

THE FIRST-TIME HOMEBUYER: THE BUILDER'S PERSPECTIVE

by

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B.A., Political Science
Bates College
1986

Submitted to the Department of Urban Studies and Planning
in partial fulfillment of the requirements of the Degree
of Master of Science in Real Estate Development at the
Massachusetts Institute of Technology

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AFFORDABILITY AND THE FIRST-TIME BUYER:
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ABSTRACT

Statistics indicate that homeownership rates for young first-time buyers have been falling in recent years. This trend concerns many analysts and would-be owners. This thesis developed out of a desire to gain insight into the topic of first-time buyers with specific attention focused on what influence the builder has on the affordability of new homes for this target group.

This study examines the first-time buyer as a national group and focuses on regional variations in their incomes, ownership rates and median house prices. It also studies the changing cost components of a new house since 1949 in an effort to determine to what extent the builder can control the overall price of a new home and in what areas the most substantial cost savings might be realized.

A principal finding of this study is that the builders' ability to control affordability for this target group of first-time buyers is subject to a set of constraints which impede the builder's ability to reduce overall housing costs. Reducing land costs is a key factor in reducing overall housing costs. This thesis operates in an environment that is not constant, however. Affordability and the way builders operate has much to do with market forces. There remains a question as to how aggressively builders will strive to reduce land costs and thus overall housing costs in an active and constrained market.

Thesis supervisor: James McKellar
Title: Visiting Professor, Department of Architecture

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I thank my father. He remains my most supportive teacher.

I thank my wife and daughter, whose confidence and support have been essential.

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INTRODUCTION

Housing affordability is an issue that is very much a part of this nation's political and social agendas. Critics have claimed that the United States is becoming a nation of "housing haves and have-nots."¹ Reports recently issued by the National Housing Task Force and the National Association of Home Builders state that homeownership helps define the American dream. They, along with other advocates for housing, claim that the desire to own one's own home is a deep-rooted characteristic of American culture. To many people, homeownership represents financial stability, a psychological and emotional pride in ownership and a sense of belonging to the community. It can also represent a substantial form of investment.²

Yet, despite the stated importance of homeownership, an increasingly large percentage of first-time buyers are finding homeownership out of reach. After increasing during every decade since the 1930's, a downward trend in the homeownership rate since 1980 has generated concern for many analysts and potential buyers that homeownership is becoming less affordable. After peaking in 1980 at 65.6 percent, the

¹Joint Center for Housing Studies, The State of the Nation's Housing, 1988, p. 1.

²See Galaty, Fillmore W. et al. Modern Real Estate Practice Eleventh Edition, p. 37.

national homeownership rate has since fallen to 64.0 percent. More noteworthy than this relatively modest drop off is the larger drop in homeownership rates for younger buyers in their mid 20's to mid 30's, traditionally the prime first-time home buying years.

The most dramatic declines in homeownership have been among younger households. Today, homeownership rates for the young remain well below those rates posted at the beginning of the 1980's.³ For the 19,480,000 families with household heads between the ages of 25 and 34, the homeownership rate has dropped from a high of 52.3 percent in 1980 to the present level of 45.2 percent. Nationwide, some two million more young households would own homes today if the ownership rates had not declined since 1980.⁴ Clearly, first-time buyers are losing ground in housing.

While some would argue that this falling rate represents a return to a more sustainable homeownership level, this study and other analyses contend that the desire of first-time buyers to own a home remains strong. Homebuilding surveys indicate that, despite falling ownership rates, the desire to own a home remains a major objective for those between

³See Joint Center for Housing Studies of Harvard University, State of the Nation's Housing 1990, p. 16.

⁴Ibid.

the ages of 25 and 34. The decline in homeownership rates in the 1980's is more a response to the rising costs associated with owning a home.

This thesis will examine the issue of homeownership affordability for the first-time homebuyer with specific focus on what the new home builder can do to affect affordability. To what extent does the builder control the component costs of a home and what is the ability to reduce housing costs and pass these savings along to the purchaser? The first chapter will provide an overview of the first-time homebuyer, track historical homeownership rates and discuss the factors that govern these rates. The second chapter examines the determinants of affordability and the barriers to homeownership and places them in an historical perspective. Although housing is a national concern, housing affordability is very much a local issue. For that reason, the second chapter will use data to show variations in affordability across regions for the first-time buyer.

The third chapter describes a model that examines changes in the cost components of a house in an effort to determine to what extent changes in the component costs over which the builder has control directly affect affordability. Having measured the builder's effect on affordability in a quantitative fashion, the final chapter contains

recommendations that might enable builders to more effectively produce a less expensive home, thus possibly enabling an increased percentage of first-time buyers to achieve homeownership.

CHAPTER ONE

HOMEOWNERSHIP AND THE FIRST-TIME BUYER

Introduction

There has been a great deal written on the topic of affordable housing, particularly on the demand for affordable housing. Yet, relatively little has been written that specifically addresses the issue of housing affordability for the first-time homebuyer and examines the builder's ability to supply a product that might improve this group's opportunities for homeownership. Due in part to the fact that the first-time buyer has not received as much attention as other buyer groups, it is important to clearly define who this group is. This chapter begins by establishing a definition of the first-time buyer. After this definition has been set forth, the chapter tracks historical homeownership rates for this group on a national level and by region. It also attempts to explain what factors determine variations in homeownership rates across regions.

The First-Time Homebuyer: The Problem

When the issue of affordability for the first-time buyer is discussed, it is generally framed as the problem that young, moderate income households have in achieving homeownership.⁵ These households are not poor; they tend to have decent jobs and would be considered by most to earn a good living. However, due to the increasing costs of homeownership, they have difficulty making the transition from renter to owner in what is the traditional time frame, between the ages of 25 and 35.

Unfortunately, these first-time buyers fall into a structural gap created by the fact that they are neither poor enough to qualify for government subsidies nor wealthy enough to realize the tax benefits of homeownership. Critics of federal or state assistance to the first-time buyer argue that any money allocated should be targeted at the truly needy, not at relatively well-off first-time buyers. Especially in an era of budgetary constraints, it seems unlikely that major direct or indirect subsidies will be directed to first-time buyers.

⁵For one of the few studies that specifically addresses this group, see Denise DiPasquale's First-Time Homebuyers: Issues and Policy Options. This section borrows from her definition.

Although first-time buyers are considered too well-off to qualify for government assistance, they are not wealthy enough to achieve homeownership and realize the financial benefits of income tax deductions.⁶ First-time buyer households have too much income to qualify for the subsidy programs and too little income to take advantage of the income tax deductions.⁷

The First-Time Homebuyer: The Definition

A concise definition for first-time buyers is somewhat elusive. Although there are several good sources that profile those who have already purchased their first home, there are no good sources available that provide a profile of potential first-time buyers who want to buy a home but cannot afford to do so.⁸ For example, the National Association of Home Builders (NAHB) provides survey results that indicate the median age, median income and product type (condo vs. single family detached) of new homeowners. Yet, the data doesn't depict regional or local differences and trying to profile the broad category of potential buyers is a difficult task.

⁶DiPasquale, pp. 1-2.

⁷Ibid.

⁸Ibid.

The alternative definitions for the first-time homebuyer range from literal first-time homebuyers (households that have never owned a home) to households that have not owned a home recently, to any household for which homeownership is not affordable.⁹ The constant and central issue for these three categories of potential buyers is housing affordability and this issue is often framed in terms of young families trying to make the transition from renter to owner. This study will define first-time buyers as young households between the ages of 25 and 35 who do not yet own a home. However, the issues discussed in this study may relate to other groups of first-time buyers.

The target group for this study is not insignificant. In 1989, the number of Americans in the prime first-time home buying age group between 25 and 34 peaked at 43.6 million. Analysts predict that from the beginning of 1989 to the end of 1992, 58.7 million people, nearly a quarter of the U.S. population, will either pass through or enter these pivotal home buying years. If homeownership rates remain where they are today, 32.2 million young adults will be left outside the ranks of the nation's homeowners.¹⁰

⁹This section has adopted the framework created by DiPasquale, p. 3.

¹⁰See Builder Magazine, July 1989. "An Essay on the State of the Nation's Housing," p. 5-7.

Exhibit 1

Homeownership Rate by Region and Age: 1973 to 1988 (Percent)

Region and Age	1973	1976	1980	1983	1988
Northeast					
Under 25	17.4	15.7	14.5	16.5	13.0
25 to 29	36.2	34.3	35.9	32.4	35.9
30 to 34	51.3	59.3	55.0	53.6	50.8
Midwest					
Under 25	25.3	24.4	24.6	21.8	14.9
25 to 29	47.9	48.6	50.5	43.5	41.4
30 to 34	66.5	68.6	68.1	63.0	57.3
South					
Under 25	29.9	24.2	25.0	23.0	19.8
25 to 29	47.6	46.8	46.4	41.7	37.9
30 to 34	62.1	63.2	63.4	56.6	53.8
West					
Under 25	15.3	15.1	16.2	11.6	11.2
25 to 29	39.7	39.0	36.0	31.4	27.8
30 to 34	59.5	56.9	54.9	48.2	47.2
Nation					
Under 25	23.4	21.0	21.3	19.3	15.5
25 to 29	43.6	43.2	43.3	38.2	35.4*
30 to 34	60.2	62.4	61.1	55.7	53.6*

Source: Joint Center for Housing Studies, The State of the Nation's Housing, 1989, 1990.

* National rate in 1989.

Homeownership Rates: An Aggregate Decline

Recent homeownership rates nationwide indicate the most persistent decline in over 50 years. The recent drop in the national homeownership rate to 64.0 percent has placed the nation's homeownership rate at its lowest level in 15 years. The decline comes at a time when demographic factors, that is, the aging of the baby boomers into prime home buying ages, would have pointed to sharp increases in homeownership rates. The decline in the rate of homeownership also follows one of the most sustained and vigorous housing recoveries on record.¹¹ The relatively modest overall drop in the aggregate rate masks a more serious problem for the first-time buyer.

Homeownership Rate: Younger Buyers

Exhibit 1 shows homeownership rates for younger age groups by census region. The table shows significant declines among younger households. Although the national homeownership rate for all households peaked in 1980, the rates reported in Exhibit 1 indicate that the decline in homeownership rates for first-time buyers began earlier. The rate peaked in 1973 for households younger than age 25

¹¹Apgar, William C. Jr., The Declining Supply of Low-Cost Housing, p. 7.

and those in the 25-29 age group. For households in the 30-34 age group, the homeownership rate peaked in 1976, with 62.4 percent of the households owning a home.

Explaining Declining Homeownership Rates

In order to make the transition to homeownership, the first-time buyer must overcome two major barriers to homeownership; the up-front cash costs (downpayment and closing costs) and the monthly housing costs (mortgage payments and other ongoing costs of owning a home). House prices and mortgage terms largely determine the magnitude of these costs, while income and accumulated wealth determine the ability of a household to make these payments.¹²

Exhibit 2 illustrates how both the downpayment and after-tax cash cost burdens have drifted upward. Although down from their peak in the early 1980's (due primarily to the decline in mortgage rates), the after-tax cash costs of homeownership remain high relative to the incomes of potential first-time buyers. In 1988, the cash cost burden was 32.8 percent of income, unchanged from 1987, but 50

¹²State of the Nation's Housing, 1989, Joint Center for Housing Studies, Harvard University, p. 11.

percent higher than the share of income required to pay for the typical starter home in the early 1970's.¹³

Exhibit 2
First-Time Buyer Burdens
(as a percentage of income in 1988 dollars)

	Downpayment Burden	Cash Burden
1971	41.0%	23.3%
1972	41.6	23.5
1973	43.9	25.3
1974	43.2	26.0
1975	46.2	27.8
1976	49.0	29.1
1977	52.3	32.2
1978	55.3	33.4
1979	59.9	37.0
1980	62.0	41.1
1981	61.9	44.5
1982	61.1	45.4
1983	59.4	40.0
1984	57.0	38.1
1985	55.3	35.8
1986	56.2	33.7
1987	56.3	32.8
1988	54.3	32.8

Source: Joint Center for Housing Studies

The downpayment burden also peaked in the early 1980's, but because the downpayment is a function of house prices rather than mortgage rates, its decline has been only modest. The improvement that has occurred reflects a slight easing of real house prices, along with moderate growth in incomes.

¹³Ibid.

In 1988, the downpayment represented 54.5 percent of first-time buyers income, up 25 percent from the early 1970's.¹⁴

To place the recent trends of lower after-tax cash burden and downpayment burden in perspective, note that house price inflation far exceeded income growth during the 1970's.

Although the reverse has been true since 1982, the inflation adjusted income of potential first-time buyers in 1989 was still below the 1972 level, while after-tax cash costs and inflation-adjusted home prices were still above early 1970's levels. As a result, both the after-tax cash cost and downpayment burdens remain significantly higher than 20 years ago.¹⁵

The increasing downpayment burden and after-tax cash cost burden of housing have important implications for the first-time buyer. As these burdens increase, the opportunities for homeownership decrease. It is important to note that housing affordability is a relative concept. Faced with higher housing cost burdens, some households may choose to purchase a smaller home or one with fewer amenities. High housing costs may force others to delay or abandon their efforts to purchase a first home entirely. Whatever the response, the figures shown in Exhibit 2 indicate that young

¹⁴Ibid.

¹⁵The State of the Nation's Housing, 1990, p. 15.

households are less able to purchase a house of given standards today than 20 years ago. In this sense, housing is less affordable to first-time buyers than in the past.¹⁶

From the builder's perspective, the extent to which he or she can reduce the cost burdens for first-time buyers by building a less expensive starter home will determine to what extent younger buyers might improve their ability to achieve homeownership. The relatively slow growth of the incomes of young households could make the builders' role in reducing housing costs a critical variable in any future effort to increase home purchases for this target group.

¹⁶Apgar, *The Nation's Housing: A Review of Past Trends and Future prospects for Housing in America*, p. 22.

CHAPTER TWO

THE FIRST-TIME BUYER: THE BUILDER'S PRODUCT

Introduction

Although homeownership rates and house prices are of national concern, housing markets are highly localized and affordability is very much a local issue. Exhibit 1 illustrated that homeownership rates for first-time buyers can vary widely across regions. While Chapter One examined first-time buyers' ability to realize homeownership, Chapter Two examines the changing cost components of a new single-family home. It also examines house price variations in an attempt to determine to what extent builders can be held responsible for increasing housing prices. This focus also provides an important background for Chapter Three, in which a quantitative study of the cost components of a house will attempt to determine what ability the builder has in controlling the fundamental factors of affordability. This chapter also hopes to illustrate those cost components of a new house which the builder can influence and those which he has limited ability to influence.

Geographical Variations in Costs

Although housing markets respond to broad national forces, housing markets are distinctly local in nature and there is a tendency to simplify economic issues related to housing by focusing on national trends. Price levels and trends differ markedly across regions, across metropolitan areas within a given region, and across cities or towns of similar size. The regional variation in housing prices reflects differences in land and site development costs, construction costs, the characteristics of the population and the strength of regional economies.¹⁷

Exhibit 3 shows trends in house prices paid and incomes earned by first-time homebuyers nationally and across regions. The house price data reflect the price paid for a house with similar attributes and quality; the income data are median incomes for married couples between the ages of 25 and 29 who are renters.¹⁸

As shown in Exhibit 3, the median house price nationally for first-time buyers jumped \$23,490 in 1973 to \$66,886 in 1987, a percentage change of 184.7%. Normal inflation is to be

¹⁷The State of the Nation's Housing, 1990, p. 10-11.

¹⁸See DiPasquale, p. 7.

Exhibit 3

First Time Homebuyers' Median Housing Prices and Young Renters' Median Incomes

Year	NATION		Northeast		Midwest		South		West	
	Sales Price	Median Household Income	Sales Price	Median Household Income	Sales Price	Median Household Income	Sales Price	Median Household Income	Sales Price	Median Household Income
1973	\$23,490	\$10,700	\$28,157	\$10,800	\$22,628	\$11,200	\$21,295	\$10,700	\$25,783	\$11,300
1974	25,682	11,900	30,673	12,700	24,460	12,000	22,988	11,400	29,086	11,800
1975	28,432	12,300	33,263	13,600	26,978	12,700	25,275	11,800	32,690	11,500
1976	30,868	12,600	34,632	13,700	29,397	12,900	27,057	12,000	36,293	12,200
1977	34,800	13,300	37,000	15,200	32,700	14,800	29,700	12,300	42,900	12,700
1978	39,846	14,400	41,107	15,900	37,376	15,100	33,323	14,000	50,837	13,300
1979	45,518	15,200	46,657	16,400	41,823	15,500	38,165	14,500	58,559	15,000
1980	50,530	16,300	51,245	16,500	44,276	16,700	42,857	15,700	66,152	16,400
1981	54,775	17,700	55,389	18,600	48,134	17,600	47,045	16,900	70,699	18,500
1982	56,202	18,400	58,201	20,100	50,162	18,000	48,975	18,800	71,386	19,300
1983	57,594	19,400	60,680	22,000	49,050	18,200	49,896	18,800	73,788	20,000
1984	59,821	20,800	67,044	23,000	51,503	19,900	51,619	20,100	73,359	22,500
1985	61,387	21,900	74,444	25,500	51,862	20,400	52,985	21,000	75,547	23,200
1986	64,067	22,700	88,282	27,200	54,282	21,100	54,113	21,600	78,293	24,100
1987	66,886	23,800	93,844	29,600	56,562	22,300	55,142	22,600	82,285	25,200
CHANGES:										
1973-1980	115.11%	52.34%	82.00%	57.78%	95.67%	49.11%	101.25%	46.73%	156.57%	45.13%
1980-1987	32.37%	46.01%	83.13%	79.39%	27.75%	33.53%	28.67%	43.95%	24.39%	53.66%
1973-1987	184.74%	122.43%	233.29%	174.07%	149.96%	99.11%	158.94%	111.21%	219.14%	123.01%

Sources: Joint Center for Housing Studies of Harvard University, "The State of the Nation's Housing 1988", Cambridge, Massachusetts, pp. 20-22.

expected over time and this jump in the median house price would not be a concern if the median incomes had kept pace. However, over the same period median income rose from \$10,700 in 1973 to \$23,800 in 1987, a percentage change of 122.4 percent.

Much of the increase in median housing price occurred during the 1973-1980 period. The percentage change in median price was 115.1% for the 1973-1980 period and just 32.4% for the 1980-1987 period. Median incomes rose by 52.3% from 1973 to 1980 and 46.0% from 1980 to 1987. While incomes have increased faster than home prices in the 1980-1987 period, these increases in incomes do not begin to narrow the gap between incomes and prices created by the home price increase of the late 1970's.¹⁹

The data presented in Exhibit 3 show that there have been wide variations in changes in housing prices across regions. During the 1973-1980 period, the large increases in the national median house price paid by first-time homebuyers seems to be driven by the large increase in the West of 156.6%. During the same period, the Northeast lagged behind all other regions with a percentage change of 82.0%. The situation changed dramatically during the 1980-1987 period. The largest increase in median price is seen in the

¹⁹Ibid., p. 9

Northeast with a 83.1% change while prices in the West only increased by 24.4%²⁰

Percentage change in income across regions shows much less change. During the 1973-1980 period, the percentage change in income ranged from 52.8% in the Northeast to 45.1% in the West. However, it is important to note that the percentage change in income lagged significantly behind the percentage change in median house price in all regions.

For the 1980-1987 period, the percentage change in income exceeded the percentage change in median house price in all regions but the Northeast. Again, it should be noted that while incomes increased faster than house prices in all regions but the Northeast for the 1980 to 1987 period, these increases do not make up for the increases in house prices in the late 1970's. House prices have increased much more rapidly than income over the entire period (1973 to 1987) in all regions.²¹ The combined effect of these trends was to boost homeownership costs beyond the grasp of an increasingly larger percentage of first-time buyers.

²⁰Ibid.

²¹Ibid.

The Cost Components of Housing Production

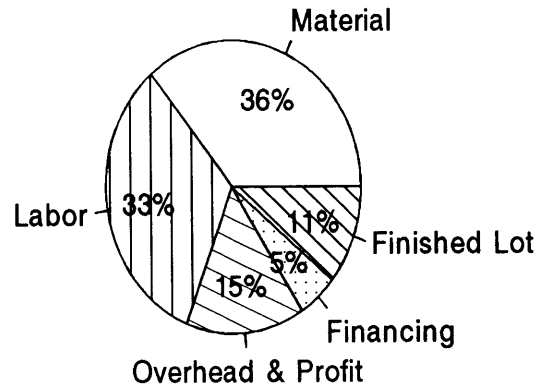
An overview of production costs for a median priced home over the past 40 years helps to provide answers as to why median house prices for first-time buyers might be outpacing their median income. Although this presentation simplifies housing cost assumptions, the overview provides a useful comparison of trends in the component costs of housing production.

Hard Costs

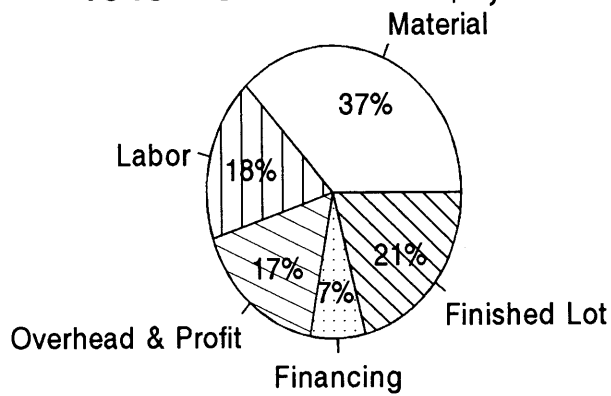
Exhibit 4 represents the changing cost components for a new single-family home since 1949. It is clear from this diagram that the cost of labor and materials required to build a new home have steadily declined as a percentage of total capital costs. The diagram indicates that labor and material costs have decreased from about 69% of total capital costs in 1949 to only 47% of the total in 1988. Labor costs have dropped by more than 50% from 1949 levels, while material costs have decreased more modestly by about 11%. Such proportional reductions in these hard costs are remarkable when considering that the standards of a typical new home have been significantly upgraded between 1946 and

Exhibit 4

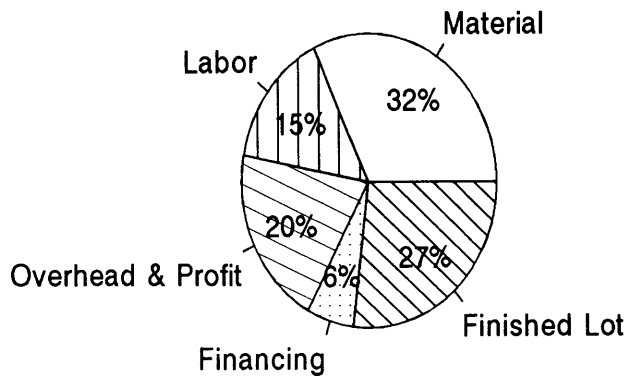
The Overall Price of a New Single-Family Home



1949 - Sales Price \$9,500



1969 - Sales Price \$26,000



1988 - Sales Price \$112,500

Source: NAHB Economics, Mortgage Finance and Housing Policy Division, Builder Magazine

1988, in terms of both the size of that home and the amenities of its construction.²²

Such relative savings in hard costs can be attributed to more rationalized building codes and improved construction materials and methods. Building codes across the country are becoming more standardized as the BOCA code has increasingly become the standard for home construction. The enacting of a more standardized code means that more cost effective construction techniques can be developed and approved which are not then subject to the whims of local building regulations and inspectors. This also allows materials and techniques (i.e. engineered wood products, plastic piping, etc.) which have been available for some time to be put to work more universally.

Such savings in hard costs can also be attributed in part to improved construction materials and methods. Labor saving tools like pneumatic nailers, laser levels, hydraulic staging and similar innovations have contributed to reduced production costs. The use of prefabricated components like roof and floor trusses, preassembled plumbing chases, fiberglass bath assemblies, prehung doors and windows, etc. have also reduced both labor and material costs. In other

²²See Kuehn, Robert H. Jr., The Homebuilding Industry: What Will It Take to Produce More Affordable Housing, p. 12.

cases, panelized and modular construction techniques create cost savings. By using factory labor to assemble larger components, the costs of on-site labor are reduced and materials can be utilized more efficiently.²³

Soft Costs

The most dramatic change in the cost components of a new single-family home has been the escalation of the cost of land acquisition and related improvements. The cost to the builder of overhead and profit has remained relatively constant. However, escalation of land acquisition, improvements, transaction costs related to the development and financing the approval process are responsible for sharp increase in total capital costs. In Exhibit 4, these components are included in the "finished lot." These costs have increased from 15% of capital costs in 1949 to 27% in 1988, an escalation of nearly 2.5 times.

These soft costs are both direct and indirect. Land costs have generally increased with inflation and market demand, especially in more developed parts of the country where buildable sites are becoming more scarce. The proliferation of regulatory controls over land use in the past 20 years further restricts the availability of land for development.

²³Ibid.

The time it takes to obtain regulatory approval can be as expensive as the cost to comply.²⁴ Zoning, subdivision and other land use controls typically decrease the allowable density of development which in turn increases the attributable cost per unit of land and land improvements. The increasing practice of imposing local impact fees for street improvements, water and sewer hookups and/or other infrastructure also adds to per unit costs of housing production. Equally significant are the costs created by regulatory controls which add both to preconstruction carrying costs as well as the cost of construction itself.

Prices for housing for the first-time buyer have increased more rapidly than median income for this group. The combined effect of these trends has boosted homeownership beyond the grasp of an increasingly larger percentage of first-time buyers. It does not appear that the builder is chiefly responsible for this condition. A study of the changing cost components of a new single-family house from 1949 to 1988 indicates that hard construction costs as a percentage of total capital costs for a typical new home have actually decreased. Accelerating land costs, transaction costs, and other soft costs of the development process have more than offset any savings in the hard cost of labor and materials. The key for the builder in reducing

²⁴Ibid., p. 14.

the overall cost of a new single family house will be in the soft cost components. These soft costs provide the builder with the greatest leverage and ability to affect the fundamental factors of affordability for the first-time homebuyer.

CHAPTER THREE

A BUILDER'S MODEL FOR FIRST-TIME BUYER AFFORDABILITY

Introduction

Chapter Three examines, from the builder's perspective, how fluctuation in the cost components of a median priced, new, single-family detached home affect the buyer's qualifying income, monthly payments and upfront cash requirement. A model has been developed in an effort to test the following hypothesis: the builder's ability to improve the chances of homeownership for first-time homebuyers is impeded by factors over which the builder has limited control (land prices, interest rates, underwriting guidelines). Also, the model will demonstrate that changes in the components controlled by the builder (hard costs, overhead and profit) have relatively little effect on the buyer's financial requirements and monthly principal and interest payments.

The Model

Exhibit 5A will serve as the base case. The costs and assumptions made in this exhibit are based on conversations with many local builders, real estate agents and mortgage originators. This model provides a snapshot and reflects the economic condition in the area. Undoubtedly, the

components will change with fluctuations in demand for housing, but this model is designed to show the comparative effects of changes in the cost components on the financial requirements of the buyer.

The House Lot

As noted in the previous chapter, land costs have increased proportionately at a greater pace than the actual bricks and mortar costs of constructing housing. Land is a key factor in controlling costs and keeping a home within reach of first-time buyers. As the old real estate saw has it, "they ain't making anymore of it." The costs of land assembly are subject to the basic economic forces of supply and demand, so land prices are driven up in active real estate markets.²⁵ Controlling land costs in an active market has long been a concern for builders.

For purposes of the base case model, land acquisition costs are estimated to be \$40,000. Discussions with builders building first-time buyer housing in semi-rural areas here indicate that this is an accurate estimate. As shown in Exhibit 5A and the accompanying notes, a house lot price of \$40,000, given the other assumptions, generates a monthly housing cost to the buyer of \$1,249, a downpayment cost of

²⁵See Kuehn, p. 24.

Exhibit 5A
Component Costs of a Single Family Home¹
Base Case

Component Summary

BUILDER:	Size (SF)	COST	COST PSF (House)	% Of Sales Price
I. HOUSE LOT ²				
Acquisition ³		40,000	33.33	
Sub-Total		40,000	33.33	31.08%
II. HARD COSTS	1,200			
Base Building ⁴		54,000	45.00	
Site Improvements ⁵		5,500	4.58	
Sub-Total		59,500	49.58	46.24%
III. SOFT COSTS ⁶				
Development Costs				
Design Fees (A/E) ⁷		1,200	1.00	
Legal/Accounting Fees/Permits ⁸		500	0.42	
Taxes		500	0.42	
Utilities		100	0.08	
Interest/Points ⁹		100	0.08	
Marketing/Sales ¹⁰		3,500	2.92	
Miscellaneous		5,500	4.58	
		1,000	0.83	
Sub-Total		12,400	10.33	9.64%
IV. OVERHEAD AND PROFIT		16,785		13.04%
SALES PRICE		128,685		100%

Source: DiPasquale and McKellar, Design Strategies for Affordable Housing.

Exhibit 5A
Continued

BUYER:		% of Income
Sales Price	128,685	
Loan Amount (90% LTV)	115,817	
Term (Months)	30	
Downpayment	12,869	
Points-Closing 1%	1,158	
Other Closing 2%	2,316	
Total Downpayment Burden	16,343	35.97%
Interest Rate	9.5%	
R/E Taxes @ 2.5% (monthly)	268	
Monthly Principal and Interest	981	
Total Monthly Cost To Buyer	1,249	33.00%
Minimum Income Required	45,435	
33% of monthly income		

Notes for Exhibit 5A

- 1 Assumes new single-family detached home on buildable lot.
- 2 Minimum lot sizes tend to be no less than 10,000 square feet in this area and can be zoned as high as 80,000 square feet. For purposes of this model, land cost per unit is more important than lot size per unit.
- 3 Base case price based on comments by builders buying house lots for homes in the \$120,000 to \$150,000 range.
- 4 \$45 PSF figure based on figures provided by local builders.
- 5 Assumes municipal water hookup, septic system and full foundation.
- 6 Based on historical cost data of local builders and cost projections for a house in this price range.
- 7 Assumes repeated use of one house plan or minor modifications to original plan.
- 8 Building permit fee and hookup fees. Does not include impact fees.
- 9 Assumes \$82,720 construction loan @ 10.5%, 20 year term, 4 month construction period.
- 10 Assumes sales commission of 4%.

\$16,343 and a minimum income of \$45,435. Zoning controls in some towns in this area require minimum lot sizes of 70,000 square feet in rural zones. That will strike many as an excessively large lot for this type of housing. If, in fact, zoning could be amended to allow for a net density of 4 units per acre, and the land cost for the parcel remained fixed at \$40,000, land costs per unit would drop to 10,000 per unit.

Appendix 1 shows how dramatically this affects the buyer's ability to pay. With a \$10,000 per unit land cost, the final costs to the buyer are reduced by about 26%. The total downpayment burden drops from \$16,343 to \$11,961, and the monthly cost to the buyer drops from \$1,249 to \$914. The minimum income required drops from \$45,435 to \$33,254.

The builder is able to realize a great deal of leverage if he succeeds in manipulating land costs in this fashion. As most builders who build in this price range will tell you, controlling land costs is a critical factor in sales.

Building houses on smaller lots is clearly one way to reduce housing costs for the builder, assuming the builder can capture the savings in land costs per unit realized by increasing density.

Hard Costs

As mentioned earlier, more rationalized building costs and improved construction materials and methods have helped to actually decrease construction hard costs as a percentage of total production costs over the past 40 years. The base case model has projected construction costs at \$45 PSF. If the builder is able to reduce hard construction costs by 20% to \$36 PSF, the effect on the buyer is less dramatic than a reduction of land costs.

A 20% reduction in hard construction costs amounts to a reduction in the final cost to the buyer of 10%. The downpayment burden drops to \$14,766 from \$16,343. The monthly cost to the buyer drops to \$1,129 from \$1,249 and the minimum income required drops to \$41,049 from \$45,435, all drops of 10%.

It is unfortunate for the first-time buyer that the component which the builder is able to most closely control is one which has less bearing on the final cost of ownership for the buyer. This is not to say that further cost-saving improvements in materials and building methods should not be encouraged. However, dramatic decreases in hard construction costs inevitably compromise building standards without achieving a corresponding impact on the costs to the

buyer. Even quite substantial savings in the hard costs of labor and/or materials do not translate into major reductions in overall housing costs.²⁶

Soft Costs

Although the model assumes a buildable lot ready for construction, such is often not the case. Many house lots intended for housing for the first-time buyer are subdivided and developed from larger parcels of raw land. When this situation exists, increases in the cost of land acquisition and land improvements have resulted in significant overall cost increases. Escalation of the transaction costs related to the development and financing approval process are responsible for sharp increases in total capital costs over the past 40 years.²⁷

Zoning, subdivision controls and other land use controls typically decrease the allowable density of development, which, as has been demonstrated, increases the attributable cost per unit of land and land improvements. Not only do these controls decrease density, they also increase soft costs in the form of architectural and engineering fees, legal fees and pre-construction carrying costs.

²⁶See Kuehn, p. 24.

²⁷See DiPasquale, p. 14.

Discussion with builders in this area reveal that the subdivision approval process in more highly settled communities in this area typically take one year or longer. Assuming a proposed 10 lot subdivision was purchased outright at \$40,000 per unit, one can see how pre-construction carrying costs affect the building bottom line. In this example, total land costs generate \$3,594 per month in carrying cost (assume \$400,000 mortgage amount, 10.5% rate, 20 year term). At the end of one year, each lot has generated \$4,792 in carrying costs. Add this to the original lot price of \$40,000 and, based on the model, this increase raises the sale price by 4.3% to \$134,196. Final costs to the buyer increase by 4.3%, the downpayment burden increases to \$17,043 from \$16,343, the total monthly cost to the buyer increases to \$1,303 from \$1,249 and the minimum income required increases from \$45,435 to \$47,380.

An increase of 4.3% off the final costs to the buyer does not seem significant until one remembers that housing production in this price range is a zero-sum game. When it is critical to control costs, increases in one area necessitate reductions in others. For example, if the increased costs of \$4,792 due to the extended approval cost had been avoided, the builder would have been able to use that capital to include another 100 square feet of living area into the house (100 square feet @ 45 PSF). For a

young, growing family this could have meant the addition of valuable eat-in kitchen space, a second full bath or perhaps a small nursery.

Underwriting Guidelines and Mortgage Interest Rates

Given the information contained in Exhibit 5A, Exhibit 6 shows how changes in the interest rate affect the buyer's final costs.

Exhibit 6

Interest Rates and Buyer's Costs

I.	Mortgage Rate	9.5%
	Sales Price	128,685
	10% Downpayment	12,869
	Monthly Cost	1,249
	Required Income	45,435
II.	Mortgage Rate	10.5%
	Sales Price	128,685
	10% Downpayment	12,869
	Monthly Cost	1,335
	Required Income	48,540
III.	Mortgage Rate	11.5%
	Sales Price	128,685
	10% Downpayment	12,869
	Monthly Cost	1,422
	Required Income	51,711

Based on the set of assumptions used in Exhibit 5A, Exhibit 6 shows that a 2% increase in the mortgage rate increases the final housing costs to the buyer by 14%. Clearly, the

builder has little control over the mortgage rate. However, in order to offset that 14% increase the builder would either have to reduce his construction costs from \$45 PSF to \$32 PSF (arguably sacrificing quality) or reduce the size of the home by 27% to 875 square feet.

The homebuilder is subject to a set of constraints which impede his ability to affect the fundamental factors of affordability for the first-time homebuyer. From the builder's perspective, issues of affordability for these buyers have less to do with the bricks and mortar costs of construction than they do with the issues related to finance, project approval and mortgage interest rates. As shown, reductions in finished lot prices have a greater effect on the buyer's ability to own than do relatively minor savings by the builder in hard construction costs. Given relatively constant overhead and profit percentages since 1949, the builder's ability to control affordability for the first-time buyer is affected by his ability to control land costs, assuming he passes any savings on to the buyer.

CHAPTER FOUR

BUILDING A LESS EXPENSIVE HOME FOR THE FIRST-TIME BUYER

Introduction

The model in Chapter Three was designed to illustrate those areas where the builder might be able to realize savings in housing costs for the first-time buyer. This chapter addresses more specifically how overall cost savings might be realized in the areas of land costs, development soft costs and hard construction costs. As mentioned, profit and overhead as a percentage of total construction costs have remained constant since 1949. It is unlikely that efforts to reduce costs in this area will yield significant savings to the builder or the buyer. Also, although finance costs have been rising as a percentage of overall costs, the builder has little control over the cost of financing for traditional construction loans.

Land Costs

As shown, land costs have a significant bearing on overall costs for the builder and housing costs for the buyer. Land costs as a percentage of overall costs have increased proportionately more than any component item since 1949. Most builders will agree that the easiest way to reduce land

costs and housing costs to the buyer is to reduce the amount of land allocated for each unit. Reduced lot sizes, setbacks and frontages can add up to considerable savings in terms of overall site improvements. This study, along with several others, contends that putting homes on an eighth of an acre rather than the typical quarter-acre site could reduce the final cost to the buyer by as much as 20 percent.²⁸

However, statistics show that the average lot size for new single family houses is actually increasing. This is due in part to the desire of builders to increase profits by building on larger, more expensive lots. From a regulatory perspective, much skepticism revolves around the issue of lot downsizing. Efforts to downscale in that manner invariably run afoul of local initiatives to curb development.²⁹ Securing the regulatory approvals necessary to increase density is a major obstacle for builders attempting to build houses for first-time buyers.

²⁸Banker and Tradesman, "Demographics, Economics Will Dowse Housing Sparks Before They Ignite," April 17, 1991.

²⁹Ibid.

Development Soft Costs

Overall costs to the builder and housing costs to the buyer are affected by the local regulatory environment in terms of zoning and subdivision controls. Homebuilding is a highly regulated activity. Perhaps in no other industry must the producer obtain permission for each individual unit of production. The effect of this regulation on the affordability of housing is undoubtedly negative. The extent to which housing cost is increased is difficult to measure, however, in part because the standard of comparison -- the cost in the absence of regulation or in a regime of only "necessary" regulations -- is not well defined.³⁰

These controls tend to restrict the availability of land for development and also restrict the density of development, increasing the effective cost of land per unit. Development soft costs including the costs of approvals, permits, impact fees and similar costs are being driven up by environmental and other regulatory controls on development in many localities.³¹ These regulations run the gamut from zoning and building codes, licensing requirements, environmental clearances and a myriad of other approvals required for even

³⁰NAHB, Housing Economics, "Regulatory Costs and Affordable Housing," May 1989, p. 9

³¹Kuehn, p. 24.

a modest housing proposal. Although many of these regulations are well-intended, the sheer volume and complexity of such rules have become a significant burden on the cost of housing production.³²

In the very least, the approval process requires reform to reduce expensive delays and costs imposed by regulation. This is not to suggest that necessary and legitimate public protections should be abandoned in favor of increased housing output. However, a balance needs to be struck between the planning concerns of communities and the need for housing production at more affordable costs.³³

Hard Construction Costs

The affordability problem for first-time buyers is due more to regulatory constraints than increases in hard costs. Construction hard costs have actually decreased as a percentage of total production costs over the past 40 years. Labor costs have dropped by more than 50 percent of the 1949 cost levels, while material costs have decreased by about 15 percent.

³²Kuehn, p. 25.

³³Ibid.

In the area where builders have the greatest influence over costs, they have succeeded in creating savings by utilizing improved construction materials and methods and labor saving tools. Continued improvements in materials and methods should be encouraged in an effort to reduce construction hard costs.

However, the increasing overall cost of a new house is due more to increasing land costs and development soft costs than the brick and mortar costs of construction. Efforts to reduce housing costs for the first-time buyer should focus on the areas of land costs and soft development costs. Housing for the first-time buyer is a unique product, in that it takes a cooperative effort on the part of both builders and municipalities to reduce housing costs for the first-time buyer. Municipalities must be willing to adopt flexible regulatory guidelines that allow for lot downsizing and development regulations that help to reduce housing production costs. Builders will also have to be willing to pass on any housing production savings to the buyer in the form of a less expensive home if a larger percentage of first-time buyers are to realize homeownership.

APPENDIX 1
Component Costs of a Single Family Home

Component Summary

BUILDER:	Size (SF)	COST	COST PSF (House)	% Of Sales Price
I. HOUSE LOT				
Acquisition		10,000	8.33	
Sub-Total		10,000	8.33	10.62%
II. HARD COSTS	1,200			
Base Building		54,000	45.00	
Site Improvements		5,500	4.58	
Sub-Total		59,500	49.58	63.17%
III. SOFT COSTS				
Development Costs				
Design Fees (A/E)		1,200	1.00	
Legal/Accounting		500	0.42	
Fees/Permits		500	0.42	
Taxes		100	0.08	
Utilities		100	0.08	
Interest/Points		3,500	2.92	
Marketing/Sales		5,500	4.58	
Miscellaneous		1,000	0.83	
Sub-Total		12,400	10.33	13.17%
IV. OVERHEAD AND PROFIT		12,285		13.04%
SALES PRICE		94,185		100%

Appendix 1
Continued

BUYER:		% of Income
Sales Price	94,185	
Loan Amount (90% LTV)	84,767	
Term (Months)	30	
Downpayment	9,419	
Points-Closing 1%	848	
Other Closing 2%	1,695	
Total Downpayment Burden	11,961	35.97%
Interest Rate	9.5%	
R/E Taxes @ 2.5% (monthly)	196	
Monthly Principal and Interest	718	
Total Monthly Cost To Buyer	914	33.00%
Minimum Income Required	33,254	
33% of monthly income		

APPENDIX 2
Component Costs of a Single Family Home

Component Summary

BUILDER:	Size (SF)	COST	COST PSF (House)	% Of Sales Price
I. HOUSE LOT				
Acquisition		40,000	33.33	
Sub-Total		40,000	33.33	34.40%
II. HARD COSTS				
	1,200			
Base Building		43,200	36.00	
Site Improvements		5,500	4.58	
Sub-Total		48,700	40.58	41.89%
III. SOFT COSTS				
Development Costs				
Design Fees (A/E)		1,200	1.00	
Legal/Accounting		500	0.42	
Fees/Permits		500	0.42	
Taxes		100	0.08	
Utilities		100	0.08	
Interest/Points		3,500	2.92	
Marketing/Sales		5,500	4.58	
Miscellaneous		1,000	0.83	
Sub-Total		12,400	10.33	10.67%
IV. OVERHEAD AND PROFIT		15,165		13.04%
SALES PRICE		116,265		100%

Appendix 2
Continued

BUYER:		% of Income
Sales Price	116,265	
Loan Amount (90% LTV)	104,639	
Term (Months)	30	
Downpayment	11,627	
Points-Closing 1%	1,046	
Other Closing 2%	2,093	
Total Downpayment Burden	14,766	35.97%
Interest Rate	9.5%	
R/E Taxes @ 2.5% (monthly)	242	
Monthly Principal and Interest	887	
Total Monthly Cost To Buyer	1,129	33.00%
Minimum Income Required	41,049	
33% of monthly income		

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