

Gifts, Down Payments, and Housing Affordability

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Abstract

Recent evidence shows that homeownership rates among young households have declined substantially since the mid-1980s. Although late household formation and the increasing user cost of housing are cited as contributing factors, aggregate data indicate that first-time home buyers are relying more on gifts from relatives and less on their own savings in accumulating the down payment.

To explore the role of gifts in helping first-time buyers purchase homes, this article uses data from two sources: surveys of recent home buyers in 18 cities between 1988 and 1993 and Boston loan applicants in 1990. The evidence shows that financial constraints are important in explaining the increased reliance on gifts, with the receipt of a gift being negatively related to income and wealth and positively related to median house price. The evidence is mixed as to whether givers target gifts to certain types of households, such as young married couples.

Keywords: homeownership; gifts; down payment; affordability

Introduction

According to the U.S. census, homeownership rates declined between 1980 and 1990. Although the drop among all households was small (0.2 percent), rates for young married households fell much more dramatically. One possible explanation is that young households that did not yet own homes faced real house prices that were rising much faster than real incomes, particularly in the Northeast and West. As a consequence, young households may have found homeownership less attractive, or at least less affordable, even though interest rates were falling over that period. In addition, households that had the desire and the income to purchase homes may have had greater difficulty saving down payments.

This study uses survey data for 1988, 1990, and 1993 from the Chicago Title and Trust Company (CT&T) to explore housing affordability for first-time buyers by looking at how buyers financed their homes. Because of considerable evidence suggesting that the down payment constraint is binding for many potential buyers, this study focuses on the sources of down payments. Although the CT&T survey does not include potential buyers who were discouraged or unsuccessful, it does show that many first-time buyers waited a long time to purchase their homes. For example, more than 25 percent of first-time buyers saved for at least five years for a down payment. Other first-time buyers turned

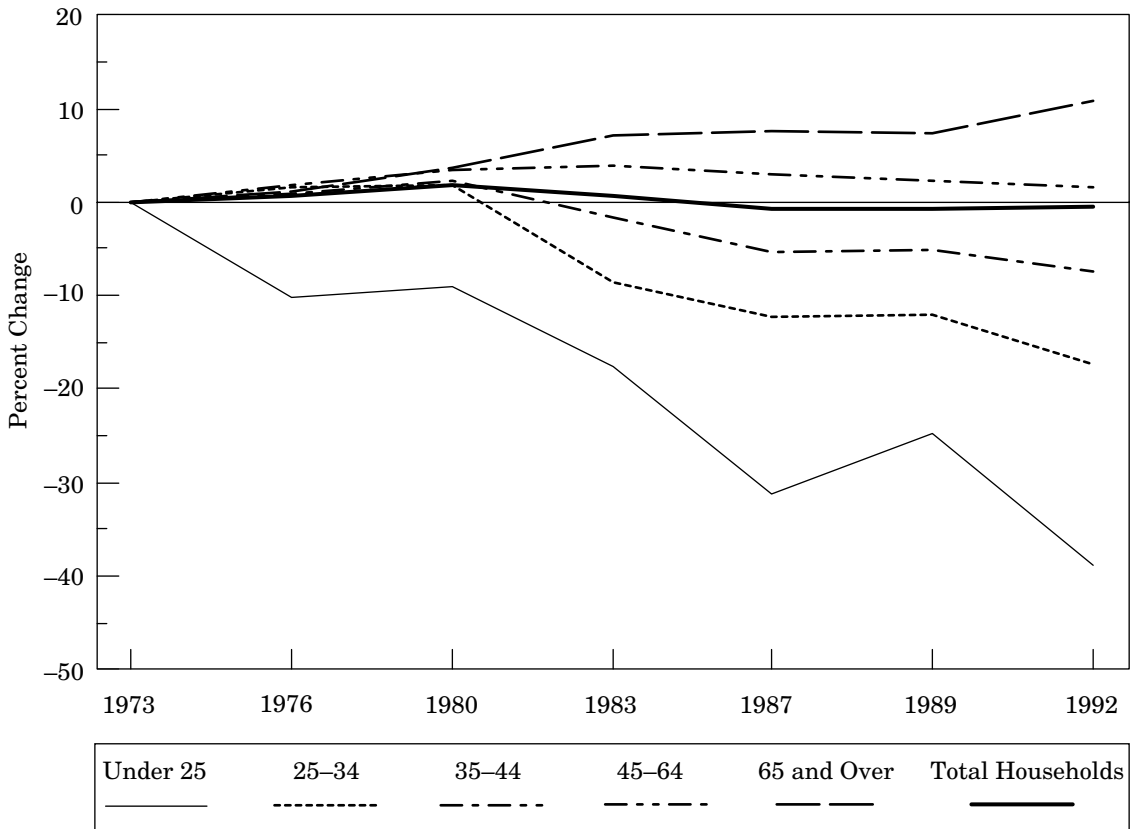
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to relatives to reduce the time required to save the down payment. Almost one-quarter obtained loans or gifts from relatives, with the average help constituting more than half the down payment. By comparison, about 5 percent of repeat buyers received help from relatives.

Changes in the Pattern of Homeownership over Time

Aggregate U.S. homeownership rates were relatively flat between 1973 and 1992. Age-specific homeownership rates typically peak at 80 percent for households aged 55 to 64. However, age-specific homeownership rates for younger households (those headed by a person 44 years old or younger) have declined (figure 1). This trend is particularly apparent after 1980. This decline in age-specific rates for young households has not yet affected the aggregate homeownership rate because of the impact of the baby boom generation moving through the prime home-buying years (see Green 1996).

Figure 1. Change in Homeownership Rates by Age of Household Head, 1973 to 1992



Source: Joint Center for Housing Studies (1993).

The decline in homeownership among young households could be caused by increasing real house prices, a drop in the rate of family formation, a decline in the incomes of renters, changes in the user cost of owner-occupied housing (due to the 1981 and 1986 tax reforms or a decline in expected nominal house price inflation), increases in nominal interest rates (and thus higher real mortgage payments in the beginning years of the mortgage), or even normal business cycle fluctuations. For example, the user cost of owner-occupied housing rose substantially after 1981, when marginal tax rates and expected nominal house price inflation declined, making homeownership less attractive relative to renting. In addition, because people are marrying later, home buying, which often occurs after household formation, is taking place later in life.

For young households, however, factors such as user costs, demographics, and household formation do not tell the whole story. Homeownership rates have declined not only for households whose heads are under 25 years old but also for households whose heads are 25 to 34 or 35 to 44. CT&T survey data from the 1980s, presented in table 1, suggest that reduced affordability, caused by either rising house prices or falling renter incomes, is an important additional factor explaining the decline in homeownership among young households. Note that for first-time buyers, the percentage of the down payment coming from personal savings has declined since 1985.¹ Over the same period, the average time required to save for the down payment and the average age of a first-time buyer have steadily increased. Also, households are relying more on relatives as a source of funds for the down payment. Late household formation or increasing user costs do not easily explain these facts. Instead, the evidence that the down payment is a decreasing percentage of the purchase price, even though home purchasers are saving longer for a down payment, suggests that younger households are having an increasingly difficult time accumulating down payment funds.

Table 1. Summary Statistics for First-Time Buyers

Year Range	Percent of Down Payment from		Average Time to Save (Years)	Average Down Payment (%)	Average Age (Years)
	Gift	Savings			
1976–78	8.5	81.6	2.4	16.5	28.2
1979–81	13.6	68.0	2.4	19.2	28.4
1982–84	11.4	79.0	2.0	14.7	28.9
1985–87	11.7	79.9	2.0	15.1	29.6
1988–90	10.2	77.8	2.6	15.4	30.1
1991–93	13.1	76.0	2.8	14.3	31.1

Source: CT&T.

¹ The percentage of the down payment that came from savings also decreased strongly between 1978 and 1981, when the sudden rise in nominal interest rates made housing less affordable. Because higher nominal interest rates result in higher real interest payments early on for a fixed-rate mortgage, buyers of a given income had a more difficult time buying a given house. As a result, the first-time buyers may have turned to relatives and other sources for additional funds to increase the down payment and thus decrease the monthly mortgage payments. In addition, high nominal interest rates in the early 1980s may have contributed to the decline in homeownership rates for young households, although homeownership rates continued to fall even as interest rates declined in the mid-1980s.

Saving for Homeownership

Prospective first-time home buyers must meet (at minimum) two financial requirements imposed by mortgage lenders. First, lenders require a down payment on the purchase price of a home, generally 10 to 20 percent in the United States for conventional mortgages.² In addition to the down payment, first-time buyers face other initial costs of homeownership—closing costs, broker fees, moving expenses, initial home repairs, and transaction taxes—that can easily add another 2 to 5 percent in upfront costs. These expenses, along with the down payment, imply that a household must accumulate substantial liquid wealth to afford a first home. For example, consider a household wishing to purchase a \$120,000 house. Even without the other costs of homeownership, the household would have to accumulate between \$12,000 and \$24,000 for the down payment—substantial amounts for low-saving Americans.³

Second, lenders generally require that mortgage payments plus property taxes and insurance premiums not exceed 28 percent of gross income; this is the relevant guideline for lenders selling a mortgage in the secondary market. An obligation ratio constraint of 28 percent may be binding for households with low current but high future income that would like to purchase a larger home than allowed otherwise. Whether this requirement is binding depends on the amount of the down payment, since a larger down payment decreases the loan amount and thus decreases the mortgage payments. Linneman and Wachter (1989) and Zorn (1989) show that obligation ratios often exceed those stated in the secondary market underwriting guidelines for households that obtain mortgages. Lenders may allow even low-income borrowers to exceed a 28 percent obligation ratio, sometimes by a large amount (Munnell et al. 1996). Thus, the payment burden is flexible and a function of the down payment.

The down payment constraint is not as flexible as the obligation ratio and is often binding for young households. Using household data from the Panel Study of Income Dynamics (PSID), Engelhardt (1996) finds that households reduce food consumption to save for the down payment. Once a household buys a home, food consumption returns to the higher long-run level, even when changes in income are controlled for.

A prospective first-time buyer household has a limited number of ways of accumulating a down payment. Household members can either consume less and save from earned income or obtain a gift or loan from a relative or friend. Of course, house prices are the primary factor that influences saving for home purchase. The cost of a house affects not just the demand for housing but also the amount of the down payment: For a given down payment percentage, the down payment rises with the house price. As a result, prospective first-time buyers may change their saving and housing decisions as house prices rise: They may increase the time it takes to save for the down payment, they may change the

² Mortgages with down payments as low as 2 or 3 percent are available to qualified households under government-sponsored mortgage programs such as those of the Federal Housing Administration and the Department of Veterans Affairs. Conventional mortgages with less than 20 percent down require the purchase of private mortgage insurance.

³ According to data from the 1992 CT&T survey, for example, the median first-time buyer had an income of \$51,000 and purchased a \$120,000 house, suggesting that the typical down payment is between one-quarter and one-half of yearly gross income.

rate at which they save from earned income, or they may purchase a smaller first home and then trade up later in life. If house prices change quickly or unexpectedly, buyers may be more likely to seek a gift or loan from a relative to make up any shortfall.

To help determine how prospective first-time buyers might react to increases in house prices, Engelhardt (1994) develops and simulates a life-cycle model of saving with endogenous tenure choice, in which households choose whether to rent or own, how long to save for the down payment, and how large a home to purchase. Engelhardt finds that as house prices rise, households adjust along all the margins described above: They take longer to save for the down payment, save at a lower rate (consume more nonhousing goods), and purchase smaller first homes. These results suggest a robust inverse relationship between housing costs and the saving rate for home purchase. Note, however, that sufficiently impatient households may become discouraged, stop saving for homeownership, and rent for their entire lives; in this case, high housing costs crowd some households out of the first-time buyer market.

Recent empirical studies of the effect of house prices on the saving behavior of renters have produced mixed results. Sheiner (1995) uses the 1984 wave of the PSID and finds that house prices have a positive and significant effect on the accumulated net worth of renter households in 26 U.S. cities. Living in a city with real house prices \$10,000 higher is associated with an increase in net worth of between \$400 and \$1,800, depending on the specification. However, the PSID provides no information on which renter households are actually saving for homeownership.

Yoshikawa and Ohtake (1988) use a Japanese data set (the 1984 National Survey of Family Income and Expenditure) that has information on household plans for saving for home purchase. They find that a rise in land prices increases the saving rate of renter households with plans to purchase a home and that the saving rate decreases for households with no such plans. The implied saving elasticities with respect to land prices are 0.003 for renters with purchase plans, -0.06 for those without, and -0.07 for all renters combined.⁴

Finally, Engelhardt (1994) examines the effect of house prices on young renters' decision to save for home purchase and finds evidence of discouragement. Canadian renter households saving for a down payment are identified by their membership in a tax-deferred savings program for prospective first-time home buyers. Engelhardt finds that high house prices significantly reduce the likelihood of saving for a down payment: A 5 percent increase in house prices decreases the probability of saving for a down payment by 1 percentage point. Prospective first-time home buyers have \$300 less in accumulated assets for every \$1,000 increase in housing costs, which suggests that renters save for a longer time or at a lower rate because of higher home prices.

⁴ The overall elasticity of -0.07 is larger in absolute value than the elasticity for households without purchase plans because the overall elasticity takes into account that some households will switch from having purchase plans to not having purchase plans when land prices increase. This switch itself results in an additional decrease in saving as those households that switched stop saving for a home.

Role of Gifts

Introducing the possibility of a gift from parents or other relatives for use as a down payment changes the dynamics of the interaction between house price and down payment for prospective first-time home buyers. If prospective buyers can receive a gift, they will alter their saving and home purchase behavior. For a given level of house prices, a gift might allow a household to put a greater percentage of the purchase price down (possibly avoiding the purchase of private mortgage insurance), purchase the same house it would have purchased without a gift but with a shorter period of saving, purchase a larger home than it could have afforded otherwise, or save at a lower rate.⁵ In fact, Engelhardt and Mayer (1995) find that households receiving gifts adjust on all these margins, especially the household savings rate and time to save. Households that receive a gift reduce their savings rate by up to 7 percentage points relative to other households.

This study focuses on three reasons that relatives give gifts for the down payment on a house: Transfers might be targeted to “constrained” households; they might be made to households showing “merit” through education, marriage, or children; or they might just be the conduit for the intergenerational transmission of wealth.⁶

In particular, this study explores whether the timing and magnitude of the gifts are related to constraints faced by the receiving household.⁷ Households’ housing purchases may be constrained by current income that is lower than expected permanent income or because they have insufficient assets to meet the minimum down payment requirement. If constrained households are more likely to get family help, households receiving gifts may appear to be poorer (have lower wealth and income) than households not receiving gifts, even though their families may actually have more financial resources than the families of those who do not receive gifts. If gifts reward merit, their receipt might be positively related to years of education, being married, or having children. If gifts are given solely for meritorious behavior and are not related to actual need, then there should be no correlation between gift giving and aggregate economic or housing activity.⁸

In addition, gifts might also affect the choice of mortgage. Brueckner and Follain (1988) provide evidence that financially constrained households are more likely to choose adjustable-rate mortgages (ARMs) than fixed-rate mortgages (FRMs). Receiving a gift for home purchase may allow a household to choose an FRM rather than an ARM. In addition, since a gift may affect the fraction of the purchase price put down, it may affect the mortgage length. For example, a gift that results in a greater down payment amount may reduce the amount of the mortgage sufficiently that the household chooses a 15-year, rather than a 30-year, mortgage.

⁵ In addition, a gift for home purchase may allow an otherwise discouraged household to purchase a home.

⁶ For estimates of the magnitude of transfers in the accumulation of aggregate wealth, see Gale and Scholz (1994), Kotlikoff (1988), and Modigliani (1988). For findings on the motives for intergenerational transfers in broader contexts, see Cox (1987, 1990), Cox and Jappelli (1990), Guiso and Jappelli (1991), and Jappelli (1990).

⁷ Unfortunately, this study does not have data on the givers and thus cannot directly estimate the effect of family wealth on transfers for home purchase. Future research will directly address the issue of givers—both which families give gifts and whether all children in a family are equally likely to get a gift.

⁸ The relationship between gift giving and economic activity might be complicated, however, if families living in areas with high housing price appreciation are wealthier and thus give more money to their children who live nearby.

Another aspect of the first-time home purchase decision not directly addressed by the theoretical discussion above is the role of expected house price appreciation in the saving and purchase decisions of first-time buyers. Whereas house prices and down payment requirements do interact to increase the barrier to homeownership, homeownership (the sooner the better) is more attractive as an investment when real house prices are rising. As described above, rising house prices make owner-occupied housing less affordable and less desirable from a consumption perspective. From the investment side, by contrast, the sooner a household purchases a home when house prices are rising, the greater the housing capital gains the household can expect to capture. In this sense, house price appreciation may result in more rapid saving as some prospective home buyers (not discouraged by the higher prices) wish to buy as soon as possible. This suggests an additional role for gifts: allowing households to purchase earlier and capture capital gains in times of rising house prices.

Data

This study uses data collected in 1988, 1990, and 1993 from a random sample of recent home buyers in 18 major U.S. cities surveyed by CT&T. The CT&T survey asks recent home buyers about their demographic characteristics, the type of house they purchased and its price, the type and amount of mortgage they obtained, the amount and sources of the down payment, the amount of time spent saving the down payment, and even the number of houses looked at before the purchase. These CT&T data have been supplemented with median house prices from the National Association of Realtors and house price indices from Freddie Mac (based on multiple observations of the same property obtained from the joint Fannie Mae–Freddie Mac database) to explore the relationship between high or rising house prices and sources of down payments.

The economic circumstances faced by recent home buyers in this sample varied greatly, depending on the year of purchase and the location of the home. Purchasers in the West (especially California) and the Northeast in 1988 faced real estate prices that had increased substantially in real terms during the mid-1980s and economies that were near their peaks. In parts of the South and Midwest, however, the oil bust had hit a couple of years earlier, and prices had already fallen quite a bit. By 1993, house prices in the Midwest and South had rebounded, while those in California and the East had dropped. In addition, mortgage rates were at a 20-year low in 1993.

As the summary statistics in table 2 indicate, home buyers were greatly affected by aggregate economic conditions. Repeat buyers, many of whose houses had fallen in value if they lived on either coast, made up a smaller percentage of home purchasers in 1993 than in 1988 (59 versus 66 percent).⁹ This is what might be expected if, as some argue, lower interest rates disproportionately attract first-time buyers into the market. Also, 1993 repeat buyers used much less equity from the sale of previous homes in the purchase of their current homes (34 versus 52 percent of the down payment), and their down payments were a lower percentage of the purchase price. The result is that repeat buyers purchased less expensive houses in 1993 than in 1988, while first-time buyers did the opposite.

⁹ The 1990 data are quite similar to the 1988 data.

Table 2. Summary of Data for First-Time and Repeat Buyers

Characteristic	1988		1993	
	First-Time Buyers	Repeat Buyers	First-Time Buyers	Repeat Buyers
Sale price (1993 \$)	130,244	184,705	150,305	165,593
Down payment (%)	14	29	13	26
Percent from savings	84	40	80	55
Percent borrowed	2	2	4	3
Percent gift from relatives/friends	11	3	12	3
Percent from sale of previous home	0	52	0	34
Percent from other sources	3	3	4	5
Time to save down payment (years)	3.0	—	3.8	—
Annual household income (1993 \$)	57,255	72,389	54,971	70,366
Obligation ratio (%)	25	25	24	22
Used ARM (%)	34	42	19	21
Household size (persons)	2.6	3.1	2.5	3.0
Married (%)	71	81	65	79
Single male (%)	18	8	19	10
Spouse employed if married (%)	60	58	57	61
Head age less than 25 (%)	13	1	5	1
Head age 25–29 (%)	37	10	35	8
Head age 30–34 (%)	29	21	33	16
Head age 35–39 (%)	13	22	15	23
Head age 40–49 (%)	7	25	8	31
Head age 50 or more (%)	1	21	4	21
New property (%)	24	31	22	23
Purchased condominium (%)	17	9	14	11
Purchased town house (%)	15	8	12	9
Purchased detached single-family house (%)	64	81	7	77
Northeast (%)	31	22	36	25
Midwest (%)	24	22	19	22
South (%)	17	22	15	21
West (%)	28	34	30	31
Sale price as percent of median value	91	135	95	129
Average real 1-year appreciation rate (%)	2	3	–2	–1
Number of observations	411	795	428	614

Source: CT&T.

Because we are interested in factors that relate to homeownership, the rest of this study focuses specifically on first-time buyers. As would be expected, first-time buyers are younger, have smaller households, earn less, purchase less expensive units, and make much smaller down payments than repeat buyers. Furthermore, more than 90 percent of the down payment for a first-time buyer comes from personal savings and investments or gifts, whereas repeat buyers rely much less on these sources.

First-time buyers and repeat buyers spend about the same percentage of their monthly income on housing payments (that is, the two groups have similar obligation ratios). Combined with smaller down payments, the data imply that first-time buyers spend less on housing. This evidence suggests that the obligation ratio is no more binding a constraint on purchases for first-time buyers than for repeat buyers. Furthermore, only a small percentage of first-time buyers use ARMs, even though these mortgages typically have lower initial monthly payments. Low mortgage rates in 1993 made ARMs much less popular for both groups.

Gifts as a Substitute for Savings

Households that can obtain gifts are able to purchase sooner than they would without gifts. Gift recipients are similar to other buyers in average age and household composition but very different in financial characteristics (table 3). For example, gift recipients use much less of their own savings for down payments. Although only 21 percent of first-time buyers received gifts, the average gift made up more than half the down payment. Gift recipients also spend almost 10 months less time saving for the down payment but appear to be more income constrained than other buyers, with a higher obligation ratio and a higher percentage of employed spouses than other purchasers.¹⁰ This evidence suggests that gifts allow buyers not only to purchase earlier but also to buy more expensive houses.

Table 3. Summary of Data for First-Time Buyers: Gift Recipients and Others

Characteristic	Gift	No Gift
Sale price (1993 \$)	183,613	124,549
Down payment (%)	15	14
Gift as a percent of total down payment	51	0
Savings as a percent of total down payment	42	93
Time to save down payment (years)	2.8	3.6
Annual household income (1993 \$)	54,570	56,080
Obligation ratio (%)	28	25
Constrained purchaser (%)	37	28
Household size (persons)	2.7	2.5
Married (%)	71	68
Single male (%)	16	19
Spouse employed if married (%)	62	57
Age (years)	30.6	31.1
Sale price as a percent of median value	94	90
Average real 1-year appreciation rate (%)	-1	-1
Used ARM (%)	24	22
Number of observations	266	1,011

Source: CT&T, survey years 1988 and 1993.

Because we are interested in how constraints affect affordability, we divided the sample into constrained and unconstrained first-time buyers (table 4); constrained buyers have a down payment of less than 20 percent and an obligation ratio greater than 28 percent. Not surprisingly, constrained buyers rely more on gifts for their down payments than unconstrained buyers do. As is consistent with their high obligation ratios, constrained buyers have lower incomes and purchase more expensive houses than their unconstrained counterparts, even when the local price of houses is controlled for.

Geographic differences in affordability are apparent in table 5. Buyers clearly purchase more expensive houses in coastal cities, and the average income of a buyer in those cities does not fully offset the higher prices.¹¹ Consequently, first-time buyers on the coasts

¹⁰ All the above differences in means between gift recipients and other first-time buyers are significant at the 5 percent level (assuming unequal variances) except the one for spousal employment.

¹¹ House prices are not quality adjusted, so one component of the average price difference could be a quality difference.

Table 4. Summary of Data for First-Time Buyers: Constrained and Unconstrained

Characteristic	Constrained	Unconstrained
Sale price (1993 \$)	177,130	120,116
Down payment (%)	11	15
Gift as a percent of total down payment	13	10
Savings as a percent of total down payment	79	84
Time to save down payment (years)	3.6	3.5
Annual household income (1993 \$)	48,509	58,829
Obligation ratio (%)	36	22
Household size (persons)	2.7	2.5
Married (%)	64	70
Single male (%)	22	16
Spouse employed if married (%)	54	60
Age (years)	31.2	30.9
Sale price as percent of median value	92	90
Average real 1-year appreciation rate (%)	-2	-1
Used ARM (%)	25	21
Number of observations	379	898

Source: CT&T, survey years 1988, 1990, and 1993.

Table 5. Summary of Data for First-Time Buyers by Year and Location

Characteristic	1988		1993	
	Coast	Noncoast	Coast	Noncoast
Sale price (1993 \$)	163,929	94,527	195,861	88,136
Down payment (%)	17	11	15	11
Gift as a percent of total down payment	12	9	11	14
Savings as a percent of total down payment	82	87	81	80
Time to save down payment (years)	3.6	2.4	4.2	3.3
Annual household income (1993 \$)	64,473	49,565	59,211	49,185
Obligation ratio (%)	28	23	27	20
Constrained purchaser (%)	34	24	37	15
Household size (persons)	2.6	2.5	2.6	2.4
Married (%)	69	73	62	69
Single male (%)	19	16	19	18
Spouse employed if married (%)	59	61	54	62
Age (years)	30.8	29.7	32.2	30.8
Sale price as percent of median value	86	96	101	90
Average real 1-year appreciation rate (%)	6	-2	-4	1
Used ARM (%)	45	22	22	15
First-time buyers as percent of all buyers	41	35	52	41
Number of observations	212	199	247	181

Source: CT&T, survey years 1988, 1990, and 1993.

spend more than a year longer saving for a down payment, have higher obligation ratios, and are much more likely to be constrained than their noncoastal counterparts. Because of affordability problems, buyers in coastal cities are much more likely to have ARMs. Surprisingly, buyers on the coasts also have higher down payments. One possible explanation for the low down payments in noncoastal cities is the availability of Federal Housing Administration mortgages. These government-guaranteed loans have caps on the price of a house that can be purchased, effectively excluding many buyers in more expensive coastal cities.

Differences in gift receipt by location are small and not consistent over time. Purchasers in coastal cities received more of their down payments as gifts in 1988 than purchasers in noncoastal cities, but less in 1993. Note, however, that a given percentage of the down payment implies a higher dollar amount of gifts in high-priced coastal cities. One explanation for the differences in gift receipt between 1988 and 1993 is the behavior of house prices. Between 1988 and 1993, the difference in house prices between coastal and noncoastal cities narrowed, with real house prices in noncoastal cities rising between 1992 and 1993,¹² although differences in the price of houses purchased by first-time buyers in the CT&T data set widened.

Model Estimates Using the CT&T Data

The above-mentioned data suggest that gifts are related to financial constraints and that they may substitute for buyer savings. In this section we present estimates of the determinants of who receives a gift. The regressions include variables relating to affordability (the level of and change in citywide house prices and household income) and household demographics. If gifts are targeted to constrained households, affordability measures should be important. Alternatively, if gifts are given to households showing merit through education, marriage, or children, demographic variables should be significant determinants of gift giving. Finally, if gifts are simply a conduit for the intergenerational transmission of wealth, gift giving should be related only to variables that are correlated with family wealth.

The results of a tobit model that estimates the percentage of the down payment that comes from gifts as a function of the real median house price in the city of purchase, real household income, and various household characteristics are presented in table 6. The dependent variable in this regression measures the importance of gifts in the household's down payment.¹³ The tobit specification allows for a truncated dependent variable; in this model, gift percentage varies between 0 and 100. Median house price is included to take into account price differences across cities. Although a quality-adjusted measure of house prices would be preferable, no such measure is widely available.¹⁴ House price appreciation indicates expected and unexpected changes in affordability that may constrain buyers who have been planning to purchase homes. Household income measures affordability, while the demographic variables control for differences in saving behavior as well as the probability of receiving a gift.

Consistent with the constraints hypothesis, the estimates in column 1 show that the reliance on gifts for the down payment is strongly (and significantly) related to income

¹² The joint Fannie Mae–Freddie Mac repeat-sales database shows an increase for this period.

¹³ Because we are trying to estimate the importance of gifts for buyers (housing affordability) rather than the overall amount of gift giving, we use the percentage of the down payment coming from gifts, rather than the gift amount, as the dependent variable. Thus a buyer for whom the percentage is large is considered to be dependent on relatives for the down payment, no matter how large the dollar amount of the gift. This point is particularly important for a sample in which the level of house prices, and thus the amount of down payment, changes over time and across cities. For completeness, however, we also estimated the regressions in table 6 using the gift amount as a percentage of the house price. The results were quite similar to those in table 6 and are available from the authors.

¹⁴ For example, significant missing data in the U.S. Chamber of Commerce house price indices (American Chamber of Commerce Researchers Association 1992) make that series impossible to use.

Table 6. Tobit Estimates of Gifts for First-Time Buyers (Dependent Variable Is Gift as a Percent of Down Payment)

Variable	(1)	(2)	(3)	(4)
Median house price (1993 \$)	0.19 (3.06)	0.22 (0.75)	0.19 (2.98)	0.21 (0.71)
One-year rate of appreciation (%)			46.15 (1.10)	39.72 (0.70)
Annual household income (1993 \$)	-0.00028 (2.14)	-0.00031 (2.34)	-0.00029 (2.20)	-0.00031 (2.36)
Head married	-15.18 (0.95)	-10.69 (0.67)	15.07 (0.95)	-10.87 (0.68)
Single male	-10.29 (0.80)	-8.97 (0.70)	-10.50 (0.82)	-8.97 (0.71)
Household size (persons)	7.2 (2.28)	7.6 (2.39)	7.5 (2.36)	7.7 (2.41)
Head age less than 25	36.45 (1.33)	41.05 (1.48)	38.08 (1.38)	41.17 (1.49)
Head age 25-29	35.82 (1.41)	41.12 (1.62)	37.51 (1.47)	41.18 (1.62)
Head age 30-34	28.05 (1.11)	34.15 (1.34)	29.27 (1.15)	34.03 (1.34)
Head age 35-39	19.77 (0.75)	26.08 (0.99)	21.41 (0.08)	26.30 (0.99)
Head age 40-49	19.58 (0.71)	22.98 (0.84)	19.59 (0.71)	22.40 (0.82)
Spouse employed	13.69 (1.08)	13.74 (1.08)	13.39 (1.06)	13.61 (1.07)
Year is 1988	-12.96 (8.63)	-13.86 (-1.47)	-17.21 (1.99)	-17.68 (1.62)
Year is 1990	-15.95 (8.47)	-17.30 (9.12)	-16.92 (8.52)	-18.10 (9.19)
City dummies included	No	Yes	No	Yes
Constant	-120.84 (4.07)	-118.90 (1.87)	-120.60 (4.06)	-113.25 (1.77)
Number of observations	1,277	1,277	1,277	1,277
Log likelihood	-1,817.78	-1,806.50	-1,817.18	-1,806.21

Source: CT&T, survey years 1988, 1990, and 1993.

Note: Numbers in parentheses are *t* statistics. All age categories are measured as dummy variables.

and median house prices, with low-income buyers and buyers living in high-priced cities receiving larger relative gifts. The coefficient on age is positive but insignificant.

In addition, the results provide some support for the merit hypothesis for gift giving. Gift percentage is positively related to household size, possibly because relatives are more likely to give gifts to families with children. Marital status, however, is not related to the gift percentage.

Adding city dummy variables (column 2) considerably reduces the significance of the coefficient of the median house price variable. This result suggests that because cities with high house prices in 1988 also had high house prices in 1993, median house price is largely picking up cross-sectional price differences. Columns 3 and 4 add a variable for the real house price appreciation rate in the previous year, but the coefficient is not significantly different from zero.

Because other sources of down payments (such as borrowing from a financial institution or a retirement plan) are important for many buyers, we calculated tobit regressions of the percentage of the down payment coming from savings as a function of the same variables used in table 6, and the results suggest similar economic conclusions (table 7).

In particular, the percentage of the down payment coming from savings is positively related to income and negatively related to median house prices, indicating that constrained buyers are more likely to turn to other sources such as gifts to obtain down payments. Larger households also rely less on savings when purchasing a house. The coefficient on the real house price appreciation rate in the savings regression is never significantly different from zero.

Estimates Using the Boston Mortgage Applications Data

The results from the previous section suggest that income-constrained buyers and buyers in cities with high median house prices rely more on gifts for their down payments. To explore more directly other possible explanations of gifts, this section uses data from a sample of mortgage applications in metropolitan Boston in 1990 to estimate the determinants of the likelihood of receiving a gift for a down payment. These data contain much more detailed financial and demographic information than is available from the CT&T survey, although they are limited to a single city and year.

The data were supplied to the Federal Reserve Bank of Boston by various Boston banks to assist in a study of the determinants of mortgage loan approval. They contain all major information that is available on a loan application and are described in detail in Munnell et al. (1996) and Engelhardt and Mayer (1994). For consistency with the data used in previous sections, the observations include only approved loan applicants.

The gift variable in the Boston Fed data includes both gifts from relatives and grants from other sources, including community organizations. However, discussions with bankers suggest that virtually all the gifts are from relatives. In theory, the data include only gifts, not loans, but it is possible that in some cases relatives will (intentionally) misreport a transfer as a gift when it is actually a loan. A comparison of the two data sets shows that differences in the definition of gift receipt probably have little effect on the

Table 7. Tobit Estimates of Savings for First-Time Buyers (Dependent Variable Is Savings as a Percent of Down Payment)

Variable	(1)	(2)	(3)	(4)
Median house price (1993 \$)	-0.26 (4.36)	-0.13 (0.46)	-0.25 (2.21)	-0.12 (0.42)
One-year rate of appreciation (%)			-55.66 (1.38)	-28.36 (0.52)
Annual household income (1993 \$)	0.00043 (3.33)	0.00045 (3.47)	0.00043 (3.41)	0.00045 (3.50)
Head married	19.87 (1.33)	14.38 (0.96)	19.72 (1.32)	14.53 (0.97)
Single male	11.48 (0.95)	10.10 (0.83)	11.63 (0.96)	10.17 (0.84)
Household size (persons)	-9.45 (3.13)	-9.84 (3.22)	-9.77 (3.23)	-9.89 (3.24)
Head age less than 25	-2.36 (0.10)	-9.26 (0.40)	-4.01 (0.17)	-9.37 (0.38)
Head age 25-29	-1.14 (0.05)	-7.83 (0.35)	-2.96 (0.13)	-7.93 (0.35)
Head age 30-34	2.42 (0.11)	-5.10 (0.23)	1.15 (0.05)	-5.02 (0.23)
Head age 35-39	9.25 (0.40)	0.14 (0.006)	7.49 (0.32)	-0.06 (0.002)
Head age 40-49	19.45 (0.79)	15.59 (0.63)	19.71 (0.80)	15.95 (0.65)
Spouse employed	-9.53 (0.80)	-8.18 (0.69)	-9.35 (0.79)	-8.15 (0.69)
Year is 1988	17.20 (2.05)	15.90 (1.74)	22.30 (2.42)	18.56 (1.77)
Year is 1990	10.25 (8.08)	9.44 (8.75)	11.56 (8.13)	10.02 (8.82)
City dummies included	No	Yes	No	Yes
Constant	168.42 (6.52)	144.92 (2.43)	167.95 (6.50)	140.5 (2.33)
Number of observations	1,277	1,277	1,277	1,277
Log likelihood	-2,393.0	-2,385.68	-2,392.0	-2,385.55

Source: CT&T, survey years 1988, 1990, and 1993.

Note: Numbers in parentheses are *t* statistics. All age categories are measured as dummy variables.

empirical results. In the Boston Fed data, about 22 percent of first-time buyers report receiving a gift, compared with 21 percent in the CT&T data.

Unfortunately, the Boston Fed data do not provide information about gift amounts. We therefore used a probit model to estimate the probability of receiving a gift as part of the down payment as a function of applicant demographic characteristics, presence of a coapplicant, household income and net worth, employment history, and credit history. Applicant demographic characteristics include age, years of education, number of dependents, gender, race, and marital status. Three categories classify the applicant's consumer credit history: no credit history, one or more accounts in slow-pay status, and any current delinquencies.¹⁵ Employment history is summarized in the number of years in the current line of work and the number of years in the current job.

Coefficient estimates for the sample of 1,604 first-time buyers whose applications were approved are reported in table 8.¹⁶ The base specification is presented in column 1, and the results differ somewhat from the findings using the CT&T data (tables 6 and 7). Married applicants are statistically more likely to get gifts for home purchase, which is consistent with the hypothesis that transfers are given because families see owner-occupied housing as a reward for meritorious behavior. However, number of dependents is not an important determinant of gift receipt, which runs counter to the merit hypothesis.

The employment history variables have no effect on the receipt of a gift. One of the credit history indicators does, however: Households with delinquent credit are more likely, all other things being equal, to receive a gift for home purchase, which is consistent with the hypothesis that credit-constrained households are more likely to receive familial help.

Higher educational levels and lower incomes are both positively related to the receipt of gifts. One possible explanation is that some households may have low current income but high permanent income (as measured by education). Without a gift, these households would be constrained to buy a smaller house than is consistent with their permanent income because the obligation ratio is tied to current income. Alternatively, educational level may proxy for the wealth of the applicant's family or may indicate meritorious behavior that is to be rewarded. A first home purchase may be a trigger event for the wealthy to transfer assets to their children that they would otherwise have transferred later.

Note, however, that in the CT&T data the marriage variable was not significant and the number of dependents was positively related to the gift amount. One explanation is that the CT&T data are missing some important variables that are correlated with age, such as education. In both data sets, however, income is significantly associated with the receipt of a gift and has the same sign. Age is also negatively related to gift receipt in both

¹⁵ The credit history variables from Munnell et al. (1996) were combined into a smaller number of variables for this analysis. The category for current delinquencies includes any applicants with one or more accounts at least 60 days delinquent.

¹⁶ Since gifts are given before the applicant knows whether or not the loan will be approved, we also estimated the equations in columns 1 and 2 using both rejected and accepted applications. The estimates were quite similar, and specification tests did not reject the hypothesis (at conventional significance levels) that the coefficients were the same for both groups.

*Table 8. Probit Equation Using Accepted Mortgage Applicants, First-Time Buyers
(Dependent Variable Is Whether Applicant Received a Gift)*

Variable	(1)	(2)
Age (years)	-0.03 (6.02)	-0.03 (5.45)
Education (years)	0.03 (2.05)	0.03 (2.18)
Married	0.27 (2.82)	0.27 (2.80)
Male	-0.06 (0.60)	-0.04 (0.44)
Minority	0.01 (0.10)	-0.29 (0.31)
Number of dependents	-0.05 (1.17)	-0.04 (1.11)
Coapplicant	0.03 (0.30)	0.01 (0.05)
Total monthly income (thousand \$)	-0.09 (4.79)	-0.09 (3.99)
Less than two years in line of work	0.08 (0.63)	0.08 (0.62)
Less than two years in same job	-0.07 (0.73)	-0.06 (0.67)
No credit history	-0.34 (1.66)	-0.31 (1.55)
One or more slow accounts	0.01 (0.14)	0.02 (0.20)
Current delinquencies	0.25 (2.46)	0.26 (2.56)
Total net worth (thousand \$)		-0.25 (2.25)
Obligation ratio (%)		0.01 (1.36)
Loan-to-value ratio (%)		0.59 (2.49)
Constant	0.18 (0.65)	-0.64 (1.68)
Number of observations	1,604	1,604
Log likelihood	-804.9	-795.9

Source: Federal Reserve Bank of Boston.

Note: Numbers in parentheses are *t* statistics.

data sets, although the coefficient is significant only in the Boston Fed data. The negative coefficient for age is consistent with the hypothesis that young households are constrained by mortgage qualification guidelines that consider current rather than lifetime income. On average, younger households have a more steeply increasing income profile than their older counterparts.

Column 2 adds several explanatory variables that are not available in the CT&T survey: total net worth, obligation ratio, and loan-to-value ratio. When these variables are included, the coefficients on the other variables change very little.

If applicants who receive gifts are income constrained, there should be an inverse relationship between the receipt of a gift and net worth. Alternatively, if gifts are simply wealth transfers from the wealthy to their offspring, there should be a positive relationship between gifts and net worth (assuming that the children of the wealthy have higher net worths than other people). Net worth in this study is that reported by the applicant on the mortgage application and includes the value of the gift.¹⁷ In this sense, net worth is endogenous. Net worth including the gift should be positively related to gift receipt, other things being equal. In column 2, however, the estimated coefficient on net worth is actually negative and statistically different from zero at the 1 percent level. Thus gifts appear to be targeted to more constrained households.

The specification in column 2 also includes the obligation ratio and loan-to-value ratio. Like net worth, these ratios are endogenous because they may reflect the proceeds of any gifts, and thus a negative relationship would be expected between gift receipt and the two ratios. Despite this bias, households with higher loan-to-value ratios—less money put down—are more likely to receive gifts for the down payment, and the result is statistically different from zero at the 5 percent level. Again, financial constraints appear important.

Conclusion

The findings in this article are consistent with the results in Engelhardt and Mayer (1994) showing that gift receipt is related to financial constraints. The percentage of the down payment coming from gifts is negatively related to income and wealth and positively related to median house price. Even when we control for income and wealth, the data also show that some household demographic characteristics are related to the receipt of gifts, which is evidence that givers target gifts to certain types of households.

The results from this study, combined with aggregate data showing that the percentage of the down payment coming from gifts is increasing (and that the percentage from savings is decreasing) and that the time to save and average age of first-time home purchasers are rising, suggest that young buyers are having an increasingly difficult time saving the down payment. In fact, difficulty saving the down payment might help explain why the homeownership rate for young households is falling even though census and National Association of Realtors data show that many renters have enough income to pay the mortgage of a starter home once the down payment has been made. One possible explanation for this phenomenon is that the cost of living or real rents have increased.

¹⁷ Because of problems in verifying net worth and questions about when the actual transfer of the gift takes place, the reported net worth for some applicants may not include the proceeds of the gift.

These data suggest that future research on savings and the timing of housing purchase should focus on time-series changes in affordability. The empirical results in Engelhardt and Mayer (1995) suggest that in a sample of successful first-time home buyers, controlling for real household income, higher real metropolitan house prices significantly raise the time to save for the down payment and increase the household savings rate for those households that do purchase. This work provides preliminary evidence that one factor affecting affordability—house prices—has a significant effect on down payment accumulation. However, to gauge the true effect of affordability on savings and the timing of home purchase, broader measures of affordability that incorporate both house prices and the effect of interest rates, as well as income, must be implemented in empirical analysis.

For policy makers interested in increasing the homeownership rate among young households, this study's findings suggest a possible solution. Because many young households have had increasing difficulty saving the down payment, low-down-payment mortgages could help. However, the mortgage default literature makes clear that such a policy comes at the cost of a significantly higher default rate.

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