	9.48	***	0.68	0.14	9.49	***	0.68	0.14
Single Male	-31.95	**	9.83	-0.03	-39.29	***	9.79	-0.04	-37.38	***	9.89	-0.04
Single Female	-42.12	***	7.98	-0.06	-47.41	***	8.04	-0.06	-46.77	***	8.04	-0.06
Previously Divorced	-44.77	***	5.69	-0.07	-39.95	***	5.79	-0.07	-39.13	***	5.80	-0.06
Previously Widowed	14.82		8.10	0.02	19.02	*	8.14	0.02	19.15	*	8.14	0.02
Black	-81.66	***	7.90	-0.11	-79.12	***	7.93	-0.10	-78.06	***	7.95	-0.10
Hispanic	-51.32	***	12.48	-0.05	-50.55	***	12.47	-0.05	-50.08	***	12.47	-0.05
Inter-Mixed	19.49		21.24	0.01	17.98		21.22	0.01	17.19		21.21	0.01
Immigrant Status	5.12		9.85	0.01	3.99		9.84	0.00	3.65		9.84	0.00
<i>Household Resources</i>												
Years of Education	9.64	***	1.25	0.10	9.13	***	1.26	0.09	8.92	***	1.26	0.09
Household Income	1.42	***	0.04	0.43	1.42	***	0.04	0.43	1.41	***	0.04	0.43
Currently Retired	63.47	***	7.52	0.09	62.31	***	7.50	0.09	63.14	***	7.51	0.09
Years in Labor Force	-0.39		0.29	-0.01	-0.50		0.29	-0.02	-0.50		0.29	-0.02
Occupational SEI	1.35	***	0.28	0.06	1.32	***	0.28	0.06	1.34	***	0.28	0.06
Self-Employed	176.72	***	7.22	0.22	176.84	***	7.21	0.22	177.50	***	7.21	0.22

Continued

Continued

Table 4.5: ML Estimates of Net Worth Comparing Different Measures of the Presence of Children



Table 4.5 Continued

	Model 1				Model 2				Model 3			
	b		S.E.	B	b		S.E.	B	b		S.E.	B
<i>Family Background</i>												
Amount of Inheritance	5.59	***	0.77	0.07	5.60	***	0.77	0.07	5.59	***	0.77	0.07
Number of Siblings	-0.01		0.90	0.00	0.19		0.90	0.00	0.13		0.90	0.00
<i>Life-Style</i>												
Conservative Protestant	-36.82	***	7.62	-0.06	-36.78	***	7.62	-0.06	-37.12	***	7.61	-0.06
Catholic	-15.27		8.27	-0.02	-13.94		8.27	-0.02	-12.83		8.27	-0.02
Other/No Religious Affiliation	-6.85		8.12	-0.01	-6.06		8.11	-0.01	-5.80		8.11	-0.01
Religious Attendance	15.62	***	3.13	0.05	16.28	***	3.13	0.05	16.14	***	3.13	0.05
Region--Midwest	-4.71		8.35	-0.01	-4.16		8.34	-0.01	-3.91		8.34	-0.01
Region--South	-15.43	*	7.84	-0.03	-15.83	*	7.83	-0.03	-16.02	*	7.83	-0.03
Region--West	28.39	**	9.44	0.03	28.90	**	9.43	0.04	28.71	**	9.43	0.04
Rural	13.04	*	6.32	0.02	13.76	*	6.31	0.02	14.14	*	6.31	0.02
R Squared	.46				.46				.46			

\*p&lt;.05, \*\*p&lt;.01, \*\*\*p&lt;.001

	Model 1			Model 2			Model 3					
	b	S.E.	B	b	S.E.	B	b	S.E.	B			
<i>Children's Characteristics</i>												
Dichotomous	-0.47	0.26	-0.02									
Number				-0.24	***	0.04	-0.08					
One Child								-0.17	0.34	-0.01		
Two Children								0.19	0.29	0.01		
Three Children								-0.49	0.30	-0.03		
Four Children								-1.23	***	0.31	-0.06	
Five or More Children								-1.28	***	0.31	-0.08	
<i>Household Demographics</i>												
Average Age	0.21	***	0.02	0.13	0.22	***	0.02	0.13	0.22	***	0.02	0.13
Single Male	-0.03		0.28	0.00	-0.28		0.27	-0.01	-0.24		0.28	-0.01
Single Female	-0.92	***	0.22	-0.05	-1.14	***	0.22	-0.07	-1.10	***	0.22	-0.06
Previously Divorced	-0.65	***	0.16	-0.05	-0.44	**	0.16	-0.03	-0.43	**	0.16	-0.03
Previously Widowed	0.19		0.23	0.01	0.38		0.23	0.02	0.36		0.23	0.02
Black	-2.57	***	0.22	-0.14	-2.43	***	0.22	-0.14	-2.45	***	0.22	-0.14
Hispanic	-2.11	***	0.35	-0.09	-2.05	***	0.35	-0.09	-2.06	***	0.35	-0.09
Inter-Mixed	0.89		0.59	0.02	0.79		0.59	0.02	0.81		0.59	0.02
Immigrant Status	0.01		0.28	0.00	-0.04		0.27	0.00	-0.06		0.27	0.00
<i>Household Resources</i>												
Years of Education	0.27	***	0.04	0.12	0.25	***	0.04	0.11	0.25	***	0.04	0.11
Household Income	0.02	***	0.00	0.22	0.02	***	0.00	0.22	0.02	***	0.00	0.22
Currently Retired	0.07		0.21	0.00	0.04		0.21	0.00	0.05		0.21	0.00
Years in Labor Force	0.02		0.01	0.02	0.01		0.01	0.02	0.01		0.01	0.02
Occupational SEI	0.03	***	0.01	0.06	0.03	***	0.01	0.05	0.03	***	0.01	0.05
Self-Employed	0.18		0.20	0.01	0.19		0.20	0.01	0.22		0.20	0.01

Continued

**Table 4.6: ML Estimates of Financial Assets Comparing Different Measures of the Presence of Children**

**Table 4.6 Continued**

	Model 1				Model 2				Model 3			
	b		S.E.	B	b		S.E.	B	b		S.E.	B
<i>Family Background</i>												
Amount of Inheritance	0.12	***	0.02	0.06	0.12	***	0.02	0.06	0.11	***	0.02	0.06
Number of Siblings	0.01		0.03	0.01	0.02		0.03	0.01	0.02		0.03	0.01
<i>Life-Style</i>												
Conservative Protestant	-0.66	**	0.21	-0.04	-0.66	**	0.21	-0.04	-0.66	**	0.21	-0.04
Catholic	-0.12		0.23	-0.01	-0.04		0.23	0.00	-0.02		0.23	0.00
Other/No Religious Affiliation	-0.16		0.23	-0.01	-0.11		0.23	-0.01	-0.12		0.23	-0.01
Religious Attendance	0.37	***	0.09	0.05	0.39	***	0.09	0.05	0.38	***	0.09	0.05
Region--Midwest	0.39		0.23	0.02	0.43		0.23	0.03	0.41		0.23	0.03
Region--South	-0.16		0.22	-0.01	-0.18		0.22	-0.01	-0.20		0.22	-0.01
Region--West	0.58	*	0.26	0.03	0.61	*	0.26	0.03	0.57	*	0.26	0.03
Rural	0.14		0.18	0.01	0.17		0.18	0.01	0.18		0.18	0.01
R Squared	.23				.24				.24			

\*p&lt;.05, \*\*p&lt;.01, \*\*\*p&lt;.001

	Model 1				Model 2				Model 3			
	b		S.E.	B	b		S.E.	B	b		S.E.	B
<i>Children's Characteristics</i>												
Dichotomous	17.62	**	5.55	0.03								
Number					-2.27	**	0.77	-0.03				
One Child									17.70	*	7.31	0.03
Two Children									24.89	***	6.12	0.07
Three Children									19.69	**	6.27	0.05
Four Children									18.88	**	6.67	0.04
Five or More Children									-1.43		6.48	0.00
<i>Household Demographics</i>												
Average Age	3.98	***	0.40	0.11	4.13	***	0.40	0.12	4.13	***	0.40	0.12
Single Male	-71.08	***	5.83	-0.14	-78.38	***	5.81	-0.15	-74.61	***	5.86	-0.14
Single Female	-48.20	***	4.73	-0.13	-52.53	***	4.77	-0.14	-51.15	***	4.76	-0.13
Previously Divorced	-34.42	***	3.37	-0.11	-30.62	***	3.43	-0.10	-30.56	***	3.44	-0.10
Previously Widowed	6.21		4.80	0.01	9.60	*	4.83	0.02	9.01		4.82	0.02
Black	-44.52	***	4.69	-0.11	-43.17	***	4.71	-0.11	-41.50	***	4.71	-0.10
Hispanic	-44.70	***	7.40	-0.09	-44.78	***	7.40	-0.09	-43.67	***	7.39	-0.09
Inter-Mixed	25.17	*	12.59	0.02	25.04	*	12.59	0.02	23.75		12.57	0.02
Immigrant Status	5.61		5.84	0.01	4.80		5.84	0.01	4.73		5.83	0.01
<i>Household Resources</i>												
Years of Education	5.00	***	0.74	0.10	4.71	***	0.75	0.09	4.47	***	0.74	0.09
Household Income	0.42	***	0.02	0.24	0.42	***	0.02	0.24	0.41	***	0.02	0.24
Currently Retired	14.24	**	4.46	0.04	12.99	**	4.45	0.03	14.32	**	4.45	0.04
Years in Labor Force	0.34	*	0.17	0.02	0.25		0.17	0.02	0.27		0.17	0.02
Occupational SEI	0.54	**	0.16	0.04	0.50	**	0.16	0.04	0.54	**	0.16	0.05
Self-Employed	26.68	***	4.28	0.06	26.73	***	4.28	0.06	27.22	***	4.27	0.07

Continued

Table 4.7: ML Estimates of Housing Net Worth Comparing Different Measures of the Presence of Children

Table 4.7 Continued

	Model 1				Model 2				Model 3			
	b		S.E.	B	b		S.E.	B	b		S.E.	B
<i>Family Background</i>												
Amount of Inheritance	2.26	***	0.46	0.05	2.26	***	0.46	0.05	2.24	***	0.46	0.05
Number of Siblings	-0.44		0.53	-0.01	-0.22		0.53	0.00	-0.34		0.53	-0.01
<i>Life-Style</i>												
Conservative Protestant	-9.23	*	4.52	-0.03	-8.97	*	4.52	-0.03	-9.53	*	4.51	-0.03
Catholic	5.98		4.90	0.02	6.53		4.91	0.02	7.73		4.90	0.02
Other/No Religious												
Affiliation	2.01		4.81	0.01	2.43		4.81	0.01	2.84		4.80	0.01
Religious Attendance	6.57	***	1.86	0.04	7.10	***	1.86	0.04	6.97	***	1.85	0.04
Region—Midwest	-25.25	***	4.95	-0.07	-25.01	***	4.95	-0.07	-24.58	***	4.94	-0.07
Region—South	-27.48	***	4.65	-0.09	-27.79	***	4.65	-0.09	-27.52	***	4.64	-0.09
Region—West	9.22		5.60	0.02	9.47		5.60	0.02	9.67		5.59	0.02
Rural	-8.67	*	3.74	-0.02	-8.18	*	3.75	-0.02	-7.85	*	3.74	-0.02
R Squared	.29				.30				.30			

\*p&lt;.05, \*\*p&lt;.01, \*\*\*p&lt;.001

## CHAPTER 5

### INVESTMENTS IN CHILDREN'S EDUCATION

#### Introduction

In the previous chapter I showed that the number of children differentially affect net worth and its components. Possibly the most surprising finding is that having had children does not negatively affect *overall net worth*. In fact, having had two children has a modest positive effect on overall net worth. Only having four or more children negatively affects *financial assets*. With the exception of households with five or more children, having children positively affects *housing net worth*. These findings are intriguing because a common belief, in industrialized nations, is that having children negatively affects the financial resources of parents. However, my results clearly show that children do not have a long-term negative financial effect.

However, there are substantial differences among parents in the costs incurred by raising children. While parents are no worse off financially than those who never had children, some parents who provide extensively to their children might be worse off. For example, another common belief is that parents who pay for their children's education do experience increased financial burdens as a result. Yet, to my knowledge there has been

no research that actually seeks to answer to understand the extent to which paying for children's education negatively affects parent's financial situation in the long run.<sup>18</sup>

In fact, very little research has been done to understand how financial transfers affect the donor rather than the recipient. While some have questioned why people give to their children, aging parents, or charities, no one has considered whether or not these financial behaviors affect the donor's wealth. In this chapter I examine the extent to which previous expenditures on children's education affect current wealth and if expenditures substantially mediate the relationship between household characteristics and wealth.

After a general discussion of previous research on intergenerational transfers and the specific factors affecting parental financial investments in children's education, I briefly review the determinants of asset accumulation and portfolio allocation discussed in previous chapters. After developing new hypotheses regarding the relationship between financial investments in children's education and wealth, I discuss the data and methods used in this analysis. Next, I interpret the results focusing on the relationship between investments in children's education and wealth. I conclude the chapter with a discussion of how intergenerational transfers affect wealth.

### **Transfers among Parents and Children**

Parental financial transfers to children have routinely been found to have positive outcomes for children. While some parents want or feel obligated to give to children, others do not. Regardless of why parents behave they way do parental attitudes result in behavioral changes with respect to household finances. Parents who want to give

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<sup>18</sup> It is important to note that inter-vivos transfers or bequests can reduce the overall consumption level of the generation doing the donating.

financially to children will have to manage their finances differently than parents who choose not to give. What are the consequences of giving or not giving for parental wealth?

Some of the most robust findings in sociological research are that parent's material and non-material resources directly influence children's psychological well-being, levels of human capital, and levels of material wealth throughout the child's life (Cooney and Uhlenberg 1992; Engelhardt and Mayer 1998; Ioannides and Sato 1987; Kotlikoff and Summers 1981; Modigliani 1988; Keister 2002b). Within this body of research, many have focused on differences in the pattern of exchanges from parents to children by race, socio-economic status, and gender. Generally, researchers have found no substantial racial differences in parental transfers to children after socio-economic status is controlled. However, groups with fewer resources are more likely to exchange non-material resources, such as time babysitting or running errands, than groups with material resources. Groups with material resources are more likely to provide financial resources to their children. Mothers, even among married couples, tend to give more to their children than fathers. Clearly, financial transfers to children result in improvements in children's human capital, increase the likelihood of their long-term asset accumulation, and determine if children are able to endure temporary economic crises.

Parents are often motivated by a variety of beliefs, attitudes, and desires to provide for their children. For some, the motivation to provide financially for children is based on tradition. Their parents helped pay for their education therefore they should help pay for their child's education (Steelman and Powell 1993). Hal Varian argues, "parents bequeath wealth in order to make sure that their children do not end up too low



on the income distribution” (Blinder, 1976: 90). Altruistic motives can also play a role (MacDonald and Koh 2003). Parents want to give their children opportunities they never had. A final motivation is expected future reciprocity (Cox and Rank, 1992). Parents hope that by facilitating their child’s success the child will feel a sense of obligation and help to care for the parent. However, a parent’s decision to invest in their child’s education and a desire to leave material resources for their children is constrained by economic limitations and additional family obligations.

Regardless of the reason why parents invest in children’s education, engage in financial transfers at various stages of their adult child’s life, or leave large bequeaths upon their death, there is substantial empirical evidence that these attitudes and motivations shape parental savings behaviors. In fact, Hossler and Vesper (1993) found that parental aspirations for their children positively affected parent saving for post-secondary education. More generally, Wakita, Fitzsimmons, Liao (2000) found evidence that there is a positive change in savings in households that believe within family generational support should occur.

What are the economic consequences of these behaviors for parents? It is commonly believed that parents are sacrificing in order to pay for their child’s education or to provide children with down-payments for homes. Clearly, among parents wanting to provide material resources to their children, at least lifetime consumption must be decreased. Blinder (1976) also argues that the desire to leave an inheritance and the size and timing of transfers from living parents to their children is crucial in determining life

cycle saving behavior. However, it is not clear if parents who provide more financially for their children actually compromise their own economic situation relative to parents who provide less.

Previous literature therefore suggests that intergenerational transfers should mediate the relationship between household characteristics and wealth. Figure 1 presents my general model. Briefly, household characteristics, such as marital status, number of children, education, and inheritances, directly influence the economic security of the household. In addition, many of these same factors influence intergenerational expenditures. Intergenerational expenditures in turn influence economic security. In what follows, I explain this process in more detail by discussing the predictors of wealth, the predictors of educational investments, and the effect of investments in education on net worth and portfolio allocation. To my knowledge, this will be the first time that the amount of an intergenerational transfer is examined to determine if there is a direct effect on net worth and if intergenerational transfers mediate the relationships between household characters, such as education and occupation, and wealth.

### **Economic Security: Wealth and Portfolio Allocation**

A great deal of research relating household characteristics to wealth and portfolio allocation has already been done. Since this literature was thoroughly reviewed in Chapter 2 I will only briefly discuss expected effects. With respect to household demographic characteristics, I expect age to positively affect net worth and its components. I expect being a single man or woman to negatively affect net worth as compared to being married or living with someone. The effect of at least one person

having been previously divorced or widowed is expected to be negative. In addition I expect that racial and ethnic minorities have a lower overall net worth (and its components).

Among household resources I expect households with more education to have a higher net worth. Current household income will also positively affect net worth. At least one person being retired is expected to positively affect net worth. Households with a higher status occupation are expected to also have a higher net worth. Additionally, households with one or more persons being self-employed are expected to positively affect net worth.

The amount of money one has inherited is expected to positively affect net worth. Conservative Protestants are expected to have lower levels of net worth than Mainline Protestants. I expect no difference between Catholics and Mainline Protestants. Religious attendance is expected to positively affect net worth. Controls for region and urban versus rural status are also included.

### **Predictors of Investments in Children's Education**

A central argument of this chapter is that household characteristics are at least partially mediated through investments in children's education. In addition, intergenerational expenditures have been hypothesized to shape the saving patterns of households. In the following section, I briefly review the theories pertaining to parental educational expenditures.

Even though most Americans believe that educational credentials are the key to future success (Kluegel and Smith 1986), not all parents are able or inclined to invest in their children's education (Steelman and Powell 1993). However, we know that the relationship between entering and completing post-secondary education is attributed to parents providing children with material and non-material resources (Hossler and Vesper 1993; Teachman 1987). In 1990 the average annual cost of attending public and private colleges came to slightly less than \$5,000 and almost \$13,000, respectively. By 2000, the average annual cost was \$7,500 and \$21,500 (National Center for Education Statistics 2002: Table 316). The ability to pay for children's education is constantly being challenged-not only by the rising costs of post-secondary education, but also by the withdrawal of state and the federal programs to help offset the costs of post-secondary education.

Unlike other expenses in the family budget, educational expenses are an especially limited resource because they are not shared by all. The methods by which parents finance children's education are diverse. However, there is an important distinction between parents who have saved money for the purpose of sending their children to school compared to parents who intend to pay for their children's education with current earnings. In 1988 46% of parents with students in a four-year college or university had not saved money for their child's education (Churaman 1992).

Parents who do not have enough savings or money from current earnings might have to tap into their home equity or retirement funds. "This type of decision requires a trade-off between greater security in their retirement years, their desires, and their perceived obligations to their children" (Churaman 1992:111). As a result it is possible

to hypothesize that educational expenditures will have a negative long-term effect. On the other hand research dating back as far as 1960 has found that parents actually begin saving for education soon after children are born (Lansing, Lorimer, and Moriguchi 1960). For those parents who modified their earlier consumption and savings behaviors it is possibly that educational expenditures will have no long-term effect since current consumption and saving will not be affected by the costs of children's education.

Three theoretical frameworks have informed most of the research on educational expenditures by sociologists, economists, and consumer scientists (Steelman and Powell 1989a, 1991, 1993; Mauldin, Mimura, Lino 2001). According to human capital theory, parents will invest time and money in their children in the hopes of future returns (Becker 1964, 1981; Taubman and Behrman 1986). The amount of resources invested in children is expected to be contingent upon the total resources available, the number of persons making claims on these resources, and the expected achievements of the children (Becker 1964).

The status attainment approach argues that resources flow toward children because of parent's aspirations for their children's future success (Blau and Duncan 1967; Featherman and Hauser 1978). Parental aspirations for their children's educational attainment are determined by the parent's characteristics. The status attainment approach has continuously shown that parent's economic resources increase the likelihood that children will enter and complete college (Conley 2001).

Finally, the resource dilution hypothesis focuses on the effects of family size, timing, and composition on investments in children (Blake 1981, Heer 1985, Steelman and Powell 1989). Based on these theories, we can expect the following household

characteristics to affect educational expenditures: household demographics, children's characteristics, resources, family background, and life-style. First, household demographics, such as sex and marital status of the parents and racial composition, will affect educational expenditures. Marital disruption has been found to negatively affect financial transfers from parents to children regardless of current marital status (Aquilino 1994; Furstenberg et al 1995). Research on investments in children's education finds that single-person households save and spend less money on their children's education (Steelman and Powell 1991, Churaman 1992). Therefore, I expect having previously been divorced negatively affects educational expenditures. Current marital status will act as a control.

While some have argued that minorities will be more likely to invest in their children's educational futures, others have argued that a dependency on government welfare programs and an inability to pay makes these families less likely to invest in education (Mickelson 1990, Chiswick 1988, Steelman and Powell 1993, Goldscheider and Goldscheider 1991). Since neither the research on educational expenditures nor intergenerational exchanges have identified robust racial differences in financial gifts from parents to children (Furstenberg et al 1995), I do not expect to find significant differences between African Americans and Hispanic Americans compared to Whites.

Second, *children's characteristics*, such as number, timing, and proportion attending post-secondary education, are consistently found to affect expenditures. One of the more robust findings in this literature is the negative effect of number of children on educational savings and expenditures (Steelman and Powell 1991, 1993; Zvoch 1999; Churaman 1992). However, it is possible that families with a large number of children

spend more overall despite spending less per child. I expect the number of children to affect investment in children's education. However, competing hypotheses suggests different directions of the effect.

The timing and spacing of children is important because children born later in the life cycle receive greater benefits from parent's improved economic position (Blake 1981; Heer 1985; Steelman and Powell 1989). This relationship is complicated by the fact that the cost of education has increased over time. For example, the average cost of attending public and private universities in 1970 was \$1,300 and \$2,800 respectively. However, it rose to \$2,400 and \$5,500 in 1980 and \$4,800 and \$12,900 in 1990 (National Center for Education Statistics, 2002). Therefore, it is possible the increasing costs of education might lead to a positive effect of children born later in life. Regardless, I expect households with children who completed their education earlier will spend less on education. I also expect parents who had children prior to marriage will spend less on children's education.

An interesting finding in previous research is that children living in stepfamilies experience different educational outcomes (i.e. rates of post-secondary school completion, scholastic achievement in school) than children living with two biological parents (Coleman and Ganong 1990; Downey 1995). Research on intergenerational transfers has shown that remarried parents give less financially than two biological parents (Aquilino 1994; Furstenberg et al 1995; Cooney and Uhlenberg 1990). Stepparents are expected to invest less in non-biological children because they do not receive the same emotional benefits from investing in stepchildren as they would from

investments in their own biological children (Emlen 1997; Zvoch 1999). As the proportion of children who are biological increases, the amount spent on education will also increase.

The sex of the child has also been found to affect educational savings and expenditures. In one study, parents with daughters were more likely to express a belief that daughters are less able to pay for their own college expenses. Thus, parents were more likely to go into debt for daughters (Steelman and Powell 1991). Another study found those students with brothers rather than sisters were less likely to receive parental support (Powell and Steelman 1989). Based on the research mentioned above and the fact that daughters are more likely to provide intergenerational assistance to their parents (Spitze and Logan 1990; Hogan, Eggebeen, and Clogg 1993), I expect parents to invest more in daughter's education than son's education. As the proportion of daughters among children increases so will the amount spent on education.

Opportunities to invest in children's education are limited by children's ability and desire to attend particular types of schools (Churaman 1992). With the exception of parents who choose to send their younger children to private schools, the costs of primary and secondary education are modest for most Americans. On the other hand, the costs associated with post-secondary education can be extensive. Therefore, I control for the proportion of children completing a post-secondary education. I expect that educational expenditures will increase as the proportion of children who completed a post-secondary education increases. An alternative hypothesis is that due to limited resources families with more children attending post-secondary education actually spend less on each child and therefore spend less in total along the lines of the resource dilution model.



Third, *household resources*, such as education, occupation, and income, are important because of the financial resources they provide, the values and aspirations they instill, and the networks and opportunities they provide access to. Those persons who have already benefited from education are also more likely to save for their children's education as well as more likely to say that they are willing to go into debt for the sake of their children's education (Steelman and Powell 1991). Therefore, I expect parental years of education to positively affect educational expenditures.

While other scholars do not routinely control for occupational position, I argue that these variables are relevant. I expect the types of work parents are engaged in to influence educational expenditures. Parents who hold more prestigious positions are expected to place greater value on education. As such, they are more likely to encourage and pay for their children to attend more expensive private schools. *I expect that as the socio-economic index of the parent's occupation rises so will investments in education.*

Previous research has established that parent's income is one of the most important factors determining educational expenditures. "Parents finance the major part of their contribution to their children's education from current income" (Churaman 1992: 97). Some argue that, in addition to current income, a parent's net worth is also important (Conley 2001; Steelman and Powell 1993; Rumberger 1983). The effect of income on educational investments should ideally be measured in the same or previous year. However, since I am concerned with the long-term effects of educational investments and am measuring historical expenditures rather than current, I do not control for the effect of

household income or wealth on educational expenditures. I would argue though that the inclusion of education and occupation are adequate predictors of household resources on total educational expenditures.

The fourth household characteristic that I control for is *family background*. In order to assess the extent to which educational expenditures affect wealth, I must control for the possibility that extremely wealthy people are able to invest in their children's education without concern for their own economic well-being. Therefore, I include a control for inherited wealth, and expect a positive effect on wealth.

The final household characteristic considered here is *lifestyle*. In order to control for some attitudinal differences in parent's perceived obligation to pay for their children's education, I control for religious affiliation and adherence. I expect Catholic and conservative Protestants to be more likely than mainline Protestants to send their children to private primary and secondary schools. Due to differences in access to private primary and secondary schools and average costs of post-secondary institutions, I control for residence in an urban versus a rural environment as well as different regions of the country.

### **The Role of Investments in Children's Education on Net Worth**

Parents in the midst of raising children and paying for their education are saving less money and consuming fewer durable goods. Therefore, it is commonly assumed that investing in children's education will negatively affects the financial well-being of parents. However, there is no empirical evidence that there is a long-term negative effect on parent's financial resources. Building on the facts that there are short-terms costs and

that it is logical to believe that investing in children's education will have a negative long-term effect, *I expect investments in children's education to negatively affect net worth and its components*. In addition, I expect investments in children's education to mediate the relationships between household characteristics and net worth. For example, the number of children will only have an indirect effect on net worth after controlling for investments in education.

### **Data, Variable Construction, and Methods**

The data are drawn from the first wave (1992) of the *Health and Retirement Study* (HRS). The HRS is a nationally representative longitudinal sample of persons born between 1931 and 1941. Analyses presented in this chapter are based on the restricted sample that includes only households with children no longer being supported by their parents. If no children are reported as living in the home and no children are indicated as currently attending school, then the household is considered to be through with the potential costs of raising children. 3,968 households fall into this classification. Descriptive statistics for the sample are provided in Table 3.2.

### **Variable Construction**

Given the highly skewed nature of net worth, *household net worth* is measured as the square root of the difference between the sum of total assets and the value of total debts.<sup>19</sup> Total assets are calculated as the sum value of all real assets (including primary

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<sup>19</sup> I use the wealth variables already constructed in the RAND HRS data file rather than recreating these same variables from the 1992 HRS data file. The advantage to using the RAND HRS constructed wealth

residence, business, farm, real estate investments, and vehicles) and financial assets (including stocks and mutual funds; IRA and Keogh accounts; Certificates of Deposit, government bonds, T-bills; bonds and bond funds; checking and savings accounts). Total debts are calculated as the sum of *housing debt* (including home mortgages and equity loans) and financial debt (including credit card, medical bills, loans from relatives). *Housing net worth* is measured as the square root of the net value of the respondent's primary residence. *Financial assets* are the logged net value of all financial assets in 1991. *Educational Expenditures* is the sum of all educational expenditures for all children and is measured in nominal dollars.

The exogenous variables have been divided into five groups: (1) characteristics of children (2) household demographic characteristics (3) household resources (4) family background and (5) life-style. The *number of children* is measured as an ordinal variable with 6 categories ranging from 0 to 5 where 5 denotes five or more children. Among couples, children include both those that are shared by the couple (biological and adopted) and those "related" to only one person in a couple. Among single persons, children include all those identified as such by the respondent, regardless of biological relationship. *Time since dependency* is measured by the number of years since the parents were no longer financially supporting the youngest child. *Pre-marital birth* is a

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variables is two-fold. First, there is less missing data and second differences in data collection across waves have been addressed (RAND 2002).

dichotomous variable where “1” indicates the oldest child’s age is greater than the number of years married among couples married only once. All other households are coded as “0.”<sup>20</sup>

The variable *children with post-secondary* education denotes the proportion of children that completed post-secondary education- in other words, the total number of children having completed either a two or four year degree program divided by the total number of children. The variables *biological children* and *daughters* represent the proportion of children that are biologically related to both parents and the proportion of children that are daughters (as compared to sons). An overview of the measurement of additional exogenous variables is provided in Table 3.3 and a description is provided in Chapter 3 as well.

### *Missing Data*

Missing data were accounted for using a Full Information Maximum Likelihood (FIML) estimation procedure available through the AMOS statistical program (Allison 2002, Arbuckle 1995).<sup>21</sup> This procedure uses the maximum amount of information available for each case and allows me to retain all cases that provided data on their net worth.

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<sup>20</sup> Unfortunately, I am not able to discern nonmarital births for persons who are currently single or remarried. Therefore, this measure represents a very conservative approach.

<sup>21</sup> For a full review of full information maximum likelihood see Chapter 3.

## *Method*

Since this analysis assumes wealth is calculated over the life-course, the constituent variables have a relatively clear causal ordering that is assumed to be unidirectional (see Figure 1). Thus, I estimate a recursive model in which I hypothesize that a subset of exogenous variables will affect both endogenous variables and that educational expenditures, occurring earlier in the life-cycle, will affect wealth<sup>22</sup>. I can therefore determine both the direct and indirect effects of the exogenous variables. Structural equation methods is the ideal solution for this analysis because I can use FIML to estimate my missing values and it makes calculating indirect effects considerably easier.

## **Results and Discussion**

Total educational expenditures in this sample ranged from no money spent to \$96,000, with an average amount of \$15,400. Surprisingly 25% of households indicated that they spent no money on children's education. In order to get a sense of who invests in their child's education and who does not I have divided educational expenditures into 7 groups. Those who refused to answer the question, those who spent no money, and 5 expenditure groups. Several consistent patterns are evident regarding household characteristics and educational expenditures.

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<sup>22</sup> Even though educational expenditures is measured chronologically before wealth it is possible that there is a reciprocal effect since wealth is accumulated over the life course. Therefore I also ran additional models that tested for a reciprocal effect and found no evidence that current wealth significantly influences previous educational expenditures.

In comparison to those who spent money on their children's education, those who did not have: the lowest average years of education, the second lowest average occupational SEI, the second highest average number of children, the highest proportion of children born outside of marriage, and the lowest proportion of children completing post-secondary education.

Another distinct group is comprised of households that refused to answer questions regarding educational expenditures. These households have a substantially higher average level of education, 13.3 years in comparison to 11.7 for the full sample, and higher average occupational SEI. Also slightly more than half of these households have at least one person in a professional occupation. Finally, 66% of the children in these households (in comparison to 40% in the full sample) have finished their post-secondary education on average. This suggests that households that refused to answer this question are rather unique.

In Figures 5.2 and 5.3 I present the median value of educational expenditures by number of children. Figure 5.2 clearly shows that the median amount spent per child declines with each additional child. However, Figure 5.3 shows that households with two children spend considerably more overall than other households, followed by households with 3, and then with 1 child. Based on this, and the fact that the relationship between net worth and number of children also continues to be non-linear as seen in Figure 5.4, I will continue to measure the effect of children using ordinal variables.

Finally, in Figure 5.5 and Figure 5.6 I present the relationship between net worth and educational expenses. Figure 5.5 presents the relationship measuring educational expenses per child and Figure 5.6 presents total educational expenses. There is

substantial variation in household net worth at all levels of educational expenditures including those spending no money on children's education. After testing for skewness and kurtosis I determined that educational expenditures as expressed in nominal dollars is appropriate.

Based on these descriptive findings, we can conclude that educational expenditures vary by household characteristics, such as number of children, years of parental education, and occupation. I have also shown that the relationship between educational expenses and net worth is a complicated one. In Table 5.2 I present unstandardized and standardized path coefficients and standard errors for all relationships in the final model. I begin by focusing on the effect of household characteristics on the mediating variable, educational expenditures, and then discuss the effects of the household characteristics on net worth, financial assets, and housing net worth. I briefly discuss direct, indirect, and total effects.

Across the children's characteristics, findings are generally as expected with a few exceptions. For example, having four or five children as compared to having one has a significant positive effect on educational expenditures. Since educational expenditures is measured in dollars the coefficients can be interpreted as dollars. So, net of other controls, households with five or more children spent \$3,552 dollars more than households with only one child. Interestingly, households with two and three children did not spend significantly more on education as compared to having only one.

Each year since parents stopped supporting their children (time since dependency) decreases educational expenditures by \$242 dollars. As mentioned earlier, this could be the result of either the lower cost of education earlier in time or lower expenditures on



children born earlier in the life cycle. Surprisingly, having had a pre-marital birth does not significantly affect educational expenditures. Despite what was likely to be an unexpected birth of at least one child, overall educational expenditures were not affected. As expected the largest effect is the proportion of children completing their post-secondary education (with an effect size of \$12,735 dollars).

Neither the proportion of biological children nor the proportion of daughters significantly affects educational expenditures. Both of these findings contradict previous research that focused on expenditures for individual children. Previous research concluded that children of divorced parents receive fewer financial resources than children of non-divorced parents. This is attributed to disagreement between the parent and step-parent over how much to invest in the child. Results from this analysis suggest the reason children of divorced parents receive less is due to a lack of financial resources resulting from the divorce rather than the lack of a biological bond.

Among the household demographic factors, only having been previously divorced, negatively affects educational expenditures. Households in which at least one person was previously divorced spent \$2470 dollars less than households that did not experience a divorce thus supporting previous findings. It is not surprising that current marital status does not have a significant effect on educational expenditures because it acts more as a control in this equation. As expected there are no significant differences in educational expenditures between Whites and Blacks or between Whites and Hispanics.

Both household resources measures, years of education and occupational prestige, positively affect educational expenditures. Each additional year of parental education results in an additional \$832 dollars for children's education. As an additional control for

the possibility that historically wealthy households are in a better position to invest in their children's education, I controlled for the amount of inheritances. Amount of inheritance received does not significantly affect educational expenditures.

I controlled for religious affiliation and attendance given differences in orientation towards private education, particularly during primary and secondary school. There are no significant differences between conservative Protestants and mainline Protestants and between mainline Protestants and Catholics. However, those with other or no affiliations, such as Hindus, Muslims, Jews or atheists, do spend less on children's education. Clearly the grouping of non-Christian and non-religious households together is not ideal however no group was large enough to be examined separately from the rest. Therefore this finding is difficult to interpret. Attendance at religious services was found to positively affect educational expenditures.

While there were no significant differences in educational expenditures between urban and rural households, there were differences across regions as expected. I found that households living in the South spent more than households in the North, net of other controls, and households in the West spent less than those in the North. There were no significant differences between households in the North and Midwest.

Turning now to the prediction of net worth, I find no significant differences between households with different numbers of children. However the timing of children remains important. Net worth increases every year since dependency. In other words households that stopped supporting children 5 years ago are better off than households that stopped one year ago. This is most likely due to the fact that economic resources previously directed at children can be redirected towards savings. This finding supports

the idea that parents with dependent children are probably saving less. However, once children leave the home, parents possibly save at a higher rate than those with dependent children. Having had a pre-marital birth continues to have a negative affect net worth even after parents are no longer supporting children.

The primary variable of interest among children's characteristics is educational expenditures. Controlling for other household characteristics, educational expenditures positively affects net worth. This counter-intuitive finding is surprising, but can possibly be explained through attitudes and behaviors.<sup>23</sup> For example, almost half of parents pay for their children's post-secondary education out of their current income stream rather than savings. Since parents do this by decreasing consumption, we can assume that upon finishing paying for the child's education parents shift those financial resources into long-term savings, paying off short-term debt, or paying off home loans rather than increasing consumption.

The findings are as expected for the other household characteristics predicting net worth. Single persons (compared to those who are married) have lower levels of net worth. Having been previously divorced has a negative effect on net worth. The effect of being Black or Hispanic as compared to White is also negative. Years of education, household income, occupational SEI, being retired, and being self-employed each have a positive effect. The amount of the inheritance received also has a positive effect. Conservative Protestants have less net worth than mainline Protestants. There are no significant differences between the other religious groups. The effect of religious

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<sup>23</sup> There are two other possible explanations. First, there might actually be a non-linear effect that could be modeled through the use of ordered variables. Second, reverse causality might be influencing the relationship but since I previously tested for this we can discount this explanation.

attendance is also positive. Households in the West have significantly more wealth than households in the North and rural households have a significantly higher net worth than urban households.

Next, I consider two components of net worth, financial assets and housing equity. Even though the results for the effect of the exogenous variables on educational expenditures are substantively the same as in the net worth model, I include the estimates in Tables 5.3 and 5.4. The reason for the change in the coefficients across the three models is due to the method used to estimate missing values. By changing the dependent variable I have changed the data that is used to estimate the missing data.

However, I am focusing here on the differences in the findings regarding the effects of household characteristics on financial assets as compared to overall net worth. For example, having had two children positively affects financial assets while having had five children has a negative effect. Time since dependency continues to have a positive effect, however, having had a pre-marital birth has no significant effect. Interestingly, educational expenditures do not have a significant effect on financial assets. As a result, we can assume that money previously directed towards children's education is not redirected towards financial assets such as IRA's or stocks and bonds.

With respect to household demographics, there is no longer a significant difference between currently single males and married couples. The other interesting change from the model predicting overall net worth is the effect of household resources. While years of education and occupational SEI continue to have positive effects on financial assets, household income, being retired, and self-employed are no longer significant predictors. Inheritances and religious attendance continue to have a positive

effect on financial assets. Finally, households in the Midwest and West have more financial assets net of other controls than households in the North. There are no significant differences in financial assets between rural and urban households.

In Table 5.4 I explore the determinants of the second component of overall net worth-housing net worth. Again, there are some interesting differences in effects. Having had five or more children has a negative effect on home equity. Although time since dependency does not significantly affect housing net worth, having had a pre-marital birth has a significant negative effect. The effect of educational expenditures is positive. This suggests that parents might use financial resources previously directed at children's education to pay off home loans earlier than required.

The effects of household demographics, resources, and family background are as expected. Religious attendance continues to have a positive effect and conservative Protestants have a lower housing net worth in comparison with mainline Protestants. Not surprisingly, households in the Midwest and South have a lower housing net worth than housing in the North while homes in the West have a higher value.

The final topic discussed here is the possibility that educational expenditures mediate the effects of household characteristics on net worth and its components. In order to determine if this is the case, I examined indirect and direct effects for the three outcomes of interest, which include net worth, financial assets, and housing net worth. I present results in Table 5.5. With the exception of modest effects of number of children I find that investments in children's education do not mediate the effects of household

characteristics on net worth, financial assets, and housing net worth. This is not surprising given that there is only a modest significant effect of educational expenditures on net worth and housing net worth and no significant effect on financial assets.

## **Discussion and Conclusion**

The primary goal of this chapter was to answer the following question: Do parents who financially invest in their children's education compromise their own economic situation in comparison with parents who provide less? The unequivocal answer is no. In fact, educational expenditures appear to have a modest positive effect on net worth. This is primarily due to the positive relationship between educational expenditures and housing net worth. These results clearly call into question the generalized belief that parental costs for education negatively affect long-term savings. The average household is able to simultaneously pay for children's education and to save for the future.

Most of the previous research on educational expenditures is based on expenditures per child. The opportunity to consider the total amount spent on education is rare. While the number of children is consistently found to reduce investments in a particular child, it was not clear how this might affect total expenditures. My findings suggest that parents with four or more children spend more in total, while parents with one to three children spend around the same amount on educational expenditures. Another interesting finding with respect to educational expenditures is that divorced parents spend less because they have fewer financial resources rather than because they don't share a biological bond with their step-children. While predicting educational

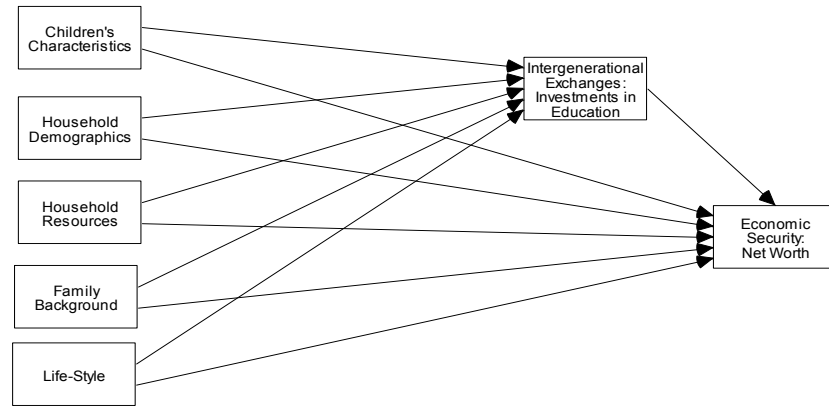
expenditures was not the focus of this chapter, my findings make it clear that total expenditures should be considered when evaluating how parents decide to invest in particular children.

There are a variety of ways that household budgets might be able to accommodate the dual goals of economic security and financial investments in children. The most obvious is through decreased consumption over the life-course. This might entail simple modifications, such as limiting routine activities outside the home (movies, restaurants), taking fewer vacations, or buying more economical cars. Another answer might come from the mechanism by which people save for their future. For example, some individuals work for companies that provide generous retirement benefits, such as IRA's. These benefits are in addition to the employee's salary. Therefore the employee does not have to actively choose between saving for the long-term and paying for a child's education. Finally, parents who are motivated to provide additional financial resources for their children's education might also be the same parents who want to provide economic resources to their children throughout the child's adult life. Therefore, these parents save more than what is necessary to provide for themselves as they age, thus producing the positive effect of educational expenditures. Parents who are not motivated to leave bequests or provide money for children to purchase a home will only save what they believe is necessary for economic security in old-age.

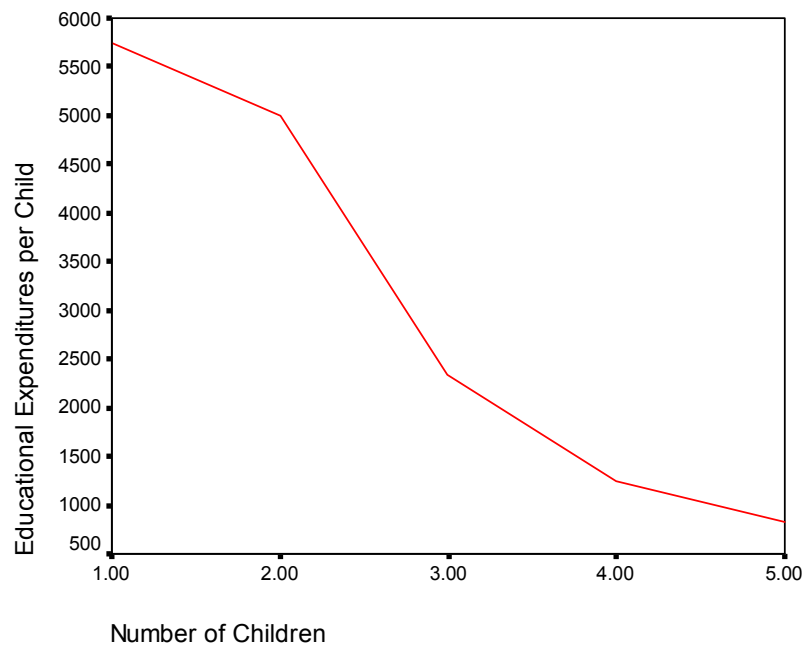
The findings contained in this chapter provide insights into several areas of research: educational expenditures, intergenerational transfers, and wealth. What is most intriguing is that parents are not compromising their economic position as measured by their net worth. This does not necessarily imply that parents could or should give more to

the children. This research should be viewed as the first stage in answering this question. In the future, researchers need to explicitly ask parents how they are able to provide financially for their children. In addition, the perceived financial cost of supporting one's children needs to be considered to determine if parent's behaviors change as a result of perceiving a financial cost to themselves.

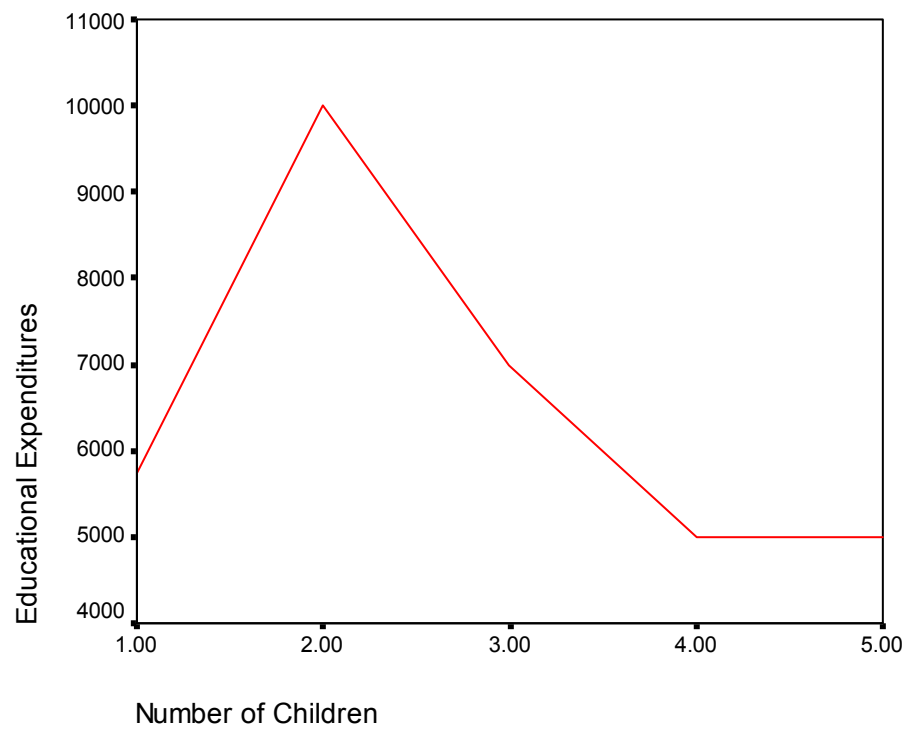




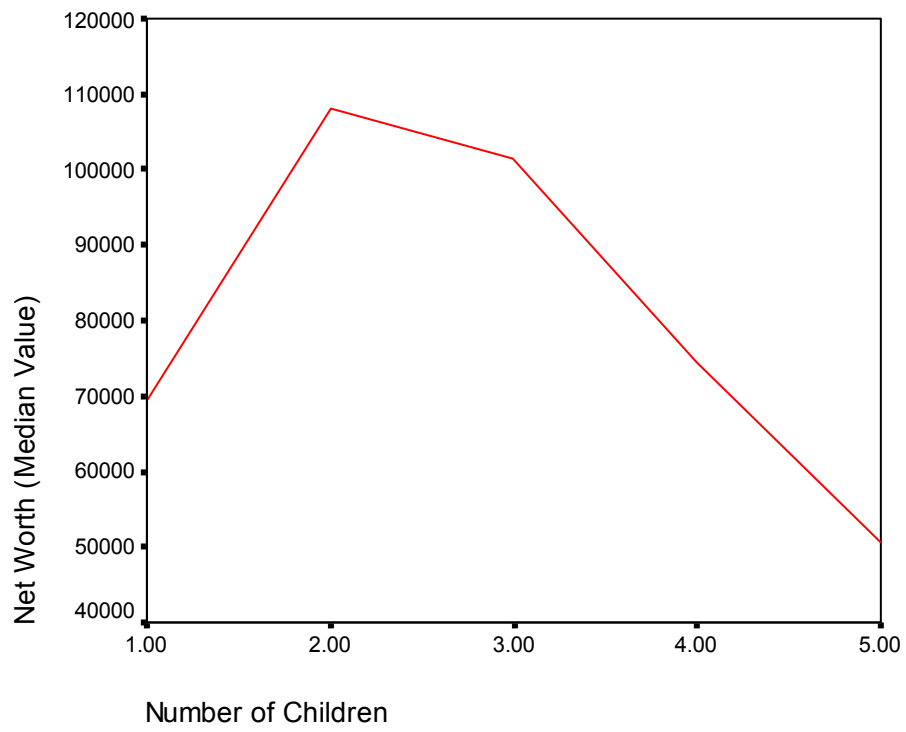
**Figure 5.1: Theoretical Model**



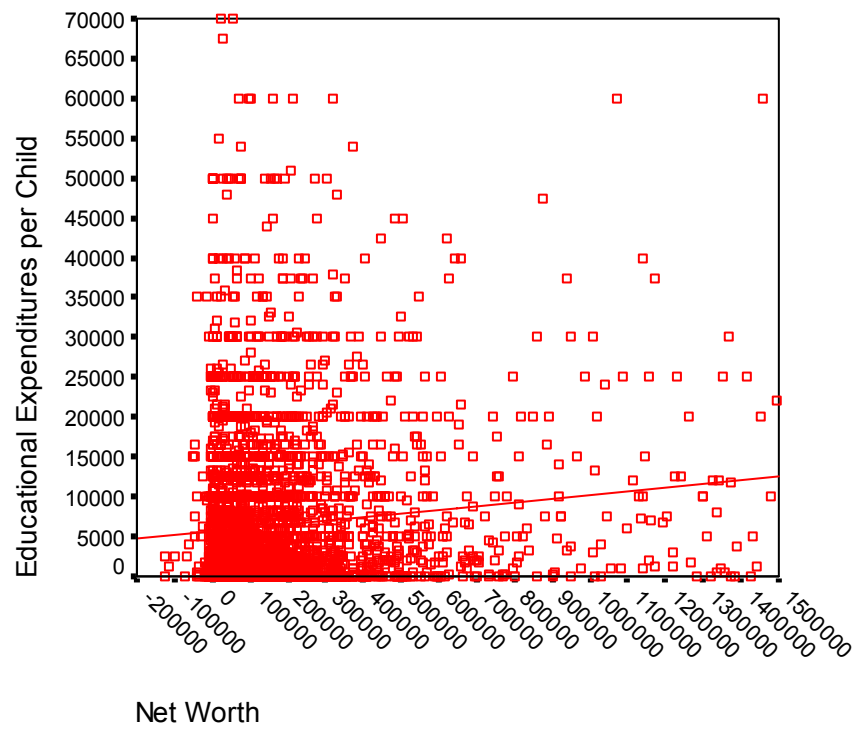
**Figure 5.2: Median Educational Expenditures per Child by Number of Children**



**Figure 5.3 Median Educational Expenditures by Number of Children**



**Figure 5.4 Net Worth by Number of Children**



**Figure 5.5: Educational Expenditures per Child by Net Worth**

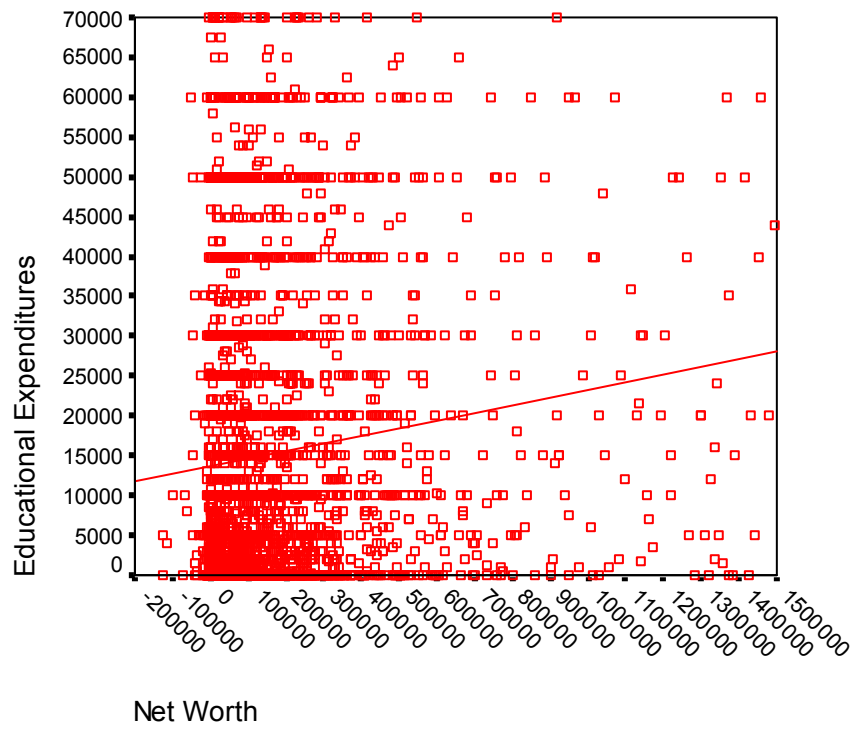


Figure 5.6: Educational Expenditures by Net Worth

	Educational Expenditures (Maximum Amount Spent by Group)							
	Refused (N=306)	None (N=1015)	2000 (N=365)	8000 (N=511)	21000 (N=845)	50000 (N=503)	96000 (N=423)	Total
<i>Children's Characteristics</i>								
Number of Children	3.49	3.46	3.25	3.10	3.14	3.12	3.21	3.26
Premarital Birth	0.05	0.12	0.12	0.08	0.07	0.09	0.09	0.09
Time Since Dependency	4.39	5.45	5.07	5.14	4.98	4.79	4.66	5.02
Children with High School Education Only	0.31	0.66	0.64	0.55	0.50	0.41	0.35	0.52
Children with Post-Secondary Degree	0.66	0.19	0.26	0.37	0.44	0.54	0.60	0.40
<i>Household Demographic Characteristics</i>								
Average Age	56.87	56.79	56.75	56.44	56.84	56.67	56.69	56.73
Black	0.17	0.22	0.22	0.17	0.18	0.17	0.18	0.19
Hispanic	0.04	0.11	0.10	0.06	0.07	0.07	0.05	0.08
<i>Household Resources</i>								
Average Years of Education	13.34	10.58	10.76	11.65	12.10	12.34	12.56	11.71
Both parents with incomplete high school education	0.09	0.35	0.30	0.21	0.16	0.16	0.13	0.22
One parent has post-secondary degree	0.38	0.05	0.07	0.13	0.18	0.22	0.26	0.16
Occupational SEI	39.56	29.50	28.93	32.35	34.01	35.29	36.71	33.11
One parent in professional occupation	0.55	0.20	0.21	0.31	0.34	0.39	0.43	0.32
Self-Employed	0.19	0.13	0.17	0.18	0.16	0.19	0.16	0.16
<i>Lifestyle</i>								
Conservative Protestant	0.27	0.35	0.38	0.34	0.38	0.34	0.32	0.35
Catholic	0.17	0.23	0.17	0.21	0.19	0.18	0.25	0.21
Mainline Protestant	0.33	0.21	0.25	0.26	0.28	0.27	0.28	0.26
Average Religious Attendance	1.39	1.32	1.45	1.41	1.59	1.48	1.65	1.46
<i>Household Wealth</i>								
Net Worth (Dollars)	415723.70	107581.54	129897.83	165358.82	188956.26	260045.49	275650.69	195410.52
Square Root Net Worth	507.80	237.77	274.74	313.62	348.23	389.14	406.17	332.43
Financial Assets (Dollars)	108402.84	20420.15	21092.61	33407.58	40031.21	52893.42	75292.99	43081.78
Logged Financial Assets	7.22	3.52	4.47	5.16	6.08	6.06	6.69	5.31
Housing Net Worth	96942.99	42833.70	49609.55	53942.45	58721.47	59153.94	68974.52	57299.18
Square Root Housing Net Worth	251.46	151.18	172.12	181.78	202.38	210.12	212.58	189.70

**Table 5.1: Characteristics of Households According to Educational Expenditures**

	Educational Expenditures (Dollars)			Net Worth (Square Root Dollars)				
	b		S.E.	B	b	S.E.	B	
<i>Children's Characteristics</i>								
Two Children	1213.11		1089.90	0.03	9.38	11.92	0.01	
Three Children	1338.04		1144.62	0.03	2.54	12.50	0.00	
Four Children	2640.52	*	1269.04	0.05	-3.81	13.79	-0.01	
Five Children	3552.81	**	1284.46	0.07	-9.70	13.78	-0.01	
Time Since Dependency	-242.43	**	87.75	-0.05	3.11	**	0.95	0.05
Pre-Marital Birth	-504.56		1233.19	-0.01	-27.15	*	13.31	-0.03
Children with Post-Secondary	12735.35	***	903.50	0.26				
Biological Children	355.87		1199.23	0.01				
Daughters	-647.75		977.20	-0.01				
Educational Expenditures (x1000)					1.05	***	0.18	0.08
<i>Household Demographics</i>								
Average Age	-113.51		93.30	-0.02	8.20	***	1.03	0.11
Single Male	1458.05		1426.95	0.02	-47.36	**	14.10	-0.04
Single Female	-444.60		1080.78	-0.01	-49.29	***	9.69	-0.07
Previously Divorced	-2470.00	**	928.05	-0.06	-49.67	***	8.10	-0.08
Black	-781.88		986.80	-0.02	-69.73	***	10.78	-0.09
Hispanic	1633.74		1412.42	0.02	-62.94	***	15.44	-0.06
<i>Household Resources</i>								
Years of Education	832.76	***	158.13	0.11	10.31	***	1.74	0.10
Household Income					1.31	***	0.05	0.39
Currently Retired					68.32	***	9.05	0.10
Occupational SEI	84.80	*	33.11	0.05	0.99	**	0.37	0.04
Self-Employed					161.19	***	9.69	0.20
<i>Family Background</i>								
Amount of Inheritance	90.22		91.88	0.02	6.12	***	1.01	0.08
<i>Life-Style</i>								
Conservative Protestant	107.62		892.74	0.00	-41.71	***	9.73	-0.07
Catholic	61.11		1010.86	0.00	-0.14		11.06	0.00
Other/No Religious Affiliation	-1640.94	^	990.89	-0.03	-11.92		10.79	-0.02
Religious Attendance	881.44	*	373.17	0.04	11.99	**	4.07	0.04
Region--Midwest	1066.15		1008.81	0.02	4.02		11.01	0.01
Region--South	2255.94	*	940.34	0.06	-6.79		10.29	-0.01
Region--West	-4872.46	***	1159.43	-0.09	49.69	***	12.72	0.06
Rural	-1186.67		740.77	-0.03	14.41	^	8.12	0.02
R Squared	0.15				0.47			

^p<.10, \*p<.05, \*\*p<.01, \*\*\*p<.001

**Table 5.2: ML Estimates, Effect of Investments in Children's Education on Net Worth**



	Educational Expenditures (Dollars)			Financial Assets (Logged Dollars)		
	b	S.E.	B	b	S.E.	B
<i>Children's Characteristics</i>						
Two Children	1167.78	1089.82	0.03	0.80 *	0.33	0.05
Three Children	1242.44	1144.55	0.03	-0.05	0.35	0.00
Four Children	2562.13 *	1268.94	0.05	-0.57	0.39	-0.03
Five Children	3426.75 **	1284.36	0.07	-0.68 ^	0.38	-0.04
Time Since Dependency	-243.18 **	87.75	-0.05	0.05 ^	0.03	0.03
Pre-Marital Birth	-524.86	1233.08	-0.01	-0.33	0.37	-0.01
Children with Post-Secondary	12552.94 ***	903.42	0.25			
Biological Children	333.91	1199.16	0.01			
Daughters	-593.75	977.15	-0.01			
Educational Expenditures (x1000)				0.01	0.01	0.03
<i>Household Demographics</i>						
Average Age	-114.28	93.29	-0.02	0.21 ***	0.03	0.12
Single Male	1414.01	1426.84	0.02	-0.20	0.39	-0.01
Single Female	-483.41	1080.70	-0.01	-1.22 ***	0.27	-0.08
Previously Divorced	-2446.37 **	928.01	-0.06	-0.46 *	0.23	-0.03
Black	-725.23	986.73	-0.01	-2.59 ***	0.30	-0.15
Hispanic	1619.87	1412.34	0.02	-2.06 ***	0.43	-0.08
<i>Household Resources</i>						
Years of Education	831.35 ***	158.11	0.11	0.26 ***	0.05	0.10
Household Income				0.02	0.00	0.23
Currently Retired				-0.11	0.25	-0.01
Occupational SEI	83.76 *	33.11	0.05	0.02 ^	0.01	0.03
Self-Employed				-0.26	0.27	-0.01
<i>Family Background</i>						
Amount of Inheritance	96.20	91.90	0.02	0.10 ***	0.03	0.05
<i>Life-Style</i>						
Conservative Protestant	138.83	892.67	0.00	-0.93 **	0.27	-0.06
Catholic	128.98	1010.75	0.00	0.11	0.31	0.01
Other/No Religious Affiliation	-1678.55 ^	990.80	-0.03	-0.44	0.30	-0.02
Religious Attendance	880.26 *	373.11	0.04	0.46 ***	0.11	0.06
Region--Midwest	1084.85	1008.66	0.02	0.52 ^	0.31	0.03
Region--South	2267.91 *	940.25	0.06	-0.03	0.29	0.00
Region--West	-4859.92 ***	1159.31	-0.09	0.85 *	0.36	0.04
Rural	-1164.28	740.70	-0.03	0.20	0.23	0.01
R Squared	0.15			0.26		

^p<.10, \*p<.05, \*\*p<.01, \*\*\*p<.001

**Table 5.3: ML Estimates, Effect of Investments in Children's Education on Financial Assets**

	Educational Expenditures (Dollars)			Housing Net Worth (Square Root Dollars)				
	b		S.E.	B	b	S.E.	B	
<i>Children's Characteristics</i>								
Two Children	1187.89		1089.83	0.03	-0.77	7.13	0.00	
Three Children	1251.69		1144.56	0.03	-1.68	7.48	-0.01	
Four Children	2584.19	*	1268.95	0.05	-8.75	8.24	-0.02	
Five Children	3454.51	**	1284.38	0.07	-19.61	*	8.24	-0.05
Time Since Dependency	-243.87	**	87.75	-0.05	0.12	0.57	0.00	
Pre-Marital Birth	-515.09		1233.10	-0.01	-26.23	**	7.96	-0.05
Children with Post-Secondary	12589.18	***	903.41	0.25				
Biological Children	329.96		1199.18	0.01				
Daughters	-610.96		977.16	-0.01				
Educational Expenditures					0.18	*	0.11	0.03
<i>Household Demographics</i>								
Average Age	-114.19		93.29	-0.02	4.94	***	0.61	0.13
Single Male	1407.95		1426.84	0.02	-72.68	***	8.43	-0.13
Single Female	-488.09		1080.72	-0.01	-53.41	***	5.79	-0.15
Previously Divorced	-2462.92	**	928.01	-0.06	-40.30	***	4.84	-0.13
Black	-731.82		986.76	-0.01	-33.09	***	6.45	-0.08
Hispanic	1634.88		1412.32	0.02	-49.08	***	9.23	-0.09
<i>Household Resources</i>								
Years of Education	832.39	***	158.13	0.11	4.85	***	1.04	0.09
Household Income					0.38	***	0.03	0.21
Currently Retired					11.06	*	5.41	0.03
Occupational SEI	84.33	*	33.11	0.05	0.30		0.22	0.02
Self-Employed					19.14	**	5.79	0.05
<i>Family Background</i>								
Amount of Inheritance	93.33		91.90	0.02	2.38	***	0.60	0.06
<i>Life-Style</i>								
Conservative Protestant	144.31		892.67	0.00	-14.82	*	5.82	-0.05
Catholic	130.97		1010.79	0.00	9.89		6.61	0.03
Other/No Religious Affiliation	-1664.37	^	990.79	-0.03	-1.15		6.45	0.00
Religious Attendance	881.97	*	373.15	0.04	4.26	^	2.43	0.03
Region--Midwest	1068.30		1008.69	0.02	-24.22	***	6.58	-0.07
Region--South	2272.10	*	940.26	0.06	-24.33	***	6.15	-0.08
Region--West	-4854.63	***	1159.32	-0.08	13.69	^	7.60	0.03
Rural	-1188.00		740.72	-0.03	-7.90		4.86	-0.02
R Squared	0.15				0.31			

^p<.10, \*p<.05, \*\*p<.01, \*\*\*p<.001

**Table 5.4: ML Estimates, Effect of Investments in Children's Education on Housing Net Worth**

	Net Worth			Financial Assets			Housing Net Worth		
	Indirect	Direct	Total	Indirect	Direct	Total	Indirect	Direct	Total
<i>Children's Characteristics</i>									
Two Children	1.38	9.38	10.75	0.01	0.80	0.81	0.30	-0.77	-0.47
Three Children	1.52	2.54	4.05	0.01	-0.05	-0.04	0.32	-1.68	-1.36
Four Children	2.99	-3.81	-0.82	0.02	-0.57	-0.54	0.66	-8.75	-8.09
Five Children	4.03	-9.70	-5.67	0.03	-0.68	-0.64	0.88	-19.61	-18.73
Time Since Dependency	-0.28	3.11	2.84	0.00	0.05	0.04	-0.06	0.12	0.06
Pre-Marital Birth	-0.57	-27.15	-27.72	-0.01	-0.33	-0.34	-0.13	-26.23	-26.36
Children with Post-Secondary	14.44	---	14.44	0.12	---	0.12	3.22	---	3.22
Biological Children	0.40	---	0.40	0.00	---	0.00	0.08	---	0.08
Daughters	-0.74	---	-0.74	-0.01	---	-0.01	-0.16	---	-0.16
Educational Expenditures	---	1.05	1.05	---	0.01	0.01	---	0.18	0.18
<i>Household Demographics</i>									
Average Age	-0.13	8.20	8.07	0.00	0.21	0.21	-0.03	4.94	4.91
Single Male	1.65	-47.36	-45.70	0.01	-0.20	-0.19	0.36	-72.68	-72.32
Single Female	-0.50	-49.29	-49.79	-0.01	-1.22	-1.23	-0.13	-53.41	-53.53
Previously Divorced	-2.80	-49.67	-52.47	-0.02	-0.46	-0.48	-0.63	-40.30	-40.92
Black	-0.89	-69.73	-70.61	-0.01	-2.59	-2.60	-0.19	-33.09	-33.27
Hispanic	1.85	-62.94	-61.09	0.02	-2.06	-2.05	0.42	-49.08	-48.66
<i>Household Resources</i>									
Years of Education	0.94	10.31	11.26	0.01	0.26	0.27	0.21	4.85	5.06
Household Income	---	1.31	1.31	---	0.02	0.02	---	0.38	0.38
Currently Retired	---	68.32	68.32	---	-0.11	-0.11	---	11.06	11.06
Occupational SEI	0.10	0.99	1.09	0.00	0.02	0.02	0.02	0.30	0.32
Self-Employed	---	161.19	161.19	---	-0.26	-0.26	---	19.14	19.14
<i>Family Background</i>									
Amount of Inheritance	0.10	6.12	6.23	0.00	0.10	0.10	0.02	2.38	2.41
<i>Life-Style</i>									
Conservative Protestant	0.12	-41.71	-41.59	0.00	-0.93	-0.93	0.04	-14.82	-14.78
Catholic	0.07	-0.14	-0.07	0.00	0.11	0.11	0.03	9.89	9.93
Other/No Religious Affiliation	-1.86	-11.92	-13.78	-0.02	-0.44	-0.45	-0.43	-1.15	-1.57
Religious Attendance	1.00	11.99	12.99	0.01	0.46	0.47	0.23	4.26	4.49
Region--Midwest	1.21	4.02	5.23	0.01	0.52	0.53	0.27	-24.22	-23.95
Region--South	2.56	-6.79	-4.23	0.02	-0.03	0.00	0.58	-24.33	-23.75
Region--West	-5.53	49.69	44.16	-0.05	0.85	0.80	-1.24	13.69	12.45
Rural	-1.35	14.41	13.07	-0.01	0.20	0.19	-0.30	-7.90	-8.21

**Table 5.5: Indirect, Direct, and Total Effects**

## **CHAPTER 6**

### **RACIAL DIFFERENCES IN INTERGENERATIONAL TRANSFERS AND THE ACCUMULATION OF WEALTH**

#### **Introduction**

The ability to maintain financial independence over the life course is increasingly challenged as a result of forced early retirement, unexpected medical costs, the loss of expected pensions due to the mismanagement of corporate funds, or simply living longer than expected. Households with wealth are in a position to endure these events without experiencing financial ruin. The disparity between households with wealth and those without has been steadily increasing. In addition, empirical research has shown that the gap between White and Black households has increased over the last 10 years. Since the vast majority of transfers to baby boomers will occur only in White households the gap is expected to continue to increase. In this chapter, I focus on racial differences in the accumulation of wealth. Paying particular attention to the importance of children and intergenerational exchanges I extend previous research which focuses primarily on racial differences in human capital, earnings, and consumption and savings patterns.

Results in chapter four suggest that having had children as compared to not has modest positive effects on net worth and substantial positive effects on housing net worth. Even though having four or more children as compared to none negatively affects

financial assets the majority of households with children experience no negative effects resulting from children. Will these relationships remain when black, Hispanic, and White households are examined separately? Isn't it possible that the negative effect of a premarital birth or having five or more children varies in racial and ethnic communities?

The finding in chapter five that there are no racial differences in educational expenditures, supports previous research which concludes that controlling for human and financial capital, there are no racial differences in intergenerational exchange patterns. However, the relative cost of these exchanges has not been considered. For example, does the previously found positive effect of educational expenditures vary across Black, White, and Hispanic households? In the average Black household with more limited financial resources than the average White it is reasonable to think that the financial costs associated educational expenditures will be greater. On the other hand, maybe the previously found positive effect of educational expenditures on net worth will be enhanced.

In this chapter I try to answer three questions. First, are black and Hispanic households less likely to own particular assets in comparison to white households? Second, do the effects of number, timing and spacing of children affect wealth (net worth, financial assets, housing net worth) differently among Black, White, and Hispanic households? Third, do educational expenditures among parents affect wealth differently across these same households? This chapter first reviews the structural explanations used to understand the differences in wealth between White, Black, and Hispanic households. Next, I review the individual level factors that are attributed to producing the wealth gap paying particular attention to the previously neglected effect of the timing, spacing, and

costs of raising children. After providing descriptive data for the three groups, I use logistic regression to determine the likelihood of asset ownership. Then I use the multiple group comparison technique for structural equation models to examine differences in the effects of the indicators across the three groups.

### **Comparisons across White, Black, and Hispanic Households**

For a variety of reasons the wealth gap between white and black households has received more attention than the wealth gap between other racial and ethnic groups. However, there is evidence that the wealth gap between Asian and white households is smaller than the gap between Hispanic and white and black and white (Campbell and Kaufman 2000). In this chapter I suggest that one possible explanation for the racial gap is the differential effect of having children and investments in children's education on wealth.

#### *The Wealth Gap*

A great deal of attention on wealth inequality has focused on the large gap between Black and White families (Avery and Rendall 2002; Blau and Graham 1990; Conley 1999; Oliver and Shapiro 1995). A recent estimate based on the 1998 Survey of Consumer Finance found that the median net worth of white households (at ages 51-55) is \$156,550 while for Black and Hispanic households it is \$33,170 (Scholz and Levine 2002). Since the experience for other groups, such as Hispanics and Asians, does not mirror that of African Americans researchers have begun to consider differences in

wealth outcomes for these unique groups (Campbell and Kaufman 2000). Unfortunately though, most data used to describe changes in the wealth gap focuses on black-white differences.

It has been speculated that between 1900 and 1980 a decline occurred in the ratio of disparity between black and white wealth (Wolff 1995). This was due in large part to the extremely low starting point of Black households at the turn of the century. Based on state auditor's reports in six Southern states it is estimated that the median black to white ratio between the Civil War and World War I was 5.8 cents of black wealth to each dollar of white wealth (Margo 1984). Using some of the earliest national wealth data Wolff concluded that in 1962 the ratio of nonwhite to white mean wealth was .12 and by 1983 it had risen to .24. Research examining trends in the 80s and 90s show no clear patterns with respect to the wealth gap between black and white households.

While some suggest there has been an increase in racial disparities resulting from the increased disparities in earnings between blacks and whites others have suggested minority wealth acquisition is keeping pace with that of whites. However, many forecast that the expected transfer of financial resources to baby boomers (1945-1964) will substantially increase the racial gap (Avery and Rendall 2002). Researchers have relied on explanations that focus on disparities in educational attainment, earnings, and types of occupations, intergenerational transfers, portfolio allocation, state policies, and even political influence to identify the cause of the observed difference (see Scholz and Levine 2003 for a review). Generally speaking the results have been mixed regarding the relative importance of these factors. Before discussing the causes of the wealth gap I would like to briefly discuss the gap itself.

Net worth is most broadly defined as the amount of assets minus debt (Juster, Smith, Stafford 1999). The ways in which assets and debts are defined however influences the degree of disparity found between white and nonwhite Americans. The single most important component of wealth for most Americans is their home. While home equity accounted for 43 percent of net worth of white households it was 63 percent of black net worth (Oliver and Shapiro 1995: 106). A substantial body of research has shown that this disparity is the result of differences in the likelihood of ownership and value of the home. Controlling for human capital and economic resources, blacks are less likely to own homes than are whites and comparable homes are found to have a lower value (Collins and Margo 1999; Jackman and Jackman 1980). While the disparity between equivalent white and Hispanic households is less, there is evidence that Hispanic households, particularly non-native ones, are less likely to own homes and have an overall lower value (Krivo 1995; Flippen 2001).

While differences in housing net worth are an important component of differences in total net worth, differences in financial assets are as important or possibly more important in explaining racial and ethnic wealth gaps (Blau and Graham 1999; Keister 2000). Among the top one percent of households in 1995, only six percent of their wealth was located in their primary residence while 30 percent was held in stocks and bonds. Only five percent of the top one percent of wealth holders are minorities (1 percent Black and 4 percent Asian) (Keister 2000: 93, 96). Investing in high-risk and high-payoff opportunities as opposed to more conservative ones has been shown to result in a faster accumulation of financial rewards over the long-term (Wolff 1995).



Keister (2000) found that Black households were significantly less likely to own the riskiest assets, such as stocks and bonds, while there was no substantial racial difference in the likelihood of owning low-risk investments, such as savings accounts and life insurance policies. Blau and Graham (1990) also found that black households were less likely than whites to have liquid savings or business assets than savings in cars or their homes. Understanding the degree to which differences in portfolio allocation and the wealth gap can be attributed to differences in opportunities, abilities, behaviors, and motivations is critical if as a society we seek to adopt policies that create a level playing field.

### *Structural Explanations*

The wealth gap between minority and non-minority households in the United States has been attributed to structural and individual factors. While individual factors can be applied universally to all groups, structural arguments tend to focus on the unique experience of the racial or ethnic group. For example, differences in home values between minority and non-minority households are often attributed to residential segregation. However, the reasons for residential segregation will vary between African American and Hispanic households. I briefly review research that focused primarily on structural explanations for the black-white wealth gap.

Clearly the most well developed structural argument for the black-white wealth gap were put forward by Oliver and Shapiro (1995) who developed three concepts with which to situate investment opportunities: the racialization of the state, the economic detour, and the sedimentation of racial inequality. The racialization of the state draws

attention to the historical and contemporary state policies that differentially affect white and black households' attempts to accumulate wealth. For example, they argue that the development of low-interest, long-term mortgages which funneled loans away from the central city and to the suburbs helped produce segregated housing in post-World War II America (Oliver and Shapiro 1995: 37).<sup>24</sup> Differential access to various types of loans and interest rates continue to shape the contemporary housing market for African Americans (Collins and Margo 1999).

Another example of state policies that are more likely to negatively affect black households are those that force families to spend down their assets prior to gaining access to state sponsored programs (Beverly, McBride, Schreiner 2003; Beverly and Sherraden 1999; Sherraden 1991). "The result is that AFDC has become for many women, especially African American women, a state-sponsored policy to encourage and maintain asset poverty" (Oliver and Shapiro 1995: 42). Finally, some state policies, in particular tax codes, actually benefit the wealthy at the expense of those without assets. The best example is clearly the home mortgage interest deduction. Not only does this deduction result in a substantial return for most home owners it also encourages home owners to itemize their taxes. Since African Americans are less likely to own homes, generally own homes of a lower value than whites, and are possibly less likely to itemize their taxes the size of the benefit from this deduction is on average less for blacks than for whites.

The second concept used by Oliver and Shapiro to understand structural differences is self-employment as an economic detour. While the entrepreneurial spirit is heralded as one of the best paths for economic gains this is not the case for African

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<sup>24</sup> Evidence by Collins and Margo (2002) offers an alternative interpretation of the effect of FHA-VA policies on rates of black housing ownership and home values.

Americans. Even though self-employment has benefited other minority immigrant groups the way in which self-employment was undertaken in the black community has not had the same effect. This can be attributed in large part to the historical segregation of black businesses within certain industries and a much smaller consumer base. While insulation has helped a number of immigrant groups' attempts at self-employment it actually negatively affected the black community. In the few examples where the black community was able to support a sizeable self-owned business community the white community, in particular competing business groups, would actively harass and in some cases destroy successful black owned and operated companies. In addition while the White community was willing to sell to and hire from the black community they were not willing to frequent their establishments. As a result the wealth that often results from self-employment has not been available in the black community.

Finally, the sedimentation of racial inequality is used to understand how institutional and organizational segregation and discrimination has limited African Americans opportunities to accumulate wealth. Even after segregation officially ended de facto segregation has limited African Americans opportunities to invest in their children's education, gain access to well paying, benefited, and secure jobs, and to invest in their neighborhoods and larger communities. In addition, the fact that wealth can and is passed on to future generations must be considered. The fact that earlier generations of African Americans have generally not been able to pass on wealth to their children and grandchildren is the final example of how the sedimentation of racial inequality affects the current accumulation of wealth of African Americans. What is interesting about this

final structural concept used by Oliver and Shapiro is that it is based on individual level differences yet these differences aggregated to the group level affect overall trends in wealth accumulation.

### *Individual Level Explanations*

Most of the attention regarding racial and ethnic differences in wealth has focused on differences in education, labor income, inheritances, savings patterns, and consumption. While family structure, family background, kinship support, and health have also been hypothesized to affect wealth they have received little empirical attention. My contribution to this literature will be to consider if children and intergenerational transfers differentially explain wealth among white, black, and Hispanic households.

Children's effect on the accumulation of assets is complicated to say the least. Based on a representative sample of households Keister (2000) found that the number of children under 18 in the household did not significantly affect ownership of 5 out of 7 components of net worth. Yet she did find a negative effect on ownership of cash accounts and a home. Basing their data on households where the primary respondent was between the ages of 24 to 34, Blau and Graham (1990) found that the number of children positively affected total wealth and equity in homes for both white and black households. Since no research has previously considered the long-term effect of having children I base my hypotheses from findings in Chapter four. I expect having two children as compared to none will positively affect net worth for all groups. I expect having four or more children will negatively affect financial assets while having four or fewer children

will positively affect housing net worth. I expect having had a premarital birth will negatively affect net worth and housing net worth. I also expect time since dependency to positively affect net worth and financial assets.

Research on wealth generally studies intergenerational transfers from the perspective of the recipient and are defined as the recipient having received an inter-vivo transfer (economic exchange between living persons) or an inheritance. Prior research has considered the effects of such transfers at an early stage in the adult life course (twenties and thirties) as well as later in the life course (approaching retirement). Generally, researchers conclude that these types of transfers positively affect the recipient's accumulation of wealth. There is also evidence though that receiving or anticipating an intergenerational transfer negatively affects the personal savings rate of the recipient.

What has generally been ignored is that intergenerational transfers can also be studied from the perspective of the donor. For example, does providing a child with a down payment negatively affect the economic well-being of the parent compared to parents who do not engage in such transfers? Have these parents compromised their financial situation as a result or had the parents previously saved enough to be able to give the gift while maintaining their financial position? Findings in the previous chapter showed that educational expenditures positively affected net worth and housing net worth but not financial assets. Therefore I expect to find that educational expenditures will positively affect net worth and housing net worth among all three groups.

Since this chapter considers the effects of individual level variables separately for the three groups I will focus my discussion on possible differences in the effects of household demographic characteristics, resources, family background, and life-style across the groups. With respect to demographic characteristics I do not expect to find differences in the effects of age or current marital status. I do expect that the coefficient for previously divorced will be larger in white households than black or Hispanic. This difference is expected to result from differences in the level of wealth prior to the divorce among the households. Since white households at all stages of the life course have accumulated more wealth the loss of wealth resulting from a divorce will be more dramatic compared to Black and Hispanic households. In terms of household resources, I do not expect to find differences in the effects of the variables with the exception of self-employment status. I expect self-employment to have a much larger effect in White and Hispanic households than Black. Among the family background and life-style variables I do not expect differences in the effects.

### **Data, Variable Construction, and Methods**

The data are drawn from the first wave (1992) of the *Health and Retirement Study* (HRS). The HRS is a nationally representative longitudinal sample of persons born between 1931 and 1941. Analyses presented in this chapter are based on both the full (N=7,332) and restricted (N=3,968) samples. Descriptive statistics for the two samples are provided in Tables 3.1 and 3.2 respectively.

## Variable Construction

Given the highly skewed nature of net worth, *household net worth* is measured as the square root of the difference between the sum of total assets and the value of total debts.<sup>25</sup> Total assets are calculated as the sum value of all real assets (including primary residence, business, farm, real estate investments, and vehicles) and financial assets (including stocks and mutual funds; IRA and Keogh accounts; Certificates of Deposit, government bonds, T-bills; bonds and bond funds; checking and savings accounts). Total debts are calculated as the sum of *housing debt* (including home mortgages and equity loans) and financial debt (including credit card, medical bills, loans from relatives). *Housing net worth* is measured as the square root of the net value of the respondent's primary residence. *Financial assets* are the logged net value of all financial assets in 1991. *Educational Expenditures* is the sum of all educational expenditures for all children and is measured in nominal dollars.

The exogenous variables have been divided into five groups: (1) characteristics of children (2) household demographic characteristics (3) household resources (4) family background and (5) life-style. The *number of children* is measured as an ordinal variable with 6 categories ranging from 0 to 5 where 5 denotes five or more children. Among couples, children include both those that are shared by the couple (biological and adopted) and those "related" to only one person in a couple. Among single persons, children include all those identified as such by the respondent, regardless of biological relationship. *Time since dependency* is measured by the number of years since the

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<sup>25</sup> I use the wealth variables already constructed in the RAND HRS data file rather than recreating these same variables from the 1992 HRS data file. The advantage to using the RAND HRS constructed wealth variables is two-fold. First, there is less missing data and second differences in data collection across waves have been addressed (RAND 2002).

parents were no longer financially supporting the youngest child. *Pre-marital birth* is a dichotomous variable where “1” indicates the oldest child’s age is greater than the number of years married among couples married only once. All other households are coded as “0.”<sup>26</sup>

The variable *children with post-secondary* education denotes the proportion of children that completed post-secondary education- in other words, the total number of children having completed either a two or four year degree program divided by the total number of children. The variables *biological children* and *daughters* represent the proportion of children that are biologically related to both parents and the proportion of children that are daughters (as compared to sons). An overview of the measurement of additional exogenous variables is provided in Table 3.3 and a description is provided in Chapter 3 as well.

## ***Methods***

Previous research focusing on wealth differences between racial and ethnic groups has used a variety of approaches to understand differences in the accumulation process. The most common method is to include race as a variable in the model and examine the race coefficient to determine if race matters (Keister 2000). A second approach is the decomposition of effects by race. The third approach as exemplified by Blau and Graham (1990) who run separate regression models and examine differences in the significance and direction of effects. The approach used here is multiple group

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<sup>26</sup> Unfortunately, I am not able to discern nonmarital births for persons who are currently single or remarried. Therefore, this measure represents a very conservative approach.



analysis which is routinely used in structural equation modeling. I continue to use full information maximum likelihood to estimate missing values available through the AMOS statistical program.

This analysis begins with a review of basic differences in the rates of asset ownership among households. I then use logistic regression to model the likelihood that households own seven assets. Next, I use the models developed in Chapter four to determine if there are group differences in the effects of having children among white, black, and Hispanic households. After that I use the models developed in Chapter five to determine if the effect of educational expenditures on net worth, financial assets, and housing net worth varies among households.

## **Results**

### *Differences in Asset Ownership*

In Table 6.1 I provide separate descriptive statistics of asset ownership for three types of white, black, and Hispanic households. Households are distinguished as those that never had children, those currently supporting children (dependent children), and those who previously supported children (independent children). Since dependent children have been found to depress savings and I assume parents with dependent children will be less likely to own riskier assets (stocks and bonds) I distinguish households with dependent and independent children. However the importance of this distinction will need to be examined.

The racial gap between white and non-white households in overall net worth is evident among all three types of households. For example, \$95,000 separates the median net worth of white and black households without children and \$86,000 separates white and Hispanic households. Interestingly though the gap between white and non-white households is slightly smaller among households with dependent and independent children. Another important racial difference is the percent of households with no or negative net worth. While 33% of black households without children have no net assets or more debt than assets only 7% of white households are in the same position. Having children not only appears to increase the net worth for all households regardless of race or ethnicity but also decreases the likelihood of having no assets.

A large gap can also be found between white and non-white households in the likelihood of owning a home and the average value of the home for all three types of households. What is interesting though is that while a similar proportion of black and Hispanic households own a home the average value of Hispanic households is substantially higher than black households. Taking into consideration that many of the households examined here have owned their homes for an extended period of time the difference between black and Hispanic average values could be the result of two factors. First, it might indicate that property values for homes owned by Hispanic families have increased at a higher rate than those owned by black families. An alternative explanation

might be difference in the terms of the mortgage used to finance the home. If Hispanic households are less likely to use the secondary market for home mortgages they may be able to pay off their loans at a faster rate.<sup>27</sup>

For all three racial groups, having children increases the likelihood of owning a home yet having children appears to decrease the average value of the home. When we examine the difference between average net worth of homes for all households versus the average value among home owners an important distinction emerges. Among home owners, the average value of a home is highest among households without children. While the difference between white households without children and with dependent children is only around \$1,500 there is a substantial difference between black (\$9,500) households without and with dependent children and Hispanic households (25,000). Using the median values of homes rather than the mean results in the same substantive conclusions however the difference in values is much smaller.

Wealth assets are often distinguished according to their level of risk with stocks, bonds, and IRAs classified among the riskier assets while CDs, checking accounts, and cars are among the least risky. With respect to the riskiest investment option, stocks, there is clear evidence that black and Hispanic households are less likely to invest in the stock market or to have the resources to invest. There is also evidence that children do not affect the likelihood of ownership but they do affect the average values among stock owners. For example white households without children have stocks valued at \$89,500

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<sup>27</sup> Mortgage lenders can be distinguished by those that offer a competitive interest rate with no penalties for early pay-offs versus those that offer higher interest rates to high-risk borrowers. Since black households are more likely to be high-risk borrowers or are more likely to purchase high-risk properties they are more likely to have to use secondary mortgage lenders. Some have speculated that it is because black households obtain mortgages from secondary lenders that they do not accrue the same benefits from home ownership that other minority groups have (Oliver and Shapiro 1995).

on average while white households with dependent children have \$76,700 and households with independent children have \$64,301. In comparison Hispanic and black households without children also have the highest average levels of ownership of stock but households with dependent children rather than independent have the lowest ownership values. Findings for black and especially Hispanic households should be treated with caution due to the small number of households actually being evaluated. For example there are only 19 Hispanic households with independent children that own stocks.

I find similar ownership patterns in values with respect to bonds and CDs that I found with stocks. Children do not substantially change the likelihood of investing in these types of assets but they do affect the average values. Racial differences in the likelihood of ownership and average values also persist. One interesting difference though is that white households with independent children actually have higher average values of CDs than those with dependent children. Of the three assets, stocks, bonds, and CDs this is the only one where households with independent children have a higher average value than households with dependent children.

Shifting our attention to IRAs we consider a different aspect of wealth ownership. Since a substantial portion of contributions to IRA's and Keogh accounts come from company contributions the value of an IRA reflects more than the individual's rate of savings it also reflects access to benefits available to only a proportion of the labor force. While the racial disparity in the percent of households owing an IRA is as expected the

average values among owners in the three types of households do not reflect the typical racial pattern. In order to make sense of these findings I will first review characteristics of the entire sample.

On average 38% of all households studied here have an IRA with 48% of white households having one, 13% of black and 12% of Hispanic households (not presented in tables). White households with an IRA have on average \$64,000 (\$24,000 median) while black households have \$46,000 (\$15,000) and Hispanic households have \$56,000 (\$11,500). Clearly white households are more likely than non-white households to have IRAs and have accumulated more money. Moving to differences among household types we first notice that among IRA owners without children non-white households have higher values on average than white households. However, the median value for all three groups is the same (\$20,000). The patterns among households with dependent and independent children do not vary based on using the mean or median values of IRA.

Even among the most conservative assets, checking accounts and car ownership, I find substantial racial differences in the rates of ownership and average and median values. Unlike other assets children appear to substantially increase the likelihood of owning a car and using a checking account. While children have little effect on owning a checking account among white and Hispanic households they increase the likelihood among black households. Children increase the likelihood of owning a car for all three racial groups.

Among all households, owning a car was the most common asset (88%) followed closely behind by checking accounts (78%) and homes (76%). The asset the least likely to be owned is bonds (10%). Based on the findings it is clear that there are substantial

racial differences in rates of ownership and average values. While the effect of children on the likelihood of owning assets does not vary tremendously among racial and ethnic groups it does affect the average values. Black and Hispanic households no longer supporting children tend to have higher average values compared to households with dependent children while the reverse is true in white households.

I next determine if the effects of race on asset ownership remain after controlling for household characteristics. I also consider if the effects of having children matter for asset ownership. Table 6.2 presents coefficient estimates from logistic regression equations. Each model includes controls for the household characteristics reviewed in the earlier chapters. For simplicity I only present the odds ratio and significance levels.

In all models the estimates indicate that black households were significantly less likely than white households to own all seven assets. This finding supports and contradicts previous research by Keister (2000) which found black-white differences in ownership of riskier assets but not in ownership of low-risk investments, like cash accounts. The difference in results might be attributed to the higher average age of the sample used in this analysis compared to the one used by Keister (2000).

I also find that Hispanic households are significantly less likely to own 6 of these assets with the exception being home ownership. To my knowledge this is the first time differences in asset allocation between white and Hispanic households have been considered. Interestingly Hispanic households are approximately 68% less likely than white households to own stocks, bonds, IRAs, and checking accounts. They are only 42% less likely to own CDs and 55% less likely to own cars.

Building on the findings of Campbell and Kaufman I also included controls inter-mixed marriages and immigrant status. I find that inter-mixed marriages increase the likelihood of stockownership substantially. I also find that immigrants are less likely to own homes, CDs, and cars.

The findings presented here indicate that having had children positively affects the likelihood of owning a home and owning a car. Having three or more children as compared to none negatively affects the likelihood of owning bonds and CDs. Having had children does not significantly affect ownership of stocks, IRAs, or cash accounts. Since I expected children to decrease the likelihood of owning the riskiest stocks these findings are unexpected. It appears that having had children does not deter households from investing in the stock market.

There is also evidence that the timing and spacing of children affect the likelihood of ownership. In fact households that had a premarital birth are 34% less likely to own a home, 26% less likely to own stocks, 25% less likely to own CDs, and 35% less likely to have IRAs. The time since parents stopped supporting children does not affect the likelihood of asset ownership with one exception. Each additional year increases the likelihood of having cash accounts. For the first time the spacing of children appears to matter. Each additional year between the oldest and youngest child decreases the likelihood of having an IRA by 2%. So households with 5 years separating their oldest and youngest child are 10% less likely to own an IRA.

The effects of other household characteristics on the likelihood of ownership are generally as expected. Age positively affects asset ownership. Being single as compared to married decreases the likelihood of ownership. Having been previously divorced

decreases the likelihood of owning a home and having an IRA. Having been previously widowed increases the likelihood of owning bonds and CDs. Education and income have positive significant effects on all types of ownership while years in the labor force and occupational status positively affect certain types of ownership, such as IRAS.

Not unexpectedly inheritances significantly increase the likelihood of owning 6 of the 7 assets while number of living siblings has no significant effects. Conservative Protestants are less likely than mainline Protestants to own all four types of risky investments (stocks, bonds, CDs, IRAS). Catholics are 20% less likely to own their own home than mainline Protestants but there are no other significant differences. Religious attendance increases the likelihood of owning 5 of the 7 assets. These results support findings by Keister (2003) that examined the effect of religious affiliation and attendance on a substantially younger sample of households.

### *Modeling Group Differences*

In the following sections I test for possible group differences in the effects of household characteristics on wealth outcomes. I use the models developed in chapters 4 and 5 to focus on the effects of having children as compared to not and the effects of educational expenditures. Table 6.3 presents maximum likelihood estimates separately for white, black, and Hispanic households based on the full sample (includes households without children). Overall the model seems to operate in a similar fashion for white, black, and Hispanic households (see the final column labeled “z (for difference in effects)” in Table 6.3). Out of a total of 30 effects only six differ significantly between white and black households, 10 between white and Hispanic households, and 5 between



black and Hispanic households. None of these differences in effects pertain to the number, timing, or spacing of children. In other words, the effects of fertility on wealth do not vary by race or ethnicity. The greatest divergence in effects is for household resources between white and black and Hispanic households.

The advantage associated with education is significantly less for Hispanic households than white households. The advantage associated with household income is significantly less for black and Hispanic households compared to white. Retired black and Hispanic households have significantly less wealth. Years in the labor force only negatively affects net worth in white households. Interestingly there are no differences in the effects of occupational status on wealth. Self-employed white households have significantly more wealth than self-employed black and Hispanic households. In addition, self-employed Hispanic households are better off than self-employed black households confirming Oliver and Shapiro's argument that the benefits associated with self-employment are not as great in the black community.

Turning our attention to differences among parents, Table 6.4 presents the estimates for the effect of investment in children's education on net worth for white, black, and Hispanic households separately. Panel A provides the coefficients for the effects of household characteristics on educational expenditures and Panel B provides the coefficients for the effects of household characteristics on net worth. The overall model seems to operate in a similar fashion again for white, black, and Hispanic households. Out of forty-seven estimates only eight are significantly different between white and black households, four between white and Hispanic households, and six between black and Hispanic households.

Among the children's characteristics only the effect of pre-marital birth on educational expenditures differs significantly between white and Hispanic households. Surprisingly having had a pre-marital birth positively affects educational expenditures among Hispanic households. Another interesting difference between Hispanic and white and black households is the substantial negative effect for single men. This finding suggests that divorced Hispanic men are either less inclined or less financially able to invest in their children's education. While each additional year of education positively affects investments among white and Hispanic households it does not significantly affect investments in children's education in Black households. On the other hand, religious attendance is a more important predictor of positive investments in Black households as compared to white and Hispanic households.

Among the effects of children's characteristics on net worth only educational expenditures differs significantly among white, black, and Hispanic households. The positive effect of investing in children's education is more pronounced in white and Hispanic households as compared to black households. There are a substantial number of differences in the effects of household resources again between white and black households.

## **Discussion and Conclusion**

The purpose of this chapter was twofold. First, I wanted to evaluate racial differences in asset ownership among households late in the asset accumulation cycle. Unfortunately, black households were less likely to own all seven types of high and low risk assets. This finding does not bode well for their financial security as they approach

retirement and is further evidence that black households are less likely to financially be in a position to retire. Even though there were no differences in the likelihood of home ownership between white and Hispanic households, Hispanic households were less likely to own the other six assets. Since home ownership is often the first stage in accumulating wealth this finding is somewhat encouraging. On the other hand, it is unlikely that home equity can be used to cover additional expenses not met through income received after retirement. As a result the economic position of Hispanic households is only slightly more secure than black households as they age.

I also found strong evidence that children positively affect ownership of homes and cars. Among financial assets, I found little evidence that children affect the likelihood of ownership of assets such as, stocks and IRAs. Having three or more children did negatively affect the likelihood of owing bonds and CDs. These findings support the conclusions in previous chapters that the number of children differentially affects asset ownership.

Determining if children or investments in their education differentially affected white, black, and Hispanic households was the second goal of this chapter. Among households with and without children I found no significant differences in the effects of number on children on net worth. In addition, there were no differences in the effects of the timing or spacing of children. On the contrary, among households with children, I found that while there were significant advantages associated with educational expenditures for white and Hispanic households this was not the case for black households. Why would black households be less likely than white or Hispanic households to receive a benefit from educational expenditures?

I attribute this finding to the lower home ownership rates of black households. If you recall in chapter five, while there was a positive effect of educational expenditures on overall net worth and housing net worth there was not a significant effect on financial assets. This finding suggested that after paying for children's education households redirected resources into their homes. Since African Americans are less likely to own a home they are less likely to be able to redirect these resources into their homes.

Another important contribution of the findings presented here is the opportunity to determine if the effects of other household characteristics differ by race or ethnicity. There is strong evidence that the importance of household resources, in particular household income, self-employment, and retirement status differ for the three groups in determining wealth outcomes. On the contrary the effects of education and occupational status are generally the same for the three groups. Taken together these findings suggest that the effects of education and occupation work in a similar manner while self-employment, household income, and years in the labor force do not. Oliver and Shapiro have already offered an explanation for why self-employment does not produce the same returns in the African American community that it does in the white but we need to further explore these differences.

Not only have I shown that the effects differ between white and black and white and Hispanic households but also between black and Hispanic households. This further indicates that grouping all non-white individuals together can misrepresent reality. Some of the more intriguing differences between black and Hispanic households are the regional differences in effects. For example, among all households Hispanic households are at an advantage compared to black households in the West and South but they are at a

disadvantage in rural areas. While making sense of these differences is beyond the scope of this research I believe it could be attributed to regional differences in access to housing markets, employment opportunities, and ethnic groups experiencing less institutional prejudice in access to financial services.

	No Children			Dependent Children			Independent Children			Total
	White	Black	Hispanic	White	Black	Hispanic	White	Black	Hispanic	
Number of Cases	484	131	81	1760	528	376	2903	758	307	7328
Net Worth (Median)	105050.00	10000.00	19000.00	116250.00	28400.00	32700.00	116000.00	24600.00	26000.00	81000.00
Percent with None or Negative	0.07	0.33	0.23	0.04	0.21	0.14	0.05	0.24	0.22	0.10
Percent Owning Home	0.70	0.47	0.44	0.87	0.62	0.64	0.84	0.60	0.59	0.76
Value Owning (Mean)	87341.52	57311.44	86136.11	85668.54	47744.39	60863.19	79569.42	46472.25	66495.97	75743.31
Value Owning (Median)	60000.00	45500.00	50000.00	62000.00	37000.00	46000.00	60000.00	37000.00	45000.00	55000.00
Percent Owning Stock	0.36	0.08	0.07	0.36	0.09	0.09	0.32	0.09	0.06	0.26
Value Owning (Mean)	89519.37	49746.10	74696.67	76741.20	35287.96	44187.50	64301.99	38680.83	63138.24	68676.06
Value Owning (Median)	20000.00	20430.50	59000.00	20000.00	10000.00	25000.00	20000.00	10000.00	15000.00	20000.00
Percent Owning Bonds	0.11	0.00	0.02	0.09	0.01	0.01	0.07	0.02	0.02	0.06
Value Owning (Mean)	49137.47	---	330000.00	53431.79	8570.20	17533.33	41051.96	5415.46	25110.00	45978.18
Value Owning (Median)	13000.00	---	330000.00	15000.00	2000.00	7000.00	12000.00	4000.00	10000.00	12000.00
Percent Owning IRA and Keoghs	0.48	0.13	0.10	0.49	0.16	0.11	0.47	0.12	0.14	0.38
Value Owning (Mean)	51294.35	77132.11	87937.50	66229.96	27533.13	53059.79	64094.71	56821.02	52255.29	62135.20
Value Owning (Median)	20000.00	20000.00	20000.00	20000.00	12000.00	17600.00	25000.00	15500.00	10000.00	21000.00
Percent Owning CDs	0.33	0.12	0.10	0.30	0.14	0.09	0.31	0.13	0.08	0.25
Value Owning (Mean)	35223.43	11644.98	28150.00	23846.79	8550.55	14629.85	29955.76	9745.44	19389.55	26159.28
Value Owning (Median)	10000.00	5500.00	19000.00	7000.00	5000.00	5000.00	10000.00	5000.00	11250.00	8000.00
Percent Owning a Cash Account	0.87	0.49	0.53	0.89	0.60	0.49	0.88	0.54	0.50	0.78
Value Owning (Mean)	21429.38	13785.69	13815.35	18227.11	9672.68	8215.69	17719.13	8862.31	10108.64	16459.78
Value Owning (Median)	6000.00	5000.00	5000.00	5000.00	3000.00	2000.00	6000.00	2000.00	4000.00	5000.00
Percent Owning a Car	0.88	0.53	0.64	0.97	0.75	0.84	0.95	0.64	0.74	0.88
Value Owning (Mean)	16173.67	13070.65	7821.59	17071.10	10319.09	10138.98	15991.98	10832.88	10833.06	14985.28
Value Owning (Median)	8000.00	9000.00	3000.00	10000.00	7000.00	5000.00	10000.00	6000.00	6000.00	9000.00

**Table 6.1: Descriptive Statistics of Asset Ownership, 1992 (N=7,328)**

	House		Stock		Bond		CD		IRA		Transportation		Checking	
	Exp(B)		Exp(B)		Exp(B)		Exp(B)		Exp(B)		Exp(B)		Exp(B)	
Black	0.55	***	0.37	***	0.40	**	0.64	***	0.32	***	0.20	***	0.34	***
Hispanic	0.84		0.32	***	0.32	*	0.58	**	0.33	***	0.45	***	0.33	***
Inter-Mixed	0.97		1.97	*	1.97		1.21		1.19		1.44		1.12	
Immigrant Status	0.74	*	0.85		1.11		0.59	***	0.94		0.65	*	0.83	
One Child	1.81	***	1.01		0.73		0.86		1.02		2.04	**	0.79	
Two Children	1.83	***	1.08		0.75		0.96		1.22		1.94	**	0.81	
Three Children	1.76	***	0.97		0.58	^	0.71	*	1.16		1.77	*	0.77	
Four Children	2.06	***	0.90		0.53	*	0.75	^	0.93		1.66	*	0.57	**
Five or More Children	1.77	**	0.83		0.44	*	0.54	***	0.89		1.38		0.52	**
Time Since Dependency	1.00		1.01		1.02		1.01		1.01		0.99		1.03	*
Pre-Marital Birth	0.66	**	0.74	^	0.98		0.75	^	0.65	**	0.82		1.01	
Age Difference Between Siblings	1.00		0.99		1.00		1.00		0.98	*	1.01		1.01	

Continued

Table 6.2: Logistic Regression of Asset Ownership, 1992 (N=6,299)

Table 6.2 Continued

	House		Stock		Bond		CD		IRA		Transportation		Checking	
	Exp(B)		Exp(B)		Exp(B)		Exp(B)		Exp(B)		Exp(B)		Exp(B)	
Average Age	1.05	***	1.04	***	1.07	***	1.03	***	1.07	***	1.02		1.04	***
Single Male	0.20	***	0.83		0.95		0.63	***	0.63	***	0.28	***	0.41	***
Single Female	0.39	***	0.65	***	0.67	^	0.64	***	0.68	***	0.16	***	0.71	**
Previously Divorced	0.53	***	0.91		0.90		0.91		0.82	**	1.11		1.03	
Previously Widowed	1.08		1.07		1.51	*	1.25	*	1.01		1.22		1.01	
Average Years of Education	1.03	^	1.22	***	1.21	***	1.09	***	1.15	***	1.10	***	1.13	***
Household Income	1.01	***	1.01	***	1.01	***	1.00	***	1.01	***	1.01	***	1.01	***
Currently Retired	1.08		1.41	***	1.34		1.00		0.98		0.53	***	0.77	**
Average Years in Labor Force	1.02	***	1.01	^	0.99		1.02	***	1.02	***	1.02	***	1.01	**
Average Occupational SEI	1.01	^	1.01	^	1.02	**	1.00		1.01	***	1.00		1.01	**
Self-Employed	1.45	**	1.24	**	1.22		0.91		1.02		1.10		0.93	
Amount of Inheritance	1.03	*	1.06	***	1.04	**	1.03	***	1.03	**	1.03		1.05	**
Number of Siblings	1.01		1.01		1.01		1.00		1.01		1.00		1.01	
Conservative Protestant	1.03		0.83	^	0.64	*	0.74	***	0.78	**	0.84		0.80	*
Catholic	0.80	*	1.00		0.99		1.00		0.96		0.90		0.96	
Other/No Religious Affiliation	0.73	**	1.07		1.18		0.95		0.86		0.68	^	0.83	
Religious Attendance	1.05		1.10	*	1.16	*	1.05		1.16	***	1.22	***	1.16	***
Region--Midwest	1.49	***	1.16		1.14		1.17	^	1.12		2.26	***	1.15	
Region--South	1.32	**	0.79	*	0.69	*	1.07		0.60	***	2.64	***	0.89	
Region--West	1.07		0.87		0.99		0.71	**	0.89	***	3.44	***	1.13	
Rural	1.53	***	0.84	*	1.18		1.00		0.81	**	1.32	*	0.84	*
-2 Log likelihood	4988.50		5773.51		2195.81		6395.89		6188.32		2681.62		4456.52	
Cox & Snell R Square	0.23		0.22		0.08		0.11		0.30		0.22		0.26	
Nagelkerke R Square	0.35		0.32		0.23		0.16		0.40		0.44		0.41	

^p&lt;.10, \*p&lt;.05, \*\*p&lt;.01, \*\*\*p&lt;.001



	White Households		Black Households		Hispanic Households		Z (For differences in effects)		
	Estimate	S.E.	Estimate	S.E.	Estimate	S.E.	w/b	w/h	b/h
One Child	1.44	19.47	-11.02	19.10	-4.70	31.35	0.46	-0.17	0.17
Two Children	6.97	15.12	4.38	16.73	-8.55	26.39	0.12	-0.51	-0.41
Three Children	-1.51	14.46	2.86	17.05	32.40	25.34	-0.20	1.16	0.97
Four Children	-17.47	15.05	7.88	17.81	8.43	26.41	-1.09	0.85	0.02
Five or More Children	-26.62	^ 15.26	-25.63	17.26	-9.28	25.62	-0.04	0.58	0.53
Time Since Dependency	2.68	* 1.11	2.25	* 1.15	3.52	2.18	0.27	0.34	0.52
Premarital Birth	-22.13	19.25	-21.35	^ 12.36	-35.76	21.94	-0.03	-0.47	-0.57
Age Difference Between Siblings	-0.66	0.92	0.58	0.84	1.18	1.34	-1.00	1.14	0.38
Average Age	9.88	*** 1.02	4.66	*** 1.11	5.07	** 1.60	3.46*	-2.54*	0.21
Single Male	-28.88	* 13.69	-47.24	*** 13.67	-77.07	** 25.09	0.95	-1.69	-1.04
Single Female	-54.43	*** 11.30	-53.44	*** 11.28	-53.59	** 18.86	-0.06	0.04	-0.08
Previously Divorced	-42.34	*** 8.17	-20.37	* 9.93	-59.20	*** 15.43	-1.71	-0.97	-2.12*
Previously Widowed	25.39	* 11.34	-2.71	11.71	11.12	20.81	1.73	-0.60	0.58
Immigrant Status	22.26	14.86	5.72	17.67	-37.39	** 14.22	0.72	-2.90*	-1.90
Average Years of Education	12.21	*** 1.93	7.98	*** 1.78	5.24	* 2.05	1.61	-2.47*	-1.01
Household Income	1.48	*** 0.05	0.98	*** 0.08	1.09	*** 0.10	5.30*	-3.41*	0.79
Currently Retired	75.88	*** 10.28	21.02	* 10.69	30.91	^ 16.35	3.70*	-2.33*	0.51
Average Years in Labor Force	-1.14	** 0.40	0.43	0.38	0.74	0.59	-2.83*	2.66*	0.46
Average Occupational SEI	1.17	*** 0.35	1.25	** 0.46	2.65	*** 0.74	-0.15	1.80	1.59
Self-Employed	194.81	*** 8.81	86.44	*** 13.95	136.32	*** 19.54	6.57*	-2.73*	2.08*
Amount of Inheritance	5.36	*** 0.88	5.26	* 2.42	1.39	3.16	0.04	-1.21	-0.97
Number of Siblings	0.39	1.35	-0.62	1.14	-0.37	1.58	0.57	-0.36	0.13
Conservative Protestant	-40.69	*** 9.95	-30.51	** 11.19	-15.13	32.51	-0.68	0.75	0.45
Catholic	-11.80	10.11	-50.41	* 20.83	-4.63	26.42	1.67	0.25	1.36
Other/No Religious Affiliation	-0.26	9.79	-43.07	** 14.78	3.06	32.27	2.42*	0.10	1.30
Religious Attendance	15.11	*** 4.00	19.71	*** 5.11	15.03	^ 8.30	-0.71	-0.01	-0.48
Region--Midwest	-14.55	10.57	8.71	12.72	42.33	32.30	-1.41	1.67	0.97
Region--South	-31.80	** 10.66	-7.62	10.92	43.34	* 21.13	-1.59	3.18*	2.14*
Region--West	14.23	12.36	22.47	18.42	78.10	*** 21.27	-0.37	2.60*	1.98*
Rural	18.57	* 7.73	14.09	12.53	-34.58	* 17.41	0.30	-2.79*	-2.27*
Squared Multiple Correlation	0.41		0.41		0.45				

^p<.10, \*p<.05, \*\*p<.01, \*\*\*p<.001

**Table 6.3: ML Estimates of Net Worth and Components of Net Worth Controlling for the Number, Timing, and Spacing of Children**  
(N<sub>White</sub>=5147; N<sub>Black</sub>=1417; N<sub>Hispanic</sub>=764)

	White Households		Black Households		Hispanic Households		Z (For differences in effects)		
	Estimate	S.E.	Estimate	S.E.	Estimate	S.E.	w/b	w/h	b/h
<b>Panel A: Effects on Educational Expenditures</b>									
<i>Children's Characteristics</i>									
Two Children	1765.57	1345.29	-825.71	2212.67	1889.61	3318.13	1.00	0.04	0.68
Three Children	2002.02	1399.25	-3359.93	2399.30	5775.23 ^	3490.00	1.93	1.00	2.16
Four Children	3151.17 *	1558.33	2404.01	2534.46	1422.34	3914.95	0.25	-0.41	-0.21
Five or More Children	3728.80 *	1608.98	1144.54	2422.85	4769.51	3580.23	0.89	0.27	1.33
Pre-Marital Birth	-3310.00	2036.59	-31.06	1816.18	5965.37 *	3034.59	-1.20	2.54*	1.70
Time Since Dependency	-214.92 *	107.52	-498.97 **	174.32	-6.41	256.39	1.39	0.75	1.59
Children with Post-Secondary	13283.41 ***	1075.52	10217.57 ***	1980.08	9018.62 **	3035.69	1.36	-1.32	-0.33
<i>Demographic Characteristics</i>									
Average Age	-92.80	112.53	-64.56	199.01	-391.68	265.38	-0.12	-1.04	-0.99
Single Male	2345.65	1593.41	1255.67	2406.70	-8139.75 *	3772.08	0.38	-2.56*	-2.10*
Single Female	-516.97	1040.96	46.66	1535.27	-3652.40	2442.39	-0.30	-1.18	-1.28
Previously Divorced	-2886.11 **	895.52	-1971.06	1639.32	-609.23	2390.35	-0.49	0.89	0.47
<i>Household Resources</i>									
Average Years of Education	1192.81 ***	218.47	180.20	307.97	761.21 *	328.86	2.68*	-1.09	1.29
Average Occupational SEI	58.66	38.90	60.43	76.56	162.39	116.11	-0.02	0.85	0.73
<i>Family Background</i>									
Amount of Inheritance	46.99	97.63	621.81	417.23	-354.36	561.46	-1.34	-0.70	-1.40
<i>Life-Style</i>									
Conservative Protestant	850.55	1072.41	-1866.58	1954.38	2619.82	4954.77	1.22	0.35	0.84
Catholic	37.94	1137.18	7438.24 ^	3820.75	534.99	3941.26	-1.86	0.12	-1.26
Other/No Religious Affiliation	-1400.57	1094.96	-1076.71	2775.05	-8417.99 ^	4857.82	-0.11	-1.41	-1.31
Religious Attendance	534.42	439.12	3167.65 ***	887.92	-613.65	1214.39	-2.66*	-0.89	-2.51*
Region--Midwest	1364.35	1177.17	138.85	2269.77	3023.63	5215.37	0.48	0.31	0.51
Region--South	3329.99 **	1177.26	-3952.83 *	1869.30	4239.01	3065.49	3.30*	0.28	2.28*
Region--West	-5421.81 ***	1403.82	-4427.21	3272.93	-2752.27	3007.28	-0.28	0.80	0.38
Rural	-1835.88 *	836.73	329.75	2161.92	5686.45 *	2590.82	-0.93	2.76*	1.59

^p<.10, \*p<.05, \*\*p<.01, \*\*\*p<.001

Continued

**Table 6.4: ML Estimates, Effect of Investments in Children's Education on Net Worth (N<sub>White</sub>=2903; N<sub>Black</sub>=758; N<sub>Hispanic</sub>=307)**

Table 6.4 Continued

	White Households			Black Households			Hispanic Households			Z (For differences in effects)		
	Estimate		S.E.	Estimate		S.E.	Estimate		S.E.	w/b	w/h	b/h
<b>Panel B: Effects on Net Worth</b>												
<i>Children's Characteristics</i>												
Two Children	4.08		15.45	6.78		17.50	26.14		35.66	-0.12	0.57	0.49
Three Children	-6.30		16.07	4.15		19.01	60.21		37.15	-0.42	1.64	1.34
Four Children	-14.86		17.87	13.50		20.03	32.57		41.14	-1.06	1.06	0.42
Five or More Children	-19.21		18.43	-9.39		18.97	16.64		37.26	-0.37	0.86	0.62
Pre-Marital Birth	-20.19		23.36	-25.51	^	14.39	-51.27		32.66	0.19	-0.77	-0.72
Time Since Dependency	3.40	**	1.24	2.20		1.39	2.33		2.77	0.65	-0.35	0.04
Educational Expenditures (x1000)	1.31	***	0.22	0.23		0.30	1.73	**	0.63	2.86*	0.62	2.14*
<i>Demographic Characteristics</i>												
Average Age	8.31	***	1.31	5.04	**	1.58	9.96	**	2.87	1.59	0.53	1.51
Single Male	-40.97	*	18.51	-77.12	***	19.78	-75.99	^	42.41	1.33	-0.76	0.02
Single Female	-47.34	***	12.77	-76.18	***	14.47	-59.04	*	28.95	1.49	-0.37	0.53
Previously Divorced	-50.40	***	10.26	-29.87	*	13.06	-62.25	*	25.16	-1.24	-0.44	-1.14
<i>Household Resources</i>												
Average Years of Education	10.75	***	2.50	11.17	***	2.44	8.10	*	3.65	-0.12	-0.60	-0.70
Household Income	1.37	***	0.06	0.88	***	0.11	1.06	***	0.18	3.82*	-1.64	0.82
Currently Retired	82.25	***	11.76	19.10		13.71	42.65	^	25.42	3.50*	-1.41	0.82
Average Occupational SEI	0.96	*	0.45	0.91		0.64	2.40	^	1.27	0.06	1.07	1.05
Self-Employed	177.67	***	11.46	66.76	**	19.92	124.75	***	33.79	4.83*	-1.48	1.48
<i>Family Background</i>												
Amount of Inheritance	6.06	***	1.12	4.75		3.31	1.23		6.02	0.37	-0.79	-0.51
<i>Life-Style</i>												
Conservative Protestant	-46.20	***	12.27	-30.09	^	15.48	-59.24		52.97	-0.82	-0.24	-0.53
Catholic	-1.26		13.07	-25.55		30.39	-28.59		42.14	0.73	-0.62	-0.06
Other/No Religious Affiliation	-1.31		12.57	-81.62	***	21.95	-60.81		52.21	3.18*	-1.11	0.37
Religious Attendance	11.80	*	5.03	17.26	*	7.13	5.32		13.36	-0.63	-0.45	-0.79
Region--Midwest	-5.78		13.51	20.38		17.94	8.59		55.55	-1.17	0.25	-0.20
Region--South	-22.38	^	13.54	-0.89		14.92	58.72	^	33.17	-1.07	2.26*	1.64
Region--West	43.61	**	16.19	-0.03		26.02	102.11	**	31.68	1.42	1.64	2.49*
Rural	16.60	^	9.65	28.36	^	17.08	-39.62		28.23	-0.60	-1.89	-2.06*

^p&lt;.10, \*p&lt;.05, \*\*p&lt;.01, \*\*\*p&lt;.001

## **CHAPTER 7**

### **DISCUSSION AND CONCLUSION**

Scholars have shown that intergenerational transfers positively affect the recipient's wealth. However, no one had considered how these types of transfers affect the wealth of the donor. The purpose of my dissertation was to determine if parents compromise their own economic well-being as a result of having children and engaging in financial transfers to them. The research presented here demonstrates that planned financial transfers to children can positively affect wealth.

I defined economic well-being as overall net worth, financial assets, and housing net worth. I defined financial transfers to children as investments in children's education. I believe that by examining the effects of a relatively common and discretionary transfer to children, we gain a broad understanding of the effects of transfers on wealth, a previously overlooked topic in the sociology of wealth.

Comparing wealth outcomes for households with and without children I was able to demonstrate that there are no long-term negative financial consequences associated with having children. Shifting the focus to differences among parents in their level of financial support of their children, I found that investing in children's education does not negatively affect wealth outcomes. In fact, investing in children's education has a

positive effect on overall net worth and housing net worth. Finally, I examined these relationships separately for white, black, and Hispanic households in order to determine if there were racial or ethnic differences in the effects of having children and investing in children's education on wealth. I found that while there were no substantive differences in the effects of having children on wealth by race or ethnicity, there were differences in the effects of educational expenditures.

In this concluding chapter I will discuss how the findings presented here contribute to research on wealth. Next I will review auxiliary and preliminary analyses not formally presented in the dissertation. I will then identify the limitations of my findings and conclude with a discussion of future extensions of this research project.

### **Wealth: A Social Economic Action**

Sociologists understand and study the concept of wealth in a variety of ways. While some study wealth as an outcome, others consider how wealth affects other outcomes, such as political power, health, or children's level of education. Interestingly though, we rarely use traditional sociological theories to understand how wealth is accumulated. An obvious exception to this statement is status attainment theory. However, status attainment theory does not provide a framework in which the effects of all variables included in wealth models (e.g. religious adherence and attendance) can be understood.

I believe that Weber's concept of social economic actions is useful for sociologists studying wealth. In "Sociological Categories of Economic Action" (Chapter 2 in Part 1 of *Economy and Society*) Weber discusses the role of sociology when studying

economic phenomenon (Weber [1956] 1978). Social economic actions are defined as, “economic actions that are oriented to the behavior of other actors” (Swedberg 2001). In other words individual decisions about wealth accumulation are influenced by the actions of other actors, such as children, relatives, and the state. For example, an aging parent needs extensive care and as a result the individual retires early and compromises their own well-being.

Weber also argued that even though individuals are driven primarily by material interests they are also influenced by non-material interests, habits (tradition), and emotions. In other words despite wanting to accumulate wealth a sense of obligation to one’s family, religious institution, or a charity might deter an individual from saving money for their own use. Weber’s line of reasoning is distinct from economic theories of actions which generally assume that actors are motivated almost solely by material interests and economic actions aimed at utility ignore the actions of other actors (Swedberg 1998).

Not only do Weber’s ideas help us to understand wealth as an outcome, but his ideas can also be used to understand how wealth is affected by other factors, such as lifestyle, religious affiliation, and family relationships. Weber makes an important distinction between economic phenomena, economically conditioned phenomena, and economically relevant phenomena. Wealth would be an example of an economic phenomenon. Economically conditioned phenomena, such as political power, are phenomena that can be partially explained through the influence of economic factors. Economically relevant phenomena, such as religious adherence, are phenomena that are not economic in themselves but influence economic phenomena.

In my dissertation I would argue that wealth is in fact a social economic action. Generally speaking, decisions about how much wealth should be accumulated are influenced by outside actors, such as family and the state. For example, the family can negatively affect wealth by requiring unexpected financial resources. The state can positively affect wealth by changing tax codes. Examples of non-material interests affecting economic decisions include a desire to pass on resources to children--an example of an emotion influencing an economic action.

Even though sociological research on wealth has previously discussed the limitation of economic theories, little empirical research has been done that explicitly considers how non-material interests of the individual and or the interests of other actors influence wealth outcomes. As a result it is often difficult to identify sociology's unique theoretical contribution. However if we use Weber's conceptualization of social economic actions and the distinction between economically conditioned and relevant phenomena, I believe our theories will be enriched.

### **Summary of Results**

My findings support Weber's argument that economic actions, in this case the accumulation of wealth, are in fact affected by the actions of others and non-material interests. In chapter four I consider the effect of an economically conditioned phenomenon, the decision to have children, on wealth. In agrarian societies children contribute positively to the household economy, while in Western industrial societies children do not. Therefore, it is generally assumed that children will have a negative effect on wealth. My findings do not support this assumption. I actually find a modest

positive advantage associated with having two children (as compared to none) on overall net worth. Furthermore, I only find that having four or more children negatively affects financial assets. Not too unexpectedly, I find that children positively affect housing net worth with the exception of households with five or more children.

How is it possible that with the additional costs associated with raising children these households are not in a worse financial position than households without children? I believe we can make sense of this puzzle using Weber's theory that economic actions are influenced by non-material interests and the actions of others. Even though children are expensive, parents are motivated to provide their children with human, social, and material capital. This desire to provide for children decreases parents' personal consumption levels in order to meet children's consumption needs. After parents are through with the daily costs associated with raising children, I would argue the resources previously directed at children are shifted into higher rates of saving rather than increased parental consumption. Chapter four provides evidence that this pattern may be occurring. The positive effect of time since dependency on overall net worth, and in particular financial assets, supports this idea. A more rigorous test of this hypothesis can be found in chapter 5.

Given the variability among parents in their desire to provide for children beyond what is legally required, I focus on differences in the level of educational investments among parents in chapter 5. I find that among households that are no longer supporting children, earlier investments in children's education positively affect net worth. In other



words, a previous financial expense positively affects savings. I argue that this counter-intuitive finding is most likely the result of parents redirecting the resources to their own savings.

Even though there is a huge disparity in wealth between white and black and white and Hispanic households, I did not find a significant difference in the levels of investments in educational expenditures across racial/ethnic categories. This finding is important because it provides evidence that racial differences in wealth should not be attributed to an inability to save. If black or Hispanic parents were not motivated or were incapable of saving then there should be differences in investments in children's education. However, results do not support this. Weber's concept of economically relevant phenomena could be particularly useful in understanding racial differences in wealth. For example, institutional racism is not an economic phenomenon but it does affect economic outcomes.

In chapter 6 I first focused on racial differences in asset ownership and then considered differences in the effects of having children and costs associated with children's education on wealth. In terms of asset ownership, these results clearly indicated that black households were less likely than white households to own all types of assets. While there were no significant differences in the likelihood of home ownership for Hispanics, Hispanic households were less likely than white households to own all other types of assets.

I found no significant differences in the effects of number, timing, and spacing of children across the three groups. Yet, I did find an important difference in the effect of educational expenditures. For both white and Hispanic households, educational

expenditures positively affect net worth. This is not the case, however, for black households. In other words, among white and Hispanic households the ability to give children additional financial help increases wealth, while among black households the effect is not significant.

### **Auxiliary Analyses**

An important consideration in any research endeavor should be the robustness of results. In the following section, I review alternative independent and dependent variables used in these analyses. Next I discuss a group comparison between professional and non-professional households in the effects of number, timing, and spacing of children as well as educational investments.

#### *Robustness of Results*

Given differences in the timing of life-cycle events, measuring household characteristics can be particularly complicated (Wilmoth and Koso 2002). Previous researchers have used a variety of techniques to measure even the simplest concepts, such as education. Since individual resources, such as education, income, and occupation, have been repeatedly shown to be among the most important predictors of wealth, I considered alternative specifications of each. I was particularly concerned that alternative specifications would change the substantive results with respect to the effects of children's characteristics and investments in education.

Beginning with education, I choose to use a single indicator that was either the average years of education for both spouses or the years of education for the single spouse. The alternative specification was a dichotomous variable for households where at least one respondent had a college education and a dichotomous variable where all respondents (one or two) failed to complete high school or secure a GED. This alternative specification would highlight the two ends of the educational distribution. I found no significant differences in the effects of children's characteristics when I replaced average years of education with the two dichotomous indicators.

Next, I consider my measure of household income. I will begin with a discussion of the distinction between wealth and income. Spilerman (2000) defines the distinction as the difference between a stock versus a flow of resources. Wealth is a stock of resources that are available at any given time. Income on the other hand is a flow of resources. Income can be defined strictly as current labor-force earnings or it can include money from social security or a work-place pension. The problem, though, is that wealth could be also be defined as including money from social security or a work-place pension. In fact, Burkhauser and Weathers (2000) found that if Social Security and pension wealth are included, they comprise at least 50% of total household wealth. Calculations of household wealth or net worth typically exclude these types of retirement assets (Spilerman 2000).

Spilerman suggests the decision to include these types of assets as income or wealth should be determined by the outcome one is interested in studying. Since I want to determine how intergenerational exchanges affect wealth I exclude social security and pension wealth since individuals have the least amount of discretion in determining their

values. Obviously, time spent in the labor force does affect the future amounts of these. However, individuals cannot increase their rate of savings in them in same way that they can with stocks, IRAs or bonds. Despite this, it is important to control for income received from social security or employer pension plans since households will base other savings decisions on the expected future amounts. For this reason, I measure household income as all earnings from current job, social security, pensions, and other government transfers. An alternative measure of household income would be one that only included earnings from the current job. I found no substantive differences in the effects of children or educational investments after including this variable.

Juster, Smith, and Stafford (1999) demonstrate the substantive differences that can emerge when alternative definitions of wealth are used. Definitions are particularly important for capturing wealth at the bottom and top of the distribution. When only financial assets are considered, a much larger proportion of households are classified as having no wealth and the inequity between households appears much larger. As a result, financial assets do not adequately distinguish among households at the bottom of the distribution. By examining overall net worth, housing net worth, and financial assets separately, I provide a broad picture of the effects of children on different components of wealth.

There are two ways that investments in children's education could have been measured. The simplest is to use the value in nominal dollars provided by the respondent. The limitations of this strategy are that respondents were not given guidance in defining what an educational expenditure would include. The most obvious expense would be tuition for private primary and secondary schools and for all post-secondary

education. However, there are other substantial expenses that households may or may not have included in their estimates (i.e. books, extra-curricular activities, tutoring). Depending on what expenses the respondent included, the estimates could vary tremendously. Therefore, an alternative specification that reduces the variability in educational expenditures and possibly creates a more reliable estimate would be to place households in spending groups based on the amount of their expenditures. The alternative measure I created recoded dollars spent on education into 6 categories with the following values: (0) 0 dollars spent; (1) 1 thru 2,000; (2) 2,001 thru 7,999; (3) 8,000 thru 20,000; (4) 20,001 thru 49,999; and (5) 50,000 thru 96,000. Using this measure I continue to find a positive effect of educational expenditures on net worth and financial assets.

### *Class Comparisons*

Both race and class position have been used to explain the increasing inequality in US society since the 1970's (Harrison and Bluestone 1988; Oliver and Shapiro 1997; Wilson 1978). While racial differences in wealth have received considerable attention, class differences are generally ignored. This is interesting given the substantial body of research that examines the relationship between social class and consumption (Fisher 1987; Bocoock 1993; Bourdieu 1994). This research demonstrates that class position (defined in a variety of ways) affects consumption choices.

Class position has also been shown to affect educational opportunities and outcomes for children. While there are no studies that examine how parental class position affects educational expenditures, there is evidence that households with

professionals do spend more than other households. Therefore, I suspect there are class differences in perceived parental obligations to support children's educational outcomes. In addition to expecting professional households to be more likely to invest in their children's education, I also expect these households to spend more on an elite or private educational experience for their children.

The final way in which class is expected to affect the accumulation of wealth is in portfolio allocation and access to employer sponsored retirement programs. Despite its limitations, dual labor market theory is useful in that it draws attention to differences in the reward structure between core and periphery industries and organizations (Hodson and Kaufman 1982; Reich et al 1973). Even though a substantial proportion of the American workforce is eligible to participate in company-sponsored retirement programs, these programs are generally not available in industries that rely on unskilled or service workers.

There are several advantages associated with company sponsored retirement programs. For example, employers provide a proportion of the savings and employees are able to set up an automatic withdrawal system that makes it more difficult to postpone savings. Also, these programs do not require a minimum deposit to begin the account. Some of the barriers to long-term savings for households with limited economic resources include minimum account balances, having to make a commitment to deposit money monthly, and penalties for early withdrawals.

Class has already been shown to affect consumption and intergenerational transfers. I argue that occupational class also affects the rate of savings and portfolio allocation primarily because of differential access to employer sponsored retirement

programs. For these reasons I examined class differences in the effects of children and educational investments on wealth. Since the number and timing of children are less likely to affect rates of savings in IRA type accounts, I expected the positive effect of number of children to be much stronger in non-professional households on net worth and financial assets. Since professional households, net of other controls, are expected to spend more on educational investments I also expect these households to redirect more money towards savings after paying for the educational expenses. Therefore, I expect the positive effect of educational investments on net worth to be much stronger in professional households.

In terms of the proposed analysis, the data available in the Health and Retirement survey for occupations are limited. Thus, the results presented here should be viewed as exploratory. The HRS codes respondents' occupation using the 17 aggregate occupation groups provided in the 1980 occupational census codes. As a result, important differences within each group are lost. Therefore, the most conservative method of distinguishing households is to classify professional from non-professional. Category 1 (managers) and category 2 (professionals) are, thus, defined as professional. If either respondent indicated that they were in the managerial (category 1) or professional (category 2) categories, the household was coded as "professional". Thirty-seven percent of all households were classified as professional with 43 percent of White households, 21percent of Black, and 16 percent of Hispanics coded as professional.

Among all households I found that there was a significant difference between professional and non-professional households with respect to the effects of the number and timing of children on net worth. While the positive effect of having two children (as

compared to none) on net worth was found among non-professional households, there are no significant differences in the number of children among professional households. While having had a pre-marital birth negatively affected net worth in non-professional households, it did not make a significant difference among professional households. Finally, time since dependency positively affected net worth in both groups. However, the effect was more substantial among non-professional households.

I also found significant differences between the professional and non-professional households with respect to the effect of number, timing, spacing, and educational investments on net worth among households no longer supporting children. The positive effect of educational investments on net worth was much larger among professional than non-professional households. I continued to find differences in the effects of having had a pre-marital birth and time since dependency on net worth. Interestingly, among professionals the effect of time since dependency reaches conventional levels of significance after controlling for educational investments.

Even though these findings should be treated with a certain amount of caution, they clearly indicate that the effect of intergenerational transfers on wealth varies between professional and non-professional households. The fact that the positive effect of two children on net worth is only present among non-professional households is particularly intriguing. I believe that a variety of factors, such as differences in consumption, attitudes towards intergenerational transfers, and access to various types of employer sponsored retirement programs, could explain these class differences.



## **Limitations of Research**

The findings put forward in this research are limited by characteristics of the sample, lack of data on important control variables, the possibility of nonlinear effects, and too little information with respect to how educational expenses were financed. Even though the sample is nationally representative it is only representative of persons born between 1931 and 1941. This limitation is important because it is difficult to assess the degree to which these findings would be replicated with a different cohort. The other limitation with respect to the sample is the lack of data for other ethnic groups, such as Asian Americans. In addition, while the Health and Retirement survey over-sampled black households, they did not do the same for other groups, such as Hispanics, which makes it difficult to assess within group differences. It is clear that Cuban households are much better off financially than households from Honduras; however, with so few cases I cannot reliably assess these differences.

Ideally in order to model wealth one would be able to control for differences in consumption, more direct measures of life-style, attitudes towards saving, and controls for levels of risk-aversion. Along these lines, in order to truly understand how educational expenditures affect wealth, controls for methods of financing education would also have been included. For example, were educational expenses paid for out of the current income stream, long-term savings, or loans?

In terms of the models presented, there are three issues that need to be addressed. First, it is possible that selection bias is influencing the relationships among my variables. Even though there has been an increase in the proportion of households that are child-free, these households are still rather unique. It is possible that for the same reasons these households choose to remain child free they also save at a lower rate.

Another problem with these models is that the explanation for the positive relationship between children and wealth and between educational investments and wealth cannot be tested directly. In order to truly test my explanation, I would need to examine the rate of savings and consumption among households with children and then in the years after children became independent. In this way I could track if savings increase after children leave the home.

A third possible problem has to do with the assumption that there is a linear relationship between educational expenditures and wealth. It is very possible that the effect of educational expenditures is not significant among households with considerable wealth while it is significant among households with less than average wealth. In the future, I will need to test for this possibility.

The final problem is that I am examining a very complicated longitudinal process using cross-sectional data. As I already mentioned parental investments in education are influenced by perceived obligations to help children but also by economic ability. Unfortunately, my models do not capture dramatic changes in wealth nor do they capture changes in the number of children. It is possible that I am over or under estimating the effect of number of children. For example, if two single parents married after the

children were no longer being supported, then we would expect these children to have a different effect on wealth compared to the effect that dependent children would have.

## **Extensions**

There are four ways the current analyses could be extended using data from the Health and Retirement Survey. First, building on Weber's model of social economic actions I would include attitudinal measures expected to affect the accumulation of wealth. For example, the HRS collects information with respect to the respondent's intentions to leave a substantial inheritance upon their death. Second, I would focus on households transitioning from supporting children to not supporting children and on households that paid for educational expenses during one wave of data collection but were not during the following wave of data collection. Third, building on my theoretical distinction between unplanned and planned intergenerational transfers, I would consider the economic consequences to parents who engage in unplanned transfers. Finally, I would like to compare the effects of transfers to aging parents and transfers to children on the economic position of the middle generation. For example, I would examine if transfers to one generation affect the likelihood of transfers to the other. In other words does having to support aging parents reduce the economic resources directed towards children?

Based on these findings I intend to explore the relationship between intergenerational exchange and wealth further using other sources of data. First, I would like to further explore the relationships between occupational class and wealth. I would pay particular attention to the effects of participation in employer sponsored retirement

programs and other forms of saving. Second, using data from Luxembourg Income Studies, I would examine these relationships in other contexts where the costs associated with educating children are much higher and there is less of an emphasis on accumulated wealth. Third, I would like to explore the relationship between attitudes and obligations regarding intergenerational transfers and actual behaviors.

## **Conclusion**

How is it possible that having had children and investing in children's education positively affects wealth outcomes? One possible answer is that parents are motivated to provide their children with additional resources. As a result, the same parents that take on the financial burden of having children and investing in their education are the same parents that want to leave a bequest to their children upon their death. Consequently these parents save at a much higher rate. Another possible answer is that parents don't actually compromise their own wealth for their children. It is possible that the values in our society may have shifted in such way that parents provide for their children, but not at the cost of their own economic security or life-style options as they age. If this is the case, the positive effect of educational investments might merely indicate that households with the economic resources to pay for children's education also have the resources to invest in their own financial well-being.

Conceptualizing wealth as a social economic action should remind researchers that not all households aspire to the same levels of wealth. It is possible that households without children do not aspire to have the same level of wealth as households with children. As a result, if we are interested in understanding whether or not children

negatively affect the economic well-being of parents, we might need to consider examining other outcomes that require wealth, but are not direct measures of wealth. For example, the ability to maintain an independent home or to pay for the increased costs of medical care might be a less value-laden measure of economic well-being. Hopefully, this research has drawn attention to the importance of non-material interests and the effects of outside actors in determining wealth outcomes.

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