THE IMPACT OF HOUSING CODE ENFORCEMENT UPON

HOUSE OPERATING FIRM DECISION-MAKING

by

JIM ROBERT YARDLEY

B.A., University of British Columbia, 1969

A THESIS SUBMITTED IN PARTIAL FULFILMENT OF

THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF ARTS

in the School

of

Community and Regional Planning

We accept this thesis as conforming to the

required standards

THE UNIVERSITY OF BRITISH COLUMBIA

May 1972

In presenting this thesis in partial fulfilment of the requirements for
an advanced degree at the University of British Columbia, I agree that
the Library shall make it freely available for reference and study. I
further agree that permission for extensive copying of this thesis for
scholarly purposes may be granted by the Head of my Department or by his
representatives. It is understood that copying or publication of this
thesis for financial gain shall not be allowed without my written per-
mission.

School of Community and Regional Planning

The University of British Columbia

Vancouver 8, Canada

Date _May 3, 1972_

ABSTRACT

In the field of planning and policy-making, there is often in-
sufficient concern for the nature and patterns of decision-making in the
private sector. It is felt that improved knowledge of these patterns
would provide an additional significant input to aid policy-makers in
the difficult task of assembling the most appropriate program from a host
of available alternatives.

To develop this theme, this thesis has focused upon private sec-
tor response to housing code enforcement as a tool for eliminating sub-
standard housing and increasing the supply of standard housing for low
income tenants. Two models of rehabilitation decision-making by absentee
owners of multiple rental housing (i.e., house operating firms) are pre-
sented and operationalized.

The first model assumes that a community does not enforce a set
of minimum housing standards. Consequently, house operating firms are
free to adjust their operating, replacement and remodelling expenditures,
thereby raising or lowering the position occupied by their buildings in
a distribution of rental housing quality. Since each position in this
quality distribution generates a different level of rent, the firm must
choose that position which maximizes profit from its building. In the
case where minimum housing regulations are not enforced, this pattern of
decision-making often implies the existence of a significant quantity of
profitable substandard rental housing. Since firms in this instance are
free to decide to operate their buildings at substandard levels without

fear of prosecution, we have termed this the "unrestricted decision-making model."

The second model, which we have described as the "restricted decision-making model," assumes that a housing code has been enacted and is strictly enforced. In this case, house operating firms owning substandard buildings have certain restrictions placed on their decision-making. These restrictions require that the firm either increase its expenditures on its building to raise the level of quality to a certain minimum standard or withdraw the building from occupancy. The result is that such firms face a potential loss in profit which they will attempt to minimize in their decision-making.

An examination of the housing code enforcement experience of selected communities points toward a number of serious issues which must be resolved if such programs are to succeed in restricting house operating firm decision-making. These issues include administration, inspection, staffing, legal, land use and vacancy problems. All but the latter problem appear to be soluble, given the appropriate steps. However, under conditions of low vacancy rates in non-luxury rental housing, the strict enforcement of a housing code threatens to dislocate significant numbers of low income tenants. This undesirable outcome is to be expected according to the restricted decision-making model; however, it is contrary to the stated aims of code enforcement.

To alter this outcome, it is contended that communities should concentrate on manipulating the important variables in the house operating firm decision-making process by introducing a range of policies into their code enforcement programs. In the final chapter of this thesis, then, certain policy alternatives are considered with respect to

their potential impact upon the decisions of house operating firms, with
the emphasis placed on stimulating rehabilitation where it might other-
wise not occur.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ACKNOWLEDGMENTS

CHAPTER ONE

LOW INCOME GROUPS AND THE HOUSING MARKET

INTRODUCTION

This chapter can be conveniently divided into two distinct parts. The first part provides a brief analysis of the position of low income families within the context of the housing market in Canada today. The essential point which emerges from this part is that most low income families are restricted to acquiring accommodation either in privately- or publicly-owned rental housing or in poor quality existing detached houses. Owing to their lack of effective demand in the housing market, then, low income groups appear to be heavily dependent on accommodation supplied by absentee landlords, over whom they can exert little control.

This observation leads into the second part of the chapter, which emphasizes the need to understand the decision-making processes of absentee owners with respect to the provision of housing services. The possible effect that the National Building Code might have in influencing these decisions is then considered. The ineffectiveness of the National Building Code demonstrated by this discussion points to the need for considering alternative devices of public policy to protect low income groups in the housing market. One such alternative device, housing code enforcement, has been widely employed as a tool to control absentee owner decision-making. In the hypothesis presented

at the end of this chapter, however, it is contended that the lack of a clear understanding of the decision-making processes of absentee owners of rental accommodation has rendered this device ineffective.

LOW INCOME GROUPS AND THE HOUSING MARKET

The Canadian Conference on Housing (1968) declared that all Canadians have the right to be adequately housed whether they can afford it or not.[1] The Task Force on Housing declared that every Canadian should be entitled to clean, warm shelter as a matter of basic human right.[2] These declarations have important implications for both the demand and supply sides of the housing equation. On the demand side, it is implied that the effective demand[3] of Canadians for housing should be raised to levels higher than those currently realized. On the supply side, it is implied that a portion of the existing supply of housing in Canada is less than adequate in terms of quality and therefore requires some improvement. Both the demand and supply implications of the above-noted declarations are of extreme importance and merit intensive study. In the course of this study, however, the analysis will be limited primarily to the latter.

The Special Senate Committee on Poverty found that the "rights" referred to above have not been realized. "The undeniable fact persists: a substantial number of Canadian families must exist from day

---

[1] M. Wheeler (ed.), The Right to Housing (Montreal: Harvest House, 1969), p. 331.

[2] Task Force on Housing and Urban Development, Report (Ottawa: Queen's Printer, 1969), p. 22.

[3] Effective demand is demand supported by purchase dollars.

to day without benefit of any of the comforts traditionally associated

with home--including protection from the elements, privacy and adequate

sanitary facilities."[4] The magnitude of this problem was clearly indi-

cated by the Task Force on Housing, which estimated that half a million

of the 5,500,000 housing units in Canada in 1968 were substandard.[5]

Similarly, the Castonguay-Nepveu Commission found that one-third of the

houses in the province of Quebec were inadequate and stated that the

present situation constituted a real danger for the physical and mental

health of families.[6] While these macro observations convey the scale

of the problem, its intensity can be summarized by a letter presented

to the Special Senate Committee on Poverty. A woman wrote:

> I have four daughters living with me . . . . I have been on
> Mother's Allowance since September, 1969, receiving $291. . . .
> We have moved six times in two years, constantly running from
> cockroaches and landlords with greedy hands. If I complained we
> got our notice. No one wanted four girls . . . .
> We nearly froze in one apartment and had to move in December.
> I took this place because it had a thermostat. We are nice and
> warm now. We are again on the third floor. The plaster is fall-
> ing from the ceiling and walls. It needs painting badly. The
> toilet doesn't work properly. There is one wall plug in the mid-
> dle room and we have to use about 200 feet of extension cord to
> all the rooms and trip over it constantly.
> The light in the bathroom doesn't work, so we have to use the
> extension through two windows to get around. The place is over-
> run with cockroaches. The landlord promised to re-decorate before
> Christmas but hasn't touched it except to put in a sink. He took
> three weeks to connect the gas stove. Heat, gas and light was
> supposed to be included in the rent.[7]

Clearly, then, the lower income groups in Canada are at a disadvantage

----

[4]Special Senate Committee on Poverty, Poverty in Canada (Ottawa:
Information Canada, 1971), p. 133.

[5]Task Force on Housing and Urban Development, op. cit., p. 14.

[6]Quoted in Poverty in Canada, p. 134.

[7]Ibid., p. 134.

in their search for adequate housing.

If we accept the declarations of the Canadian Conference on
Housing (1968) and the Task Force on Housing, then we must examine the
alternative sources of supply of adequate housing and their availability
to all groups in the income spectrum. In any given year, the housing
supply consists of a modest amount of new construction plus a substan-
tial inventory of existing housing. By the end of 1970, annual new
residential construction in Canada amounted to approximately 200,000
units, while the supply of existing housing units numbered approximately
5,880,000.[8] It is immediately apparent from these figures that the
existing stock of housing units constitutes by far the majority of the
total housing stock in any given year (96.6% in 1970).

Subsidized Residential Construction

Generally speaking, new subsidized residential construction does
not substantially increase the supply of housing for that portion of
the income spectrum which can express only limited effective demand.
Government involvement in low income housing reached its peak to date
during the period 1969-70, in which an annual average of 41,670 units
were constructed.[9] While this figure represents a substantial increase
in the government's performance in the sphere of low income housing,[10]

---

[8]This estimate is based upon an addition of 400,000 units (con-
structed in 1969-70) to the 1968 estimate of 5,500,000 units, less an
estimated annual removal of 10,000 units.

[9]Central Mortgage and Housing Corporation, Economics and Statis-
tics Division, Canadian Housing Statistics, 1970 (Ottawa: March, 1971),
p. 39.

[10]During the period 1960-69 only an average of 5,150 units were
constructed annually.

it still represents only 20.7% of all new residential construction for that period. Moreover, the significance of this improved performance is further diminished when viewed in the light of the total housing stock, as the low income housing units constructed constitute but 0.66% of all residential units in Canada in 1970. The above statistics serve to confirm a preliminary assumption of this study: newly constructed subsidized housing represents only a small proportion of the total supply of housing available to low income groups.

Non-subsidized Residential Construction

It is generally assumed that non-subsidized new residential construction is beyond the reach of low income groups. Support for this assumption can be gleaned from Table I below, which indicates that families with incomes in the lowest third of the income distribution were able to obtain only 5.3% of all N.H.A. mortgages for newly constructed housing in 1970. Table II below indicates that in 1970 a family living in a major metropolitan area required an income of $9,022.00 and a down payment of $4,193.00 in order to finance the average new dwelling constructed during that year. These figures clearly indicate that almost the entire supply of new residential construction is currently unavailable to the lowest third of the income spectrum.

The Existing Housing Stock

If new residential construction, whether subsidized or not, supplies only a small portion of the housing requirements of lower income Canadian families, it can then be expected that the vast supply of existing housing supplies the remainder. Table III below, however, indicates that the plight of the prospective low income purchaser is not relieved

TABLE I

N.H.A. BORROWERS AND FAMILY INCOME GROUPS
IN LARGE URBAN CENTRES - 1954-70

Family income group	Percentage of N.H.A. borrowers from each family income group in selected years						
	1954	1961	1963	1965	1967	1968	1970
Lower third	6.6	9.5	10.4	17.9	11.2	7.7	5.3
Middle third	44.2	48.3	57.4	54.2	52.0	50.7	54.2
Upper third	49.2	42.2	32.2	27.9	36.8	41.6	40.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Canadian Housing Statistics, 1970, Table 99, p. 79.

TABLE II

DWELLING COSTS, DOWN PAYMENTS, GROSS DEBT
SERVICE AND INCOMES BY AREA - 1970

Metropolitan area	Average dwelling cost	Average down payment	Average gross debt service	Average minimum income
Calgary	22,626	3,788	2,519	9,330
Edmonton	23,909	4,302	2,560	9,481
Halifax	25,140	5,661	2,772	10,267
Hamilton	28,690	7,800	2,833	10,493
Kitchener	24,208	4,028	2,605	9,648
London	24,421	5,159	2,657	9,841
Montreal	17,655	2,715	2,166	8,022
Ottawa-Hull	26,640	6,121	2,713	10,048
Quebec	17,596	2,727	2,027	7,508
Regina	18,697	2,853	2,087	7,729
Saint John	21,219	4,598	2,220	8,222
St. John's	22,104	3,782	2,073	7,678
Saskatoon	19,115	2,642	2,172	8,044
Sudbury	26,249	6,587	2,714	10,052
Toronto	29,350	6,649	3,066	11,355
Vancouver	25,488	6,590	2,494	9,237
Victoria	27,340	7,269	2,577	9,544
Windsor	28,439	7,069	2,886	10,688
Winnipeg	22,543	4,361	2,392	8,859
Average	22,304	4,193	2,436	9,022

Source: Canadian Housing Statistics, 1970, Table 104, p. 83.

TABLE III

DWELLING COSTS AND INCOMES BY AREA
AND TYPE OF LENDER - 1970
EXISTING HOUSING

	Approved-lender loan		CMHC loan	
Metropolitan area	Average dwelling cost	Average family income of borrower	Average dwelling cost	Average family income of borrower
Calgary	19,288	11,536	17,365	9,806
Edmonton	20,489	12,160	17,270	9,628
Halifax	21,938	11,120	17,666	4,280
Hamilton	22,404	11,029	---	---
Kitchener	18,980	11,527	---	---
London	17,120	11,279	16,523	8,364
Montreal	18,022	12,362	14,079	8,853
Ottawa-Hull	19,229	11,101	16,015	9,974
Quebec	19,112	13,071	16,060	8,116
Regina	14,563	10,154	12,155	6,600
Saint John	17,565	10,638	---	---
St. John's	21,917	12,155	17,152	8,197
Saskatoon	14,186	10,536	13,372	7,653
Sudbury	19,471	10,953	18,520	9,780
Toronto	24,626	12,479	31,360	12,236
Vancouver	22,959	12,012	24,580	7,528
Victoria	20,425	10,978	---	---
Windsor	19,169	11,427	---	---
Winnipeg	14,603	9,451	13,751	7,715
Average	18,798	10,914	15,169	8,525

Source: Canadian Housing Statistics, 1970. Tables 88 and 89, pp. 74-75.

substantially in the market of existing housing. The fact remains that

in order to purchase even an existing detached house, one must have a

relatively high income or, alternatively, must possess a substantial down

payment.

It might be contended that the low income groups have access to

housing which is less expensive than that referred to in Table III.

Unfortunately, at least from the prospective purchaser's point of view,

both the conventional lenders and CMHC require that housing meet certain quality standards before they will approve a mortgage. While this requirement protects the lender's investment, it must inevitably raise the cost of existing housing and thereby reduce the opportunity of the lower income groups to acquire that housing.

The picture painted to this point is bleak. The low income groups in Canada, having for the most part been denied access to the market of new non-subsidized detached houses as well as to the stock of well maintained, relatively high quality existing houses, must either turn to rental accommodation or purchase poorer quality existing detached housing. This situation is not restricted to Canada, but also exists in the United States. The importance of the stock of lower quality existing housing to the low income sector has been emphasized by Royal Shipp:

> Because of the high mobility rates in the U.S. and because of the dominance of the existing housing stock, around 5 - 6 times as many used housing units become available for occupancy each year as newly constructed houses . . . . This would suggest the feasibility of giving relatively more emphasis to upgrading the quality of the lower end of the existing housing stock to an acceptable standard of decency, instead of building new houses for underhoused families.[11]

Similarly, the Special Senate Committee on Poverty has stated that:

> One answer to the housing problems of the poor may lie in more efficient use of the existing stock of housing, the 97 per cent or so which is not brand new. The importance of improving the existing housing stock cannot be overestimated, even though this requires re-thinking Canadian housing policies which have traditionally been concerned almost exclusively with new housing.[12]

---

[11]Royal Shipp, "Evaluation of Federal Housing Programs: Progress and Prospects," Proceedings of the American Real Estate and Urban Economics Association, V (1970), pp. 102-103.

[12]Special Senate Committee on Poverty, op. cit., p. 137.

It is apparent, therefore, that the stock of existing housing,
if maintained to sufficiently high levels, offers the greatest potential
relief to the underhoused poor.

The National Building Code and
the Housing Supply

Certainly a portion of the housing supply available to the lower
income groups has been constructed and maintained to the standards for
original construction prescribed in the National Building Code. Such
housing would thus comply with the declarations[13] of the Canadian Confer-
ence on Housing (1968) and the Task Force on Housing. However, it is
not mandatory under the National Building Code that even the most recent-
ly constructed housing be maintained to the levels prescribed by it for
new construction. Indeed, only when mortgage funds are required from
the conventional lenders or CMHC as a result of a change in ownership or
for the purpose of making substantial structural alterations, are the
standards of the National Building Code liable to be enforced to raise
the quality of an existing structure to an acceptable level.

Thus, when a low income family seeks accommodation, it is faced
with the following situation. First, the quality of existing rental
accommodation is unregulated, due to the ineffectiveness of the National
Building Code. Secondly, the conventional lenders and CMHC are reluc-
tant to enter the market of poorer quality existing detached housing,
as evidenced by the more restrictive loan-to-value ratios which they
offer. What, then, becomes of the low income groups in their search for
adequate housing, and how are they to be protected from a situation

---

[13]See page 2 of this chapter.

which forces them to occupy housing of inferior quality?

As increasing numbers of housing units are constructed under the National Building Code and increasing numbers of older units which pre-date the adoption of the Code are removed from the stock, some marginal net increase in the quality of the housing stock can be expected. However, such a process can occur only over a long period of time, since new construction amounts to only 3% and removals amount to less than 1% of the total stock in any given year.[14] Since the demand for adequate housing remains high over the short run, it is necessary to look to devices other than the National Building Code to improve the quality of housing.

Landlord Decision-making and the Need for Housing Regulations

To this point an attempt has been made to identify the position which lower income groups occupy in the housing market. Basically, they have been restricted to acquiring accommodation in rental housing, usually privately owned, and in existing poor quality single detached houses. In the sphere of rental housing, the low income groups have little or no means of assuring that their accommodation will be maintained to acceptable standards of quality. Enforcement of the National Building Code cannot be relied upon to ensure that proper maintenance standards for such housing are met. The low income groups are thus virtually unprotected in the rental housing market. Their lack of effective demand and the absence of effective public controls expose them to potentially unilateral decisions by absentee landlords as to the quality

---

[14]Canadian Housing Statistics, 1970, Table 124, p. 97.

of available rental accommodation. It cannot be denied that substandard rental housing exists and that lower income groups lack sufficient effective demand in the housing market. It would therefore appear that public controls, perhaps in the form of minimum housing regulations, are required to eliminate or improve the substandard rental housing found in all major metropolitan centres in Canada.

While some form of public control is required to regulate housing conditions, and while some landlords have the opportunity to make unilateral decisions regarding the quality of housing offered, it is inappropriate to assume that the slum landlord is necessarily evil and motivated solely by greed. Jacob Riis unfortunately adopted this position when he stated that a man "has no right to slowly kill his neighbours, or his tenants, by making a death-trap of his house."[15] Further, he asserted that "reform by law must aim at making it unprofitable to own a bad tenement."[16] On the other hand, Lawrence Friedman adopts a somewhat different view. He finds that "while the notion of the evil slumlord is not completely untrue,"[17] the evidence that "some buildings are losers"[18] and that "code enforcement is variable and uncertain"[19] has had the effect of placing the slumlord in an unenviable and potentially disastrous financial position, in that he is often unable to make a profit and yet unable to sell the building.

---

[15]Jacob Riis, How the Other Half Lives (New York: Hill and Wang, 1957), p. 205.

[16]Ibid., p. 217.

[17]Lawrence Friedman, Government and Slum Housing (Chicago: Rand McNally and Company, 1967), p. 42.

[18]Ibid., p. 43.   [19]Ibid., p. 57.

The debate as to whether the slumlord is necessarily evil or merely a product of successive unfortunate circumstances is not of central concern to this study. It does, however, serve to identify a critical problem relating to housing of lower income groups: too little is known about the factors which underlie the decisions made by owners and operators of rental housing regarding the quality of housing services provided. Too often housing authorities have attempted to enforce strict minimum regulations in a housing code without seriously considering how such regulations might affect the decision-making variables relevant to the owners of rental housing.

Housing Codes

The above criticism is far more applicable to communities in the United States than in Canada. Canada, like the United States, has a large stock of substandard housing, but for some reason Canadian officials have not utilized housing codes to any extent to regulate the quality of that housing. The one exception in Canada has been the province of Ontario, which in the past decade has actively entered the area of housing code enforcement, particularly in the city of Toronto. Usually, Canadian housing regulations have been included in a variety of specialized municipal codes, such as health, fire, building and zoning codes. In the United States, however, the trend in more recent times has been to simplify this rather complex arrangement. Hence regulations regarding structural soundness, fire safety, maintenance, sanitation and occupancy have been combined into a single housing code. Unlike the National Building Code in Canada, which, as mentioned previously, is ineffective in regulating existing housing not undergoing alterations, housing codes have been extensively applied in the United

States in an attempt to eliminate existing substandard housing.

Obviously, housing code enforcement has a tremendous potential for eliminating substandard housing. Superficially at least, it is expected that the strict uniform application of such codes should constitute the major, if not the only, step required to eliminate substandard housing. Simply stated, enforcement of the code would require owners of substandard housing to either improve the quality of their buildings to the acceptable limits defined in the code, or close down their operation. In either case, substandard housing would be removed from the market. Unfortunately, seldom can a multi-faceted issue such as substandard housing be considered in such clear, distinct terms. As with most important issues involving public programs and private sector responses to those programs, it is necessary to examine the latter critically in order to improve the effectiveness of the former. Such has not been the case with housing code enforcement. As Friedman has noted, too often "there has been a great rush to enact housing codes."[20] Not often enough, if ever, has there been a corresponding rush to consider how the owners of substandard housing might respond to the housing codes, and therefore how the effectiveness of the enforcement programs might be improved.

SUMMARY

In this chapter the writer has attempted to focus on the position of the lower income groups in the Canadian housing market. It was contended that these groups occupy a disadvantaged position, in that

---

[20]Ibid., p. 50.

they are usually restricted by their lack of effective demand to acquiring accommodation in rental housing or in poor quality existing single detached houses. In the rental market, their position is not only disadvantaged but also unprotected, in that the low income groups are exposed to potentially unilateral decisions by owners regarding the quality of housing services offered. The National Building Code offers little relief in the short run in regulating the quality of rental housing. Rather, its value lies chiefly in the long run, where it can be expected that the overall quality of the housing stock will gradually increase as a result of regulating the quality of new construction. It is apparent, therefore, that alternative devices must be found to improve the quality of rental housing over the short run.

One such device, housing code enforcement, offers prospects for relief. Although widely employed in the United States, this device has been used by Canadian authorities only in the province of Ontario. Unfortunately, too often the approach taken in code enforcement programs is that absentee landlords are the source of all housing ills. Consequently, few attempts, if any, have been made by housing authorities to determine the motivating factors which influence landlord decision-making. Surely such understanding would be highly beneficial in improving the effectiveness of the enforcement programs.

In the remaining portion of this study, an attempt is made to establish possible patterns of landlord response to housing code enforcement. First, a framework for landlord decision-making is developed. The experience of selected communities is then examined with respect to the general effectiveness of housing code enforcement and its particular effect on decision-making. The hypothesis upon which

the remainder of this study is based may be stated as follows: Given

an understanding of the decision-making practices of absentee owners

of rental housing, housing code enforcement could become more effective

in its attempts to eliminate substandard housing.

CHAPTER TWO

HOUSE OPERATING FIRM DECISION-MAKING THEORY

INTRODUCTION

In the following pages we will attempt to explain the decision-making practices of absentee owners of multiple dwellings. To simplify the terminology, this ownership group will hereafter be referred to as "house operating firms." It is noted that for the purposes of this study, the term "firm" is used in a broader sense than its usual definition. As defined herein, the term may be applied to an individual who owns and perhaps operates, but does not necessarily reside in, a multiple dwelling. The word "firm" may also be used in its more usual sense to describe a corporate entity which owns and operates but does not reside in a multiple dwelling.

The term "multiple dwelling" also requires definition. In the context of this study, "multiple dwelling" refers to a structure, either purpose-built or converted, containing three or more dwelling units of unspecified size. Thus, both family and non-family dwelling units are included in the definition.

Two models are constructed in this chapter. The first accounts for the decisions of house operating firms whose buildings are not regulated by minimum housing regulations. That is, either the community has not adopted a housing code or it has never enforced or threatened to enforce a code which it has adopted. Under such circumstances, a house

16

operating firm would not be expected to take into account minimum housing regulations in its decision-making practices. The second model accounts for the decisions of house operating firms whose buildings are actually regulated by minimum housing standards or potentially regulated by an active threat of code enforcement. In this case, it is expected that the decision-making practices of house operating firms would be substantially affected by the housing code. The first model will thus be described as the "unrestricted decision-making model," and the second as the "restricted decision-making model."

A THEORY OF DECISION-MAKING FOR HOUSE OPERATING FIRMS

The Opportunity to Move a Building in
    the Rent-quality Distribution

In the absence of housing regulations, the house operating firm can alter the condition of the housing it offers in order to produce changes in the demand for that housing. Note that the above statement is likely to be true even in cases where housing regulations do exist but have consistently not been enforced. In the process of altering the condition of the housing supply offered, the house operating firm is, in fact, shifting the position of the building relative to the position of other buildings which constitute the total stock of multiple rental accommodation in a given location. This shift in the relative position of the building in the housing supply distribution causes a shift in the relative position of the building with respect to a distribution of rents. Thus, within certain limits, a house operating firm can move its building either upwards or downwards in a rent-quality distribution.[21]

_____

[21]This possibility was first noted by H.W. Robinson, The Economics

How are these shifts achieved? In this regard, it is suggested
that the quality of housing services offered by a house operating firm
can be varied in the following manner, given the prior condition regard-
ing the absence of housing regulations. First, a firm can vary the
supply of housing services within a given building by remodelling that
building. A number of remodelling alternatives can be considered,
including those identified by W.W. Nash:[22] prestige, middle income or
low income. For example, the prestige alternative might involve a reduc-
tion in the number of units in the building, thereby increasing the size
of each unit. Also, it might involve providing higher quality fixtures,
finishes and equipment for each unit. Conversely, remodelling for low
income occupants might involve increasing the number of units in the
building and thereby reducing the size of each unit. In any case, re-
modelling a building can include a host of alternatives, each of which
could result in a change in the position of the building with respect to
the rent-quality distribution mentioned previously.

A second method which the house operating firm might employ to
shift the relative position of the building which it operates is to
vary the rate at which it replaces equipment and structural elements.
For example, although the plumbing within a building might have a
potential lifespan of 50 years before ceasing to function entirely, it

---

of Housing (London: P.S. King, 1939), p. 83. Later authors such as
James Heilbrun assumed a similar position: "Reforming the Real Estate
Tax to Encourage Housing Maintenance," Land and Building Taxes: Their
Effect on Economic Development, ed. Arthur P. Becker (Milwaukee: Com-
mittee on Taxation, Resources and Economic Development, The University
of Wisconsin Press, 1969).

[22]W.W. Nash, Residential Rehabilitation: Private Profits and
Public Purposes (New York: McGraw-Hill, 1959).

is apparent that some deterioration in the quality of service must occur before the end of that time. Thus, the house operating firm might choose to replace this plumbing every 10 or 20 years to ensure that it continues to function perfectly at all times. It is obvious, then, that different replacement rates will have the effect of moving the position of the building with respect to the rent-quality distribution.

A third method which the house operating firm might employ is to vary the operating expenditures of the building in the short run. Expenditures such as those for the cleaning of exterior windows, garbage collection, janitorial services and minor maintenance can be varied over the short run, with the result that the building shifts position in the rent-quality distribution.

Limitations on the Upward Movement of a Building

In total, real opportunities exist for the house operating firm to shift the quality of its building relative to that of other buildings in order to alter the demand for the housing services it supplies. The principal techniques which are evident to this author include the variation of remodelling practices, replacement practices and operating practices. However, some restrictions exist which limit the degree to which the building can be moved in the rent-quality distribution. These limitations include the location of the building, the demand for housing amenities, the design of the structural shell and housing regulations. All but the latter, which will be discussed in much greater detail later, are discussed below.

The first limitation, the location of the building, is an important consideration which the house operating firm cannot overlook.

"Appraisers often say that the three most important influences on value
are: (1) location, (2) location, and (3) location"[23]--that is to say,
the location of the building in the neighbourhood, the location of the
neighbourhood in the city, and the location of the city within the
region. In considering the potential movement of its building, the
house operating firm must thus be aware of the relative desirability of
the location of the building.

Knowles suggests a host of variables with respect to location
which the house operating firm should consider. They include:

1. Relative economic stability,

2. Protection from adverse influences,

3. Freedom from hazards and nuisances,

4. Adequacy of civic, social and commercial facilities,

5. Adequacy of utilities and conveniences,

6. Adequacy of transportation,

7. Level of taxes and special assessments,

8. Appeal or amenities.[24]

The demand for the housing services offered by a building which
is located in a neighbourhood rating high on each of the above indices
will inevitably exceed the demand for services of a less ideally located
building. It is important, then, that prior to making any decisions
regarding the operation of its building, the house operating firm ask:
"Is this building needed in this community and neighbourhood?"[25] Due

[23] Jerome Knowles Jr., "City and Neighborhood Data and Analysis,"
The Appraisal Journal, XXXV (1967), 260-268, p. 263.

[24] Ibid., p. 264.

[25] K.K. Stowell, Modernizing Buildings for a Profit (Englewood
Cliffs, New Jersey: Prentice-Hall, 1935), p. 4.

to its size, a multiple dwelling is fixed in location and there is

really no opportunity for the house operating firm to move it to a more

desirable location. Consequently, the house operating firm is highly

unlikely to attempt to improve the quality of services offered by a

building in any neighbourhood beyond the levels demanded in that neigh-

bourhood.

The second limitation is the demand for housing amenities. In

other words, a point is reached where providing additional amenities,

and thereby increasing the quality of housing services, no longer results

in an increase in the demand for the total supply of services offered by

a house operating firm. At that point the demand for the level of hous-

ing services provided becomes totally inelastic. For example, providing

a doorman for a fashionable apartment would likely result in an increase

in the rent which tenants are willing to pay.[26] In this case, it can be

said that the house operating firm has moved its building upwards in the

rent-quality distribution. However, if the firm were to provide gold-

plated fixtures in place of the existing high quality fixtures in all

suites of that same fashionable apartment, it is doubtful that the ten-

ants would be willing to pay more for the accommodation. It is apparent,

therefore, that beyond a given point, any increase in the amenities

offered in the total package of housing services offered by the firm will

not generate any additional increase in the rents tenants are willing to

pay.

As a less extreme example of the above point, consider the impli-

cation of supplying a doorman for an apartment in a low rent district.

---

[26]James Heilbrun, Real Estate Taxes and Urban Housing (New York:
Columbia University Press, 1966), p. 18.

In theory, such an addition would shift the building to a higher position in the rent-quality distribution. In fact, however, the presence or absence of a doorman is likely to be of little or no importance to a low rent tenant. Such a tenant will not be willing to raise his rent in order to account for the "improved" quality of his housing. In this case, it is observed that limits do indeed exist with respect to the potential movement of a building achieved by altering the amenities provided by a house operating firm. Moreover, the two examples indicate that not only is there an absolute upper limit which no conceivable building can exceed, but also there is a separate upper limit for each building, which may or may not lie well below the absolute upper limit.

Finnaly, the structural shell limits the potential movement of a building in the rent-quality distribution. Internal structural alterations in any building are governed in the final analysis by the shell of the building itself. Thus, a house operating firm cannot in every instance shift its building to the upper limits of the rent-quality distribution by restructuring and improving the internal space. Rather, the flexibility and structural soundness of the shell dictate the upper limits to which the building can be moved. While this is likely to be a more serious constraint in the case of an older building, it is applicable to buildings of more recent construction as well.

To this point the discussion has been limited to cases where the house operating firm desires to move its building upwards in the rent-quality distribution. But what of the case where the firm finds that a downward movement could be potentially more profitable? The answer is immediately obvious. The firm simply chooses to reduce or perhaps eliminate entirely expenditures on operating, replacement and remodelling

practices. The quality of services offered decreases correspondingly with the rents which tenants are willing to pay.

Limitations on the Downward Movement
of a Building

As with upward movement, the house operating firm faces limitations with respect to the downward movement of its building. There is a point where the housing services offered in a building have declined so far that they can no longer command any rent whatsoever and the building remains vacant. In this case the lower limit of the rent-quality distribution has been reached. This holds true even though the movement of a building to this point may take place only over a long period of time, during which rents decrease very slowly and vacancies remain very low. Eventually, the quality of the housing services offered becomes so poor as to threaten the very health and safety of prospective tenants and thus the building is no longer occupied.

A second limitation is mentioned here only briefly, as it will be discussed in greater depth later in this chapter. This limitation is, of course, the existence and enforcement of minimum housing regulations. Faced with such regulations, the house operating firm cannot conceivably move its building downward to a point where it cannot command any rent. Thus minimum housing standards serve to limit the extent of downward movement of a building by a house operating firm.

A third limitation on the potential downward movement of a building concerns the recapture of the house operating firm's equity. Any model of the decision-making practices of a house operating firm must consider recapture value as well as cash flow. For example, consider a house operating firm which chooses to defer maintenance and

improvements to its building for a long period of time. In such a case, we note that the net cash proceeds from the sale of the building would likely be substantially less than if the building were well operated and maintained. We also note that in the latter circumstance, the economic life of the building is increased, although admittedly at higher costs. It is obvious, therefore, that the concern of a house operating firm for the ultimate resale value of its building will affect the firm's operating, replacement and remodelling decisions and will serve to limit the potential movement of the building in the rent-quality distribution.

An Example of the Concepts

To this point, the broad concepts of a theory of the house operating firm have been outlined in some detail. It is appropriate at this time to refer to Figure 1 below to exemplify the workings of these concepts.
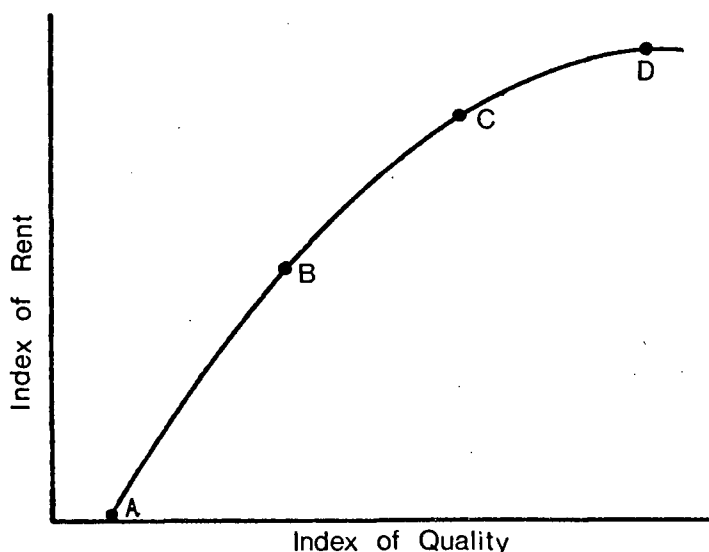
FIGURE 1

A HYPOTHETICAL RENT-QUALITY DISTRIBUTION

Figure 1 represents four buildings, A, B, C and D, placed along a hypothetical rent-quality curve. The position of D on the curve is such that any increase in expenditures will result in a shift to the right along the quality index but will not result in an upward shift along the rent index. Thus even the addition of gold-plated fixtures to D will not increase the rents tenants are willing to pay. Over the short run, however, the firm which operates D may choose to reduce operating and replacement expenditures so as to move its building to the left along the quality index and downwards on the rent index, toward the position occupied by C.

C, unlike D, can be moved in either direction along the rent-quality curve. For example, by increasing operating and replacement expenditures, it may be moved at least marginally to the right on the quality index toward D. By remodelling, C could be moved a substantial distance toward D, perhaps even to that point occupied by D. The factors limiting this movement would be the location of the building and the flexibility of its structural shell. Downward movement of C could also occur if operating and replacement expenditures were deferred. Downward movement would be limited by the ultimate reversionary value of the building.

Similarly, B could also be moved either upwards or downwards along the rent-quality curve as a function of expenditures on replacement, operating and remodelling. Compared to C, however, B is probably older, less ideally located and less suitable for remodelling (i.e., its structural shell is less flexible), as evidenced by its relatively lower position on the rent-quality curve. Consequently, it is less likely that the quality of B could be increased to equal that of D,

although downward movement toward A is possible. The factors limiting downward movement would again be concern for the ultimate resale value of the building, in addition to any minimum housing regulations in force.

A occupies the lowest point on the hypothetical rent-quality curve. The quality of the accommodation is so low that the building remains vacant. While such a building may provide a "roof over one's head," it would likely endanger the lives and safety of its tenants. Potentially, however, A may be moved upward along the curve toward B. Again, such factors as an inflexible structural shell and an undesirable location would limit the degree of upward movement which A could experience.

Having described the range of positions which a building may occupy in the rent-quality distribution, we will now construct a model demonstrating how a house operating firm decides upon the position its building should occupy in that distribution. Actually, the model to be constructed consists of two sub-models, the unrestricted decision-making model and the restricted decision-making model, which were defined previously in the introduction to this chapter.

THE UNRESTRICTED DECISION-MAKING MODEL

The following model is constructed on the assumption that given the absence of minimum housing regulations, a house operating firm will adjust its operating, replacement and remodelling expenditures so as to maximize profit. As Heilbrun has so aptly stated: "The owner's objective is to maximize the spread between rent and operating costs."[27] But

---

[27] Heilbrun, Real Estate Taxes and Urban Housing, pp. 16-17.

how is the point of maximum profit determined?

The concept of profit maximization can perhaps be best explained by referring to Figures 2 and 3 below. In Figure 2, hypothetical cost, revenue and profit curves have been drawn for a given building operated at various levels of quality. Similarly in Figure 3, hypothetical marginal revenue and cost curves have been drawn. In both figures it is assumed that quality is perfectly divisible; hence the curves are smooth rather than "stepped." While this is undoubtedly an oversimplification, the error introduced is of minor importance, since the figures are intended for descriptive use rather than for actual calculation purposes.

From Figure 2 it is apparent that profit is maximized at a level of quality Q_3, which is supplied by the house operating firm at a cost C_3 and which generates a rent R_3. At Q_3 the slope of the total profit curve is zero and the slopes of the rent and cost curves are identical. It is readily noted that a shift in the position of the building described in Figure 2 either to the right or left along the quality axis results in a decline in total profit. For example, total profit is greater at Q_3 than at Q_4 or at Q_2. By definition, then, profit maximization occurs at Q_3.[28]

From Figure 3 it is apparent that profit is maximized at Q_3. At that point, one additional dollar of costs will generate exactly one additional dollar of rents. Moving beyond Q_3 to Q_4, one additional dollar of costs will generate less than one additional dollar of rents; hence, profit is not maximized. Similarly, moving to the left along

---

[28]Paul A. Samuelson, Economics (8th ed.; New York: McGraw-Hill, 1970), p. 473.
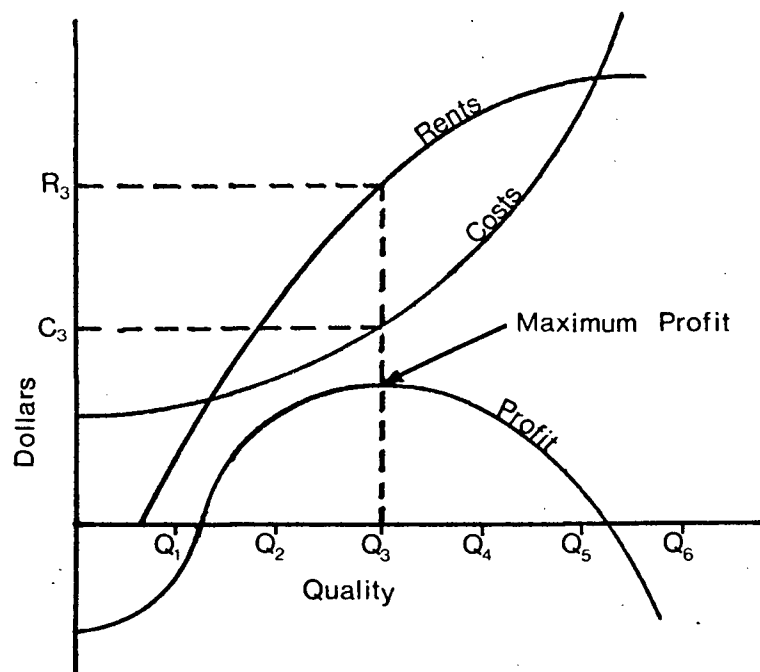
FIGURE 2

HYPOTHETICAL COST, RENT AND PROFIT CURVES
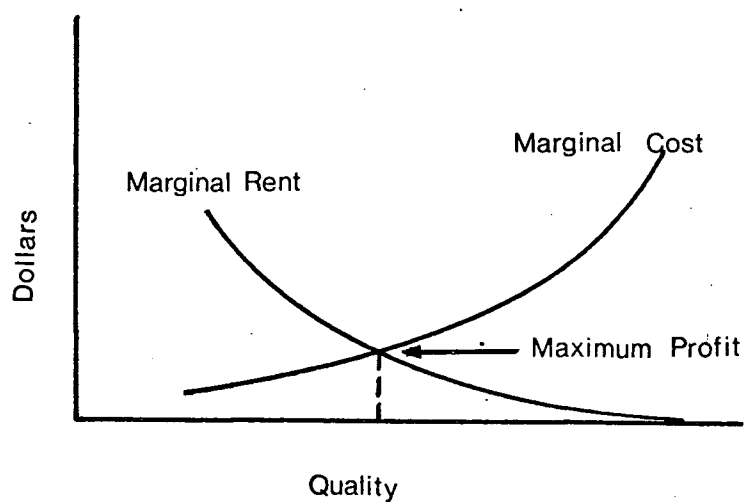
FIGURE 3

HYPOTHETICAL MARGINAL RENT AND COST CURVES

the quality axis from Q_3 to Q_2, although one additional dollar of costs will generate more than one additional dollar of rents, total profit is not maximized. By definition, then, profit is maximized only when marginal costs equal marginal rents.[29]

In less theoretical terms, one might ask how well the curves in Figures 2 and 3 represent the experience of the house operating firm. Since the total profit curve and the marginal cost and rent curves are derived from the total cost and total rent curves in Figure 2, only the latter two curves require explanation. At Q = 0, we can conceive of a house operating firm owning a building which is completely unfit for human occupation and thus cannot command any rents. Even at Q = 0, however, the firm is faced with some fixed costs, including property taxes and perhaps mortgage payments. Moving toward Q_1, the firm makes some minor, low-cost improvements to the housing services offered so that the building attracts tenants willing to pay reasonably low rents. Between Q_1 and Q_2 the building begins to show a profit. Costs increase as the firm improves the quality of the building, but total rents increase at a faster rate, due to a combination of a rise in occupancy and an increase in rents. At Q_3, the difference between total rents and total costs is maximized. Moving toward Q_4, the firm is faced with rising costs as it increases the quality of the building. At the same time, however, total rents do not rise as quickly as costs, because the already high occupancy levels cannot be raised substantially and because tenants are unwilling to accept a rise in rents equivalent to the rise in quality of the housing services. Between Q_5 and Q_6 a saturation point

---

[29]Ibid., p. 472.

is reached at which the firm must make extremely high expenditures to improve the quality of the building (remember our previous example of gold-plated fixtures), while tenants are unwilling to increase their rents at all. A firm which moved its building to this position would thus soon realize a loss in its operation.

Point Q_3 for a given building will, of course, vary according to its location, the condition and age of its structural shell and the demand for housing amenities. How, then, does a house operating firm determine the position at which to operate its building in order to achieve maximum profit (i.e., Q_3)? The following model is offered (see Figure 4).

For the purposes of this discussion, let it be assumed that the house operating firm is willing to shift the position of its building in order to achieve maximum profit. Further, let it be assumed that the firm operates only one building, so that its operating decisions are based solely on the conditions surrounding that particular building. Finally, let it be assumed that the house operating firm has access to perfect information regarding the rent-quality distribution.

The house operating firm must first compile an operating analysis of its building based on its records of income and expenditures. This operating statement must then be tested against the criterion of profit maximization previously defined in this chapter: If one additional dollar of costs generates exactly one additional dollar of revenue, then the building is being operated at the point of maximum profit. In this case, the house operating firm needs only to maintain the operation at its current level. If, however, the building is not being operated at maximum profit, then the firm must consider the alternative

FIGURE 4

THE UNRESTRICTED DECISION-MAKING MODEL
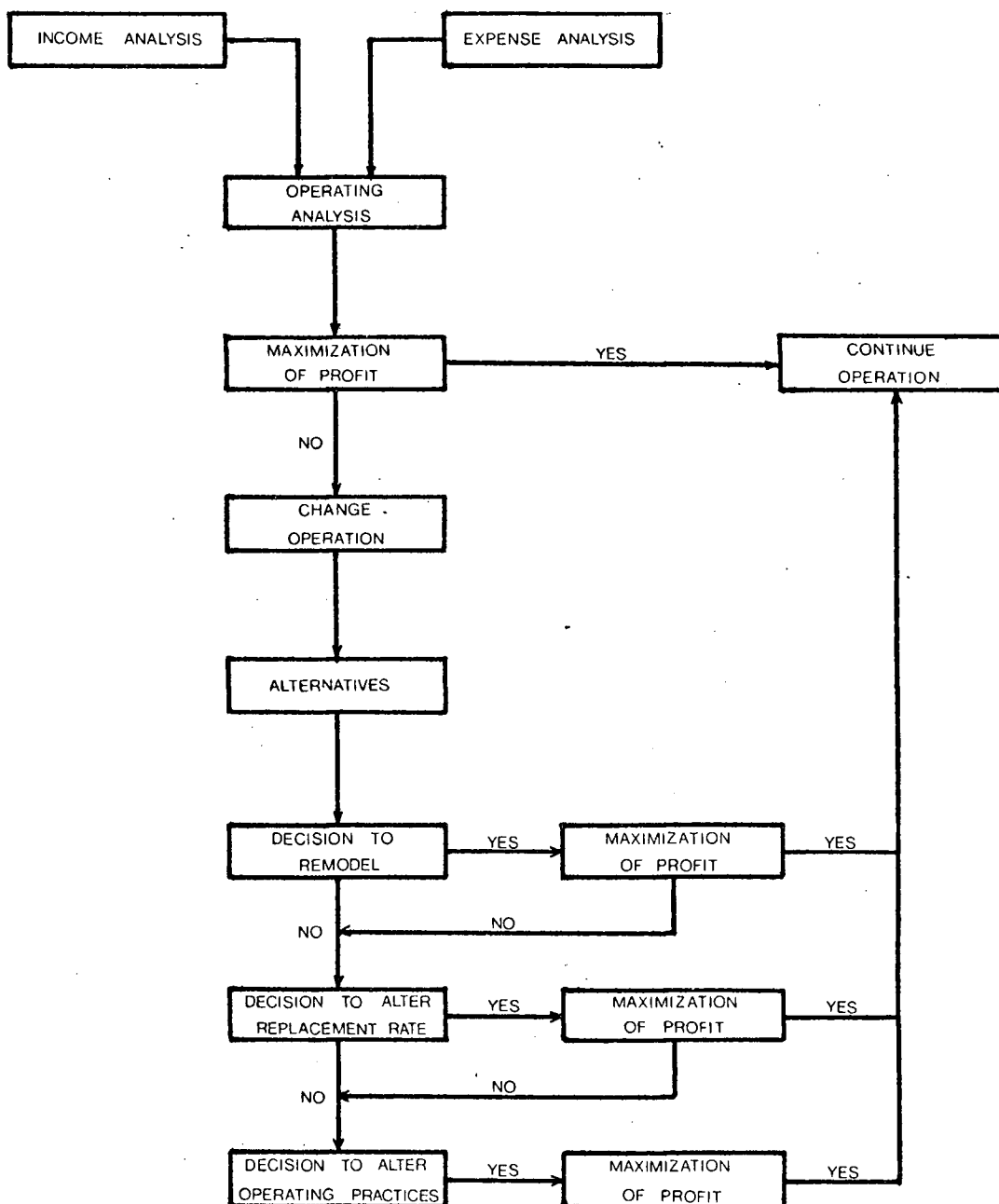
methods of changing the position of its building in the rent-quality distribution.

There are three alternative methods for the house operating firm to choose from: altering the replacement schedule, altering basic operating practices, and remodelling. Of these alternatives, remodelling offers the greatest potential movement of a building upwards in the rent-quality distribution. Consequently, the decision as to whether or not to remodel the building is assigned the highest priority (i.e., A) in the decision-making model in Figure 4. The choice to remodel the building is based upon three factors, including the expected increase in rent due to the increased quality of housing services, the effect of remodelling on the reversionary value of the building, and the costs of remodelling. Thus, if the increase in the discounted cash flow and the increase in the discounted reversionary value which will occur as the result of remodelling exceed the costs of remodelling, then the firm will choose that alternative.[30] If the opposite is the case, it is expected that the firm would not choose to remodel. Note that the decision-making criterion dictates not only whether or not a building should be remodelled, but also the type and scale of remodelling to be undertaken.

Referring again to Figure 4, let it be assumed that the firm has decided to remodel. That accomplished, it must determine again whether or not the building is being operated at maximum profit. If remodelling has indeed resulted in shifting the building to its optimum operating point, then the firm needs only to continue operating at that point. If, however, remodelling has brought the building closer to the optimum

---

[30]Richard U. Ratcliff, Real Estate Analysis (New York: McGraw-Hill, 1961), pp. 130-131.

operating point without reaching it, then the house operating firm must examine the possibility of altering its replacement schedule (referred to as B in the model in Figure 4) so as to achieve maximum profit. This also applies to a firm which decides against remodelling and thus does not obtain maximum profit.

Each piece of equipment and structural element of the building is characterized by an optimum period of replacement. Naturally, if the replacement period is short, then higher rents may be obtained. However, these higher rents will be gained only through increased costs. In order to determine the appropriate period of replacement for each element, the house operating firm must employ the following decision-making criterion: equipment and structural elements should be replaced at a rate such that the last additional dollar spent annually on replacement generates just one additional dollar of rent. Reference to Table IV and Figure 5 below will serve to clarify this criterion.

Table IV compares replacement of a structural element at intervals ranging from eight years to one year. It is noted that the total annual cost of replacement increases simultaneously with the rate of replacement. Similarly, as the rate of replacement increases, the marginal cost also increases, while the marginal rents obtained decrease. When the marginal rents and costs are plotted in Figure 5, it is noted that the resulting curves intersect at a point lying between a replacement interval of once every four years and once every five years. This point coincides with the optimum rate of replacement where one additional dollar spent annually on replacement generates just one additional dollar of rent. At this point the house operating firm is realizing the maximum profit obtainable by varying the rate of replacement of

structural elements and equipment.

Consider the firm which is not replacing elements of its building at the optimum rate and thus alters this rate in order to achieve optimization. Maximum profit may or may not be achieved by taking this step. If indeed maximum profit is reached, then the firm will simply maintain the building at that level (as indicated in Figure 4). If, however, the optimum operating point is not reached even after altering the replacement rate, then the firm is left with the alternative of examining and changing its operating practices (referred to as C in the model in Figure 4).

TABLE IV

HYPOTHETICAL RESULTS OF VARYING RATE OF
REPLACEMENT OF A STRUCTURAL ELEMENT*

Rate of re-placement (1/L)	Annual replace-ment costs (D)	Marginal cost of increasing rate of replacement	Marginal increase in annual rent ob-tained by increasing rate of replacement
1/8	$ 12.5	$....	$7
1/7	14.3	1.8	6
1/6	16.7	2.4	5
1/5	20.0	3.3	4
1/4	25.0	5.0	3
1/3	33.3	8.3	2
1/2	50.0	16.7	1
1/1	100.0	50.0	0

*Assume a structural element with a replacement cost of $100.00. If L is the assumed life of the element, then the annual charge for replacement (D) is given by $100.00 x (1/L).

Source: James Heilbrun, Real Estate Taxes and Urban Housing, p. 33.
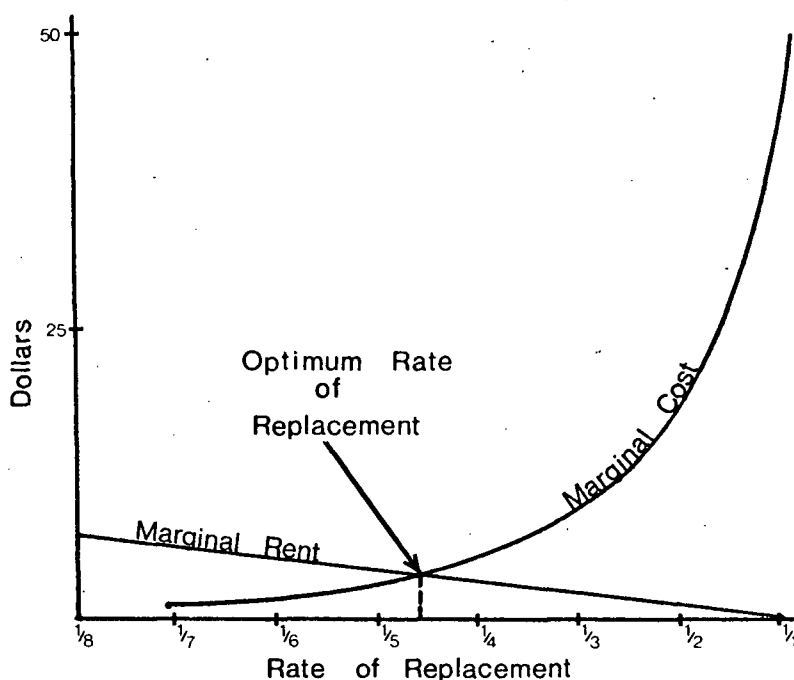
FIGURE 5

HYPOTHETICAL MARGINAL RENT AND COST CURVES RESULTING
FROM VARIATIONS IN THE RATE OF REPLACEMENT

While decisions to remodel or alter the rate of replacement
operate over the long run, the decision to change operating practices
operates over the short run. In a sense, then, changes in operating
practices constitute the fine tuning by which the house operating firm
ultimately moves its building to the position where maximum profit is
achieved. These changes might include, for example, collecting garbage
daily instead of weekly, repainting annually instead of every ten years,
and reducing or increasing janitorial services.

The decision-making criterion (referred to as C in the model
in Figure 4) for these and other operating inputs is quite straightfor-
ward. The house operating firm attempting to maximize profits will

increase expenditures on that operating input which adds the largest

increment to the quality of service and thus to rents.[31] As the firm

increases expenditures on successive operating inputs, it will find that

the quality of service increases only marginally, to the point where

further expenditures generate no further increases in rent. Thus, it

will be able to determine which operating inputs generate which rents

and subsequently increase or decrease expenditures on these inputs in

order to maximize profit.

This completes the discussion of the unrestricted decision-

making model, which applies to the house operating firm not constrained

by the existence and enforcement of minimum housing regulations. The

focus now shifts to an examination of the restricted decision-making

model, in which the house operating firm must contend with minimum

housing standards.

THE RESTRICTED DECISION-MAKING MODEL

The following model attempts to explain the decision-making

process of firms operating buildings regulated by minimum housing stan-

dards. The same assumptions are made here as in the previous model.

For the sake of convenience to the reader they are repeated below:

1. The house operating firm is willing to shift the position

   of its building.

2. The house operating firm operates only one building.

3. The house operating firm has access to perfect information

   regarding the rent-quality distribution.

---

[31]Heilbrun, _Real Estate Taxes and Urban Housing_, p. 17.

How do minimum housing regulations affect the decision-making practices of the house operating firm? Expressed in the simplest of terms, housing regulations restrict the potential movement of a building in the rent-quality distribution. In so doing, they may prevent a house operating firm from realizing the optimum operating point for its building. This situation is represented in Figure 6 below. According to the unrestricted decision-making model, the building referred to in the figure would maximize profits at the point Q_2. However, the minimum housing regulations require that all buildings be operated at a level of housing service at least equal to or greater than Q_3. Since the optimum operating point for the building is less than Q_3, it is expected that the firm must accept less than maximum profit (i.e., by an amount equal to $P_2 - P_3$), as it must operate at a level at least equal to Q_3.
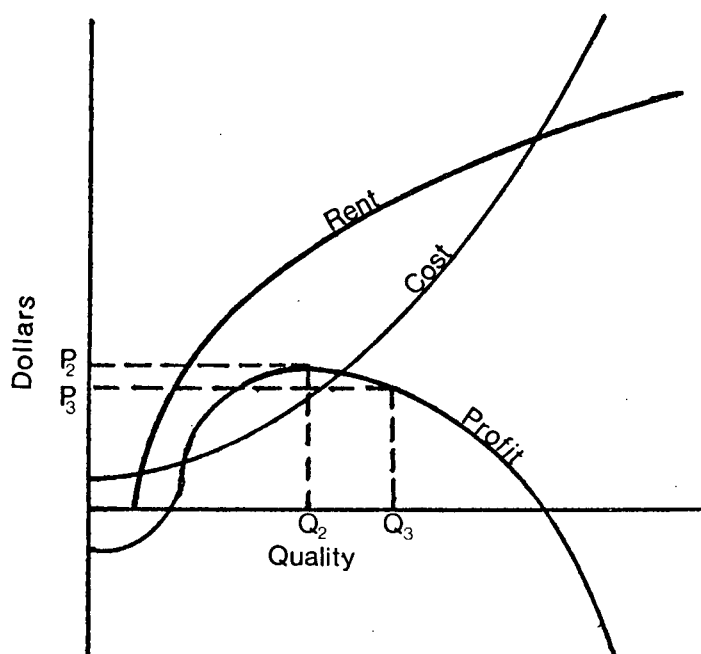
FIGURE 6

HYPOTHETICAL COST, RENT AND PROFIT CURVES

It is conceivable, however, that another building may have its optimum operating point lying above Q_3. In this case, the enforcement of minimum housing regulations will not affect the profit position of the house operating firm.

Thus it is clear that the restricted decision-making model (see Figure 7 below) need only consider those firms whose optimum operating points lie below the level of quality required by the minimum housing regulations. Firms whose buildings exceed the minimum regulations will, of course, proceed through the model on the basis of profit maximization, as in the unrestricted decision-making model presented in Figure 4.

When a building must be moved from its optimum operating point to meet minimum housing standards, the main concern of the house operating firm is to minimize the loss of profit incurred. This concern determines whether the firm will (A) remodel the building, (B) increase replacement expenditures, (C) increase operating expenditures, (D) replace the building with a new structure, (E) abandon the building, or (F) sell the building. Upon selecting one of the above alternatives, the firm may still realize a profit from its building. In no case, however, will the profit be equal to that obtained when the building is operated at its optimum point. Thus, it is expected that the firm will choose that alternative which minimizes its loss in profit. Decision-making in the model in Figure 7, then, is based upon "least loss alternatives."

Having defined "least loss alternatives" in a preliminary manner, we will now examine in depth the restricted decision-making model presented in Figure 7. By proceeding through the model, the definition of "least loss alternatives" will be further defined and operationalized.

FIGURE 7

THE RESTRICTED DECISION-MAKING MODEL

39
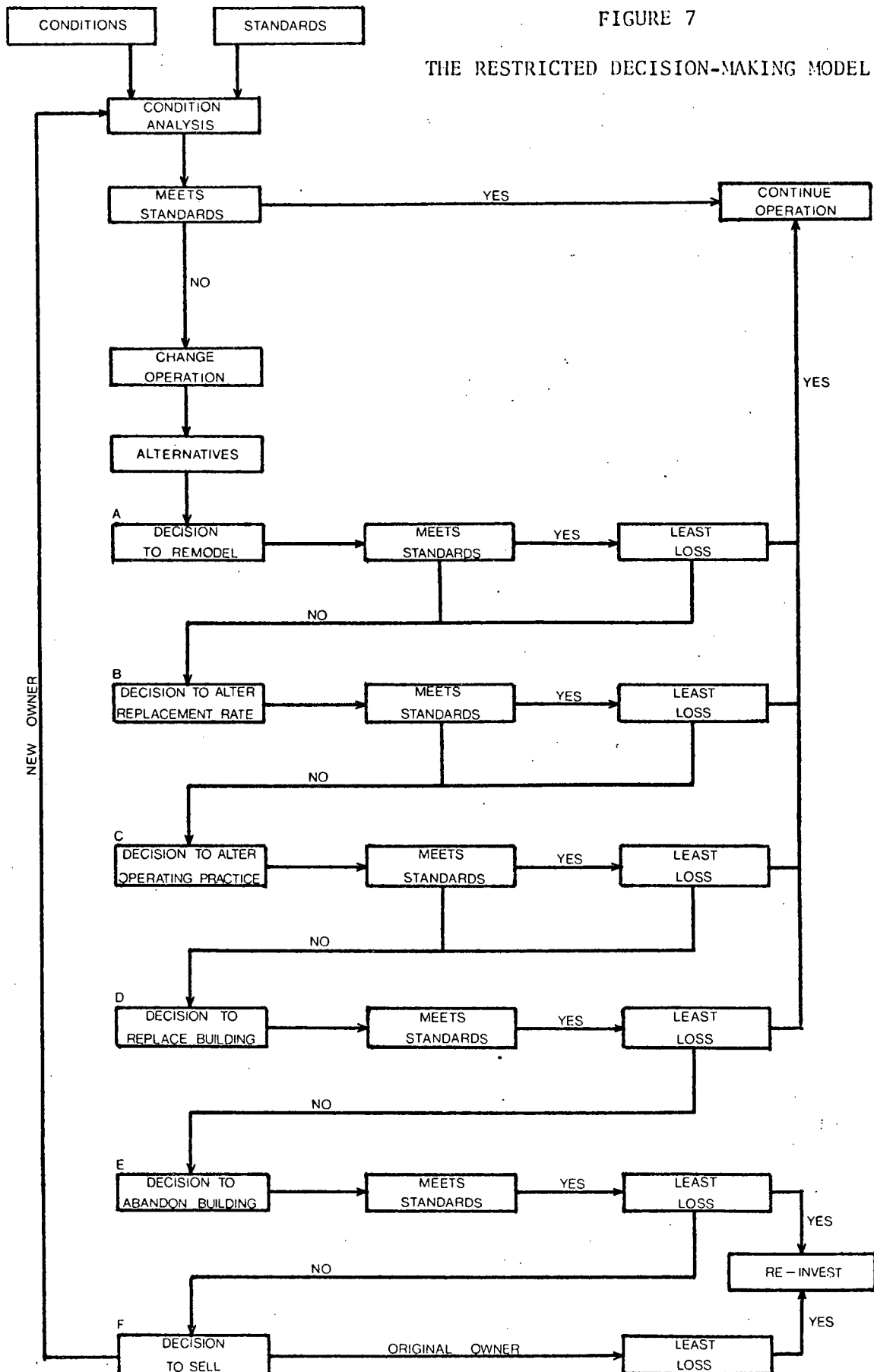
When confronted by the existence and enforcement of minimum housing regulations, the house operating firm first analyzes the condition of its building relative to the standards prescribed in those regulations. If the minimum housing standards are met, then the firm must examine the position of the building with respect to the profit maximization criterion. In the case where the building is operating at maximum profit, the firm will choose to continue the operation at the current level. If, however, the building is not operating at maximum profit, then the firm must work through parts A, B and C of the model to determine an optimum operating point for the building. Upon reaching this optimum operating point, the firm will continue operating at that level. Note that this optimum operating point must be above the minimum housing standards and this is not necessarily equivalent to the maximization of profit.

If the analysis of the building's condition indicates that the minimum standards are not met, the firm must consider changing its operation and examine various alternative plans. The first decision which the firm must consider is whether or not to remodel the building. Two factors are relevant to this decision: the physical condition of the building in relation to the minimum standards, and the cost-revenue relationship. If the building is in such poor condition that it cannot be brought up to the minimum standards through remodelling, the firm must then proceed directly through the model to part D (i.e., the decision to replace the building), since increasing operating and replacement expenditures (i.e., parts B and C) would not raise such a building to the minimum housing standards. If, however, the building can be remodelled to meet at least the minimum housing standards, the firm

must then consider the cost-revenue relationship. In this regard, the firm will remodel the building to meet the minimum housing standards if the loss in profit compared to the potential profit is minimized with respect to the alternatives B, C, D, E and F. For example, if the rate of return (r') from operating the building at the optimum point is 9% and the rate of return after remodelling (r_a) is 7.5%, then the loss (L_A) due to remodelling is expressed as ($r' - r_a$) or 1.5%. If the loss from adopting any of the other alternatives always exceeds 1.5% (i.e., L_A), then the firm will choose remodelling as the least loss alternative.

It might be questioned that a firm could, in fact, remodel the building to a standard higher than that required by the minimum housing regulations. However, such a decision implies that the optimum operating point for the building originally lay above the minimum housing standards. In this case, the model in Figure 4 is more appropriate than the model in Figure 7, as the latter is wholly applicable only to those firms whose buildings do not meet minimum housing standards.

Having determined the potential losses incurred by remodelling, the firm must examine the other alternatives. The second decision to be made is whether or not to alter the rate of replacing structural elements and equipment. This decision is limited to those firms which own buildings operated at a level only marginally below the minimum housing standards because, unlike remodelling, alteration of the replacement rate can move the building only a small distance in the rent-quality distribution. If the condition of the building is far below the minimum housing standards, then it is highly unlikely that it can be brought up to those standards by altering the replacement rate. If the decision is relevant, however, it must be viewed in relation to the other

alternatives. Thus a firm will alter the replacement rate only if it minimizes losses when compared to the other alternatives.

Let r_b equal the rate of return from the building after increasing expenditures for replacement to meet the minimum housing standards. Thus the loss (i.e., L_B) incurred will be equal to $r' - r_b$. If L_B is less than L_A or the loss from any other alternative, then the firm will choose to increase replacement expenditures as the least loss alternative.

The third decision, alteration of operating practices (C in Figure 7), is also relevant only to buildings with optimum operating points just slightly below the minimum housing standards. If a house operating firm can raise its building to minimum levels by changing operating practices, it will choose this alternative when $r' - r_c$ minimizes its losses.

In the case where the building cannot be brought up to the minimum housing standards, the firm may choose to replace the building with a new structure (D in Figure 7). It is assumed that such a structure would then meet the minimum housing requirements. The loss (L_D) incurred by the firm in this case is equal to $r' - r_d$, where r_d is the rate of return from adopting strategy D.

Alternatively, a firm which is unable or unwilling to bring its building up to minimum housing standards may choose to abandon or board up the building (E in Figure 7). The loss to the firm in this case will equal its equity in the building.[32] Again the firm must compare this loss to the loss incurred by choosing any of the other alternatives.

---

[32]It is assumed here that the land upon which the building is situated may not be put to any alternative use other than residential.

Finally, a house operating firm may choose to sell its building (F in Figure 7), regardless of its condition with respect to the minimum housing standards. Naturally, the firm will obtain a higher price for the building if indeed it can be brought up to the minimum housing standards. The rate of return realized from selling the building, r_f, would thus directly reflect the condition of the building with respect to the minimum housing regulations and the potential for improving that condition. The loss (L_F) incurred by the firm in this case would be equal to $r' - r_f$, which again must be evaluated in terms of the five previously listed alternatives.

This completes the discussion of the restricted decision-making model. This model attempts to explain decision-making behaviour of a house operating firm whose building contravenes minimum housing regulations when operated at its optimum operating point (i.e., when profit is maximized and the rate of return equals r'). Six alternative decisions are open to the firm, the relevance of each decision being determined in a given situation by the condition of the building in relation to the minimum housing standards. The firm chooses its strategy so as to minimize its loss in profit and thus adopts the "least loss alternative."

SUMMARY

In this chapter an attempt has been made to formulate a theory of decision-making of house operating firms. It was proposed that a house operating firm can move its building to some degree either upwards or downwards in a rent-quality distribution, thereby altering the profit position of the building. Certain constraints were recognized which limit the potential degree of movement, including the location

of the building, the condition and flexibility of its structural shell, the concern for the reversionary value of the building, and finally the existence and enforcement of minimum housing standards. These constraints serve to define the position in the rent-quality distribution at which the building may be operated most profitably.

Two decision-making models were constructed based on the general theory of the house operating firm. The unrestricted decision-making model is applicable in the absence of minimum housing regulations. The restricted decision-making model applies when minimum housing regulations have been enacted and are actively enforced. The former model postulated that the house operating firm varies its expenditures on re-modelling, replacement and operating practices so as to move its building to the point where profit is maximized. The latter model postulated that a firm which operates a building with an optimum operating point below that prescribed in the minimum housing standards responds by selecting a strategy which minimizes losses to the firm while meeting the minimum housing requirements. In the following chapter, an attempt will be made to further refine and operationalize these two decision-making models.

CHAPTER THREE

OPERATIONALIZING THE DECISION-MAKING MODELS

INTRODUCTION

It has been proposed that in the absence of minimum housing reg-
ulations, a house operating firm will vary its expenditures on remodel-
ling, replacement and operating practices in order to move a building to
the point in the rent-quality distribution where maximum profit may be
achieved. In this chapter an attempt is made to operationalize a deci-
sion-making formula which a house operating firm might employ to ensure
maximum profits from its building. In effect, two fully operationalized
formulas are considered. The first is an adaptation of the model for
real estate investment proposed by Ratcliff and Schwab.[33] The second is
proposed by A.H. Schaaf as a tool for evaluating public subsidization of
private renewal efforts.[34] Both formulas are presented in detail and
evaluated in terms of their applicability to the decision-making models
presented in the previous chapter.

---

[33]Richard U. Ratcliff and Bernard Schwab, "Contemporary Decision
Theory and Real Estate Investment," The Appraisal Journal, XXXVII (1969),
165-187.

[34]A.H. Schaaf, Economics of Urban Renewal (Berkeley: Institute
of Business and Economic Research, University of California, 1960); see
also Schaaf, "Economic Feasibility Analysis for Urban Renewal Housing
Rehabilitation," Journal of the American Institute of Planners, XXXV
(1969), 399-404; and also Schaaf, "The Potential for Subsidized Housing
Rehabilitation," Proceedings of the American Real Estate and Urban Eco-
nomics Association, V (1970), 105-116.

In the discussion of the operationalized formula, an attempt is made to establish the factors which are crucial to the decision-making practices of a house operating firm. These factors must be clearly identified, since the success of any housing code enforcement program or similar public effort to improve rental housing conditions is largely dependent upon the degree to which the responsible public authority can manipulate these factors and affect the ultimate decision-making process. With this concept in mind, the examination now focuses on the formulation of Ratcliff and Schwab.

<div align="center">

AN ADAPTED VERSION OF THE FORMULATION
OF RATCLIFF AND SCHWAB

</div>

According to individual perceptions of the housing market, it is conceivable that a house operating firm may arrive at different projections as to both the future productivity and ultimate reversionary value of its building, which determine the ultimate rate of return to the firm's investment. Ratcliff and Schwab suggest that given these different perceptions, the expected return to an investment can be classified as (1) pessimistic, (2) most probable, or (3) optimistic.[35] In plotting a frequency distribution of the possible rates of return to an investment, it is expected that by far the majority of the rates of return will fall under the "most probable" classification. In a few cases, it is expected that the rate of return will lie under the tails of the frequency curve and thus be classed as "pessimistic" or "optimistic." Figure 8 below illustrates this concept.

---

[35] Ratcliff and Schwab, op. cit., p. 176.
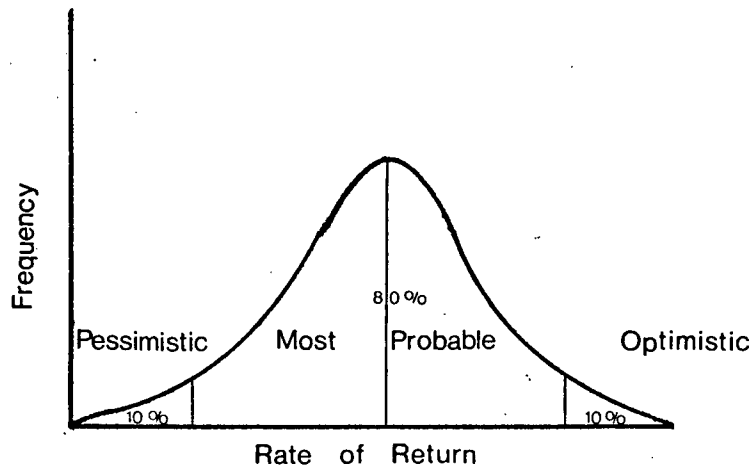
Source: R.U. Ratcliff and B. Schwab, "Contemporary Decision Theory and Real Estate Investment," p. 176.

FIGURE 8

HYPOTHETICAL FREQUENCY DISTRIBUTION OF
RATES OF RETURN

In order to derive the various estimates of the expected rate

of return, it is necessary to project the cash flow and ultimate rever-

sionary value of the building at the termination of the investment

period based upon the pessimistic, most probable and optimistic assump-

tions regarding the housing market. For example, a firm might expect

that vacancy rates will rise along with rising operating and replacement

costs over the course of the investment period. Similarly, the firm

might expect that the resale value of the building upon liquidation will

be relatively low. Such perceptions regarding the housing market will

result in a "pessimistic" expected rate of return. With different per-

ceptions of the housing market, the same firm can arrive at a "most

probable" as well as an "optimistic" expectation regarding the future

rate of return from the building.

Having determined the expected rates of return under each of these assumptions, Ratcliff and Schwab suggest that these rates be weighted according to their probability illustrated in Figure 8. Thus the pessimistic rate of return (r_p) is multiplied by 10%; the optimistic rate (r_o) by 10%; and the most probable rate (r_{mp}) by 80%. The sum of these values determines the overall expected rate of return to the investment. Using this procedure the overall rate of return for each operating strategy can be determined, thus providing the firm with a sound basis for decision-making.

An Example of the Use of the Model

How exactly might a house operating firm calculate the overall rate of return for a given operating strategy under the Ratcliff and Schwab formulation? For the purposes of the discussion, assume that the house operating firm wishes to calculate the "pessimistic", "most probable" and "optimistic" rates of return from adopting a strategy of deferring operating and replacement expenditures. The procedure and calculations which follow are based upon a hypothetical example. The emphasis is, of course, on the method rather than the actual numbers employed.

The property in question is a three-story apartment building of frame construction containing 25 units, either studio or one-bedroom suites. The building is 20 years old and has been well maintained and is located in an area of slightly less than average attractiveness within the community. The house operating firm has recently acquired the building for $275,000.00, of which the land component is estimated to be $70,000.00 and the building $205,000.00. The firm has put up

$91,000.00 in equity and financed the remainder of $184,000.00 at 9.5%

over a 20-year term. The firm operates this building only and desires

to achieve maximum profit from the building over the next ten years, at

the end of which time the building will be sold. The description of the

model and the calculations based upon these assumptions follow below.

The Calculation Procedure

Line 1. Assume 100% occupancy and estimate the gross annual income for each year according to the operating strategy proposed.

Line 2. Estimate the occupancy rate for each year according to the operating strategy proposed.

Line 3. Calculate the effective gross income (line 1 multiplied by line 2).

Line 4. Estimate the operating expenses for each year according to the operating strategy proposed.

Line 5. Estimate the replacement expenses for each year according to the strategy proposed.

Line 6. Estimate the costs of remodelling in the case where that strategy is proposed.

Line 7. Calculate the interest on the mortgage for each year.

Line 8. Calculate the book value of the building at the beginning of each year (the depreciation base in year one minus the cumulative annual depreciation).

Line 9. Calculate the depreciation allowance for each year (assume 5% straight line depreciation).[36]

Line 10. Calculate the potential taxable income for each year (line 3 minus the sum of lines 4, 5, 7 and 9).

Line 11. Calculate the actual taxable income for each year (line 10 minus accumulated losses of the previous five years).[37]

---

[36]In order to simplify the example, a straight line depreciation rate of 5% has been employed. However, the model allows the firm to choose any depreciation technique which suits its requirements.

[37]The method used here is based on Canadian tax laws in 1970 and is taken from A.W. Gilmore, Income Tax Handbook, 1970-1971 (20th ed.; Toronto: Richard DeBoo Ltd., 1970), p. 487.

Line 12.   Calculate the taxes for each year[38] (line 11 multiplied by 0.18).[39]

Line 13.   Calculate the annual mortgage principal payments.

Line 14.   Calculate the remaining principal on the mortgage after each year.

Line 15.   Calculate the cash flow after taxes (line 9 plus line 10 minus the sum of lines 12 and 13).

Line 16.   Estimate the sale price of the property after a 10-year holding period.

Line 17.   Calculate the value of the land component at the time of sale (assumed to remain constant in the case of this example).

Line 18.   Calculate the value of the building at the time of sale (line 16 minus line 17).

Line 19.   Calculate the book value of the building at the end of the holding period.

Line 20.   Calculate the capital gain realized from the sale of the property (line 18 minus line 19).

Line 21.   Calculate the capital gains tax. (Where depreciable property is sold for a price in excess of the remaining undepreciated capital cost, the taxpayer is required to take into income any depreciation claimed in previous years. The amount included will be the lesser of (a) the excess of the selling price over the remaining undepreciated capital cost, or (b) the excess of the original cost over the remaining undepreciated capital cost. The excess is taxed at a rate of 18% on the first $35,000.00 and 47% on the remainder exceeding $35,000.00.)[40]

Line 22.   Calculate the net proceeds to the house operating firm after the capital gains tax (line 16 minus the sum of lines 14 and 21).

---

[38]The benefit of a tax shield is not considered in this formulation, since it has been assumed that the firm in question operates only one building. Such provision could easily be incorporated into the formulation, however. For a fuller explanation, see R.U. Ratcliff and B. Schwab, "Contemporary Decision Theory and Real Estate Investment."

[39]The taxation rate of 0.18 is taken from Gilmore, op. cit., p. 689.

[40]This method of tax calculation is presented in Canadian Master Tax Guide (23rd ed.; Don Mills, Ontario: C.C.H. Canadian Limited, 1968), p. 412.

The Return to Equity

Wendt and Cerf[41] suggest the use of the following formula to calculate the rate of return to equity:

$$E = \sum_{t=1}^{n} \frac{R_t - I_t - A_t - T_t}{(1 + r)^t} + \frac{P_n - GT - UM}{(1 + r)^n}$$

Where: E = Equity

R_t = Net income in period t (i.e., line 3 minus the sum of lines 4 and 5).

I_t = Interest paid on mortgage in period t (i.e., line 7).

A_t = Principal payment on mortgage in period t (i.e., line 13).

T_t = Income tax in period t (i.e., line 12).

P_n = Sales price in period t = n (i.e., line 16).

GT = Capital gains tax (i.e., line 21).

UM = Unpaid mortgage principal at period t = n (i.e., line 14).

r = Rate of return.

The expression $(R_t - I_t - A_t - T_t)$ is equal to the cash flow in line 15 of the Ratcliff and Schwab model. Similarly, the expression $(P_n - GT - UM)$ is equal to the sum of line 16 discounted at (r) plus line 22 discounted at (r) for the period t = 1,...,n. While (r) can be calculated by hand using methods of approximation, as has been done with the example, the use of data processing would substantially speed up the process for a house operating firm.

Having calculated the rate of return for each estimate for the particular strategy (i.e., deferring expenditures on operating and

---

[41]P.F. Wendt and A.R. Cerf, Real Estate Investment Analysis and Taxation (New York: McGraw-Hill, 1969), p. 27.

replacement practices in the case of this example), the remaining step is to account for the probability of these rates. As stated earlier, each of the three estimates of (r) (i.e., r_o, r_{mp} and r_p) is assigned a probability under the Ratcliff-Schwab formulation. Thus, the "pessimistic" estimate is assigned a probability of 0.1, the "most probable" estimate is assigned a probability of 0.8, and the "optimistic" estimate is assigned a probability of 0.1. To determine the overall estimated rate of return, these probabilities are multiplied by their corresponding estimated rate of return. In our example, the overall rate of return (i.e., r') from adopting a strategy of deferring operating and replacement expenditures is the sum of (-0.1%)(0.1) + (6.18%)(0.8) + (7.62%)(0.1), or 5.69%.[42]

Where: The pessimistic rate of return (r_p) = -0.1%.

The most probable rate of return (r_{mp}) = 6.18%.

The optimistic rate of return (r_o) = 7.62%.

In Tables V, VI and VII below, a set of income and operating streams are estimated for the particular strategy in question. The required calculations are performed based on these estimates and the results are presented in the same tables.

Discussion of the Adapted Version of the
Ratcliff-Schwab Formulation

The model presented here is tailored to a house operating firm involved in the operation of one building only. However, the taxation position of such a firm differs greatly from that of a firm which operates several buildings and holds other assets. Thus the model must be

---

[42]These rates of return are derived from Tables V, VI and VII respectively.

TABLE V

STRATEGY: Deferring Operating and Replacement Expenditures
ESTIMATE: Pessimistic

	Year									
	1	2	3	4	5	6	7	8	9	10
1. Potential gross income	38,880	38,880	38,500	38,100	37,700	37,300	36,800	36,300	35,700	35,100
2. Occupancy rate	.95	.93	.92	.91	.89	.87	.85	.83	.82	.80
3. Effective gross income	36,940	36,160	35,420	34,670	33,550	32,450	31,280	30,130	29,270	28,080
4. Operating expenses	11,200	11,100	10,900	10,650	10,350	10,000	9,600	9,150	8,600	8,000
5. Replacement expenses	2,800	2,770	2,730	2,660	2,890	2,500	2,400	2,290	2,150	2,000
6. Remodelling expenses	----	----	----	----	----	----	----	----	----	----
7. Mortgage interest	17,480	17,160	16,800	16,400	15,990	15,530	15,020	14,460	13,850	13,180
8. Book value of building	205,000	194,750	184,500	174,250	164,000	153,750	143,500	133,250	123,000	112,750
9. Depreciation allowance	10,250	10,250	10,250	10,250	10,250	10,250	10,250	10,250	10,250	10,250
10. Potential taxable income	-4,790	-5,120	-5,260	-5,290	-5,930	-5,830	-5,990	-6,020	-5,580	-5,350
11. Actual taxable income	----	----	----	----	----	----	----	----	----	----
12. Taxes	----	----	----	----	----	----	----	----	----	----
13. Annual mortgage principal	3,400	3,720	4,080	4,480	4,890	5,360	5,860	6,420	7,030	7,700
14. Outstanding mortgage principal	180,600	176,880	172,800	168,320	163,430	158,070	152,210	145,790	138,760	131,060
15. Cash flow	2,060	1,410	910	480	-570	-940	-1,600	-2,190	-2,360	-2,800

16. Estimated sales price	245,000	19. Amount undepreciated	112,750	22. Net after sale	107,910
17. Land component	70,000	20. Capital gain	62,250	23. Rate of return	-0.1%
18. Value of building	175,000	21. Gains tax	6,030		

TABLE VI

STRATEGY: Deferring Operating and Replacement Expenditures
ESTIMATE: Most Probable

					Year					
	1	2	3	4	5	6	7	8	9	10
1. Potential gross income	38,880	39,180	39,480	39,780	40,100	40,400	40,700	41,000	41,300	41,600
2. Occupancy rate	.95	.94	.94	.93	.92	.91	.90	.88	.86	.85
3. Effective gross income	36,940	36,830	37,110	36,990	36,890	36,760	36,630	36,080	35,520	35,360
4. Operating expenses	11,200	10,640	10,080	9,520	8,960	8,400	7,840	7,280	6,720	6,160
5. Replacement expenses	2,800	2,660	2,520	2,380	2,240	2,100	1,960	1,820	1,680	1,540
6. Remodelling expenses	----	----	----	----	----	----	----	----	----	----
7. Mortgage interest	17,480	17,160	16,800	16,400	15,990	15,530	15,020	14,460	13,850	13,180
8. Book value of building	205,000	194,750	184,500	174,250	164,000	153,750	143,500	133,250	123,000	112,750
9. Depreciation allowance	10,250	10,250	10,250	10,250	10,250	10,250	10,250	10,250	10,250	10,250
10. Potential taxable income	-4,790	-3,880	-2,540	-550	470	1,560	2,270	2,270	3,020	4,230
11. Actual taxable income	----	----	----	----	----	----	----	----	210	4,230
12. Taxes	----	----	----	----	----	----	----	----	40	760
13. Annual mortgage principal	3,400	3,720	4,080	4,480	4,890	5,360	5,860	6,420	7,030	7,700
14. Outstanding mortgage principal	180,600	176,880	172,800	168,320	163,430	158,070	152,210	145,790	138,760	131,060
15. Cash flow	2,060	2,650	3,630	3,510	4,810	5,360	5,950	6,100	6,200	6,020

16. Estimated sales price	260,000	19. Amount undepreciated	112,750	22. Net after sale	105,140
17. Land component	70,000	20. Capital gain	77,250	23. Rate of return	6.18%
18. Value of building	190,000	21. Gains tax	23,800		

54

TABLE VII

STRATEGY: Deferring Operating and Replacement Expenditures
ESTIMATE: Optimistic

	Year									
	1	2	3	4	5	6	7	8	9	10
1. Potential gross income	38,880	39,280	39,700	40,130	40,570	40,900	41,250	41,600	41,900	42,200
2. Occupancy rate	.95	.95	.95	.94	.94	.93	.93	.92	.91	.90
3. Effective gross income	36,940	37,320	37,710	37,720	38,140	38,040	38,360	38,270	38,130	37,980
4. Operating expenses	11,200	10,700	10,100	9,500	8,900	8,300	7,600	6,900	6,400	5,900
5. Replacement expenses	2,800	2,680	2,530	2,380	2,230	2,080	1,900	1,730	1,600	1,480
6. Remodelling expenses	----	----	----	----	----	----	----	----	----	----
7. Mortgage interest	17,480	17,160	16,800	16,400	15,990	15,530	15,020	14,460	13,850	13,180
8. Book value of building	205,000	194,750	184,500	174,250	164,000	153,750	143,500	133,250	123,000	112,750
9. Depreciation allowance	10,250	10,250	10,250	10,250	10,250	10,250	10,250	10,250	10,250	10,250
10. Potential taxable income	-4,790	-3,470	-1,970	-810	870	1,880	3,590	4,930	6,030	7,170
11. Actual taxable income	----	----	----	----	----	----	----	2,150	6,030	7,170
12. Taxes	----	----	----	----	----	----	----	390	1,080	1,290
13. Annual mortgage principal	3,400	3,720	4,080	4,480	4,890	5,360	5,860	6,420	7,030	7,700
14. Outstanding mortgage principal	180,600	176,880	172,800	168,320	163,430	158,070	152,210	145,790	138,760	131,060
15. Cash flow	2,060	3,060	4,200	4,960	6,230	6,770	7,980	8,370	8,170	8,430

16. Estimated sales price	275,000	19. Amount undepreciated	112,750	22. Net after sale	110,750
17. Land component	70,000	20. Capital gain	92,250	23. Rate of return	7.62%
18. Value of building	205,000	21. Gains tax	33,190		

extended to account for the tax shield benefits which might accrue as a result of operating the building in question.

A firm holding several buildings may find that the operation of the particular building in the example needs to be modified so as to provide the largest possible tax shield for other investments of the firm. In such a case, this building will not be operated to maximize its own profit position, but rather to maximize profit from the total holdings of the firm. The application of an accelerated rate of depreciation might aid in achieving this end. Such a policy would, however, tend to disallow maximization of returns from the building in question. It can thus be concluded that while the model can account for the benefits accruing from a tax shield, it is most applicable in the case of a firm operating a single building.

Perhaps the most significant point which can be raised in the discussion of the model and the data in Tables V, VI and VII concerns the degree of certainty surrounding the projections, principally in lines 1, 2 and 16, but also in lines 4 and 5. With perfect information, there is little doubt that the firm could predict with relatively high accuracy, annual gross incomes, occupancy rates, expenses and the ultimate sales price of the building after the holding period. However, such is not the case. Louis Winnick has stated:[43]

> Rational investment always requires the assembly and analysis of various kinds of dependable information. In this respect, the market for residential property is primitive and the level of business ethics far from high. Accurate and regular reports on sales, costs and earnings such as are required of large corporations are notoriously lacking in the real estate market. The

[43]Louis Winnick, Rental Housing: Opportunities for Private Investment (New York: A.C.T.I.O.N., 1958), p. 101.

prospective investor in an existing apartment building has no
sure way of obtaining the current and past gross and net earn-
ings of a given property. The information supplied by the
would-be seller is seldom accepted at face value and the prin-
ciple of <u>caveat emptor</u> prevails.

This statement tends to cast the assumption regarding perfect information

in rather poor light. Fortunately, the previously outlined model com-

pensates at least in part for this lack of market information by making

three projections of the relevant income and expense streams based upon

different assumptions and assigning different probabilities to the reali-

zation of the projections. It is maintained that by using this method,

as opposed to a single projection, some of the uncertainty caused by the

lack of perfect information is factored out.

While the Ratcliff-Schwab formulation may be validly criticized

as indicated above, it should not be rejected outright. Given its flexi-

bility and comprehensive nature, it allows for variations in a signifi-

cant range of "real world" operating and investment inputs. For example,

different financing formulas may be injected into the model at any stage

of the holding period. It also allows incorporation of annual changes

in the taxation position and depreciation practices of a house operating

firm possessing numerous assets other than the building. In addition,

a host of variations in operating, replacement and remodelling practices

can be incorporated in the model and their effects gauged in terms of

the profit criterion. Finally, these variations can be incorporated in

terms of both the time at which they occur and their magnitude of value.

Operationalization of the Restricted Decision-making Model

To this point the discussion has dealt only with a house oper-

ating firm which is not constrained by the existence and enforcement

of a housing code. In the case where a housing code is enforced, it is necessary to operationalize the concept of least loss alternatives. The calculations required to derive the loss incurred by adopting any one of the strategies presented in the restricted decision-making model follow below and are based on the adaptation of Ratcliff and Schwab's model.

Let us assume that a house operating firm has been operating its building at maximum profit at a level of quality which, due to deferred operating and replacement expenditures, is below that required by a recently enacted housing code. Through the use of the previously discussed model, the firm has calculated the overall expected rate of return (r') from the building. However, as the building is below the minimum level of quality, the enforcement of the housing code does not permit the firm to earn this rate of return. By following the procedure below, the firm can determine which of strategies A - F will involve the least loss while at the same time allowing it to meet the requirements of the code.

Strategy A: Remodelling

Step 1.   Calculate (r') (follow steps 1 - 22 as previously outlined and apply the formula from Wendt and Cerf).[44]

Step 2.   Calculate the expected rate of return to equity (r_a), assuming that the building is remodelled (use the same procedure as in step 1).

Step 3.   Calculate the decline in the rate of return to equity (line 1 minus line 2).

Step 4.   Calculate the loss (L_A) incurred from remodelling (line 3 multiplied by the equity in line 2 times the number of years remaining in the holding period).

---

[44]See page 51 of this study.

Strategy B: Increasing Replacement Expenditures

Step 1.   Calculate (r').

Step 2.   Calculate the expected rate of return to equity (r_b) assuming that the replacement expenditures were increased so as to comply with the minimum housing standards.

Step 3.   Calculate the decline in the rate of return to equity (line 1 minus line 2).

Step 4.   Calculate the loss (L_B) incurred by increasing replacement expenditures (line 3 multiplied by the equity in line 2 times the number of years remaining in the holding period).

Strategy C: Increasing Operating Expenditures

Step 1.   Calculate (r').

Step 2.   Calculate the expected rate of return to equity (r_c) assuming that the operating expenditures were increased so as to comply with the minimum housing standards.

Step 3.   Calculate the decline in the rate of return to equity (line 1 minus line 2).

Step 4.   Calculate the loss (L_C) incurred by increasing operating expenditures (line 3 multiplied by the equity in line 2 times the number of years remaining in the holding period).

Strategy D: Replacing the Building

Step 1.   Calculate (r').

Step 2.   Calculate the expected cumulative discounted cash flow up to the time at which the minimum housing regulations were enforced (use the rate of discount (r') determined in line 1).

Step 3.   Calculate the initial equity.

Step 4.   Calculate the expected discounted cash flow and discounted reversionary value of the building for the remainder of the holding period after the minimum housing regulations were enforced (line 3 minus line 2).

Step 5.   Calculate the remaining mortgage debt at the time that the decision to replace the building is made.

Step 6.   Calculate the costs of demolishing the building.

Step 7.   Calculate the total loss due to the decision to demolish the building (the sum of lines 3, 4, 5 and 6 minus line 2).

Step 8.   Calculate the expected total discounted return from the new building, assuming it is operated at maximum profit for the duration of the holding period (use the rate of discount (r') determined in line 1).

Step 9.   Calculate the total loss (L_D) due to the decision to replace the building (line 8 minus line 7).

Strategy E: Abandoning the Building

Step 1.   Calculate (r').

Step 2.   Calculate the expected cumulative discounted cash flow up to the time at which the minimum housing regulations were enforced (use the rate of discount determined in line 1).

Step 3.   Calculate the initial equity.

Step 4.   Calculate the expected discounted cash flow and discounted reversionary value of the building for the remainder of the holding period after the minimum housing regulations were enforced (line 3 minus line 2).

Step 5.   Calculate the total loss (L_E) due to the decision to abandon the building (the sum of lines 3 and 4 minus line 2).

Strategy F: Selling the Building

Step 1.   Calculate the expected discounted return to equity assuming that the building was operated at maximum profit for the holding period.

Step 2.   Calculate the discounted return to equity assuming that the building was sold when the minimum housing regulations began to be enforced (use the discount rate (r') in line 1).

Step 3.   Calculate the opportunity cost of capital.

Step 4.   Calculate the discounted return to the equity in the building if it were re-invested for the remainder of the holding period (use the discount rate in line 3).

Step 5.   Calculate the loss due to selling the building (line 2 plus line 4 minus line 1).

Discussion of the Restricted
Decision-making Model

The operationalization of the foregoing decision-making strate-gies through the use of an adapted version of Ratcliff and Schwab's model serves to delineate several key variables in the decision-making process of a house operating firm faced with code enforcement. For example, in strategy A (remodelling), it is essential that the house operating firm be able to predict the income and expense streams as well as the ultimate sales price of the remodelled building. Similarly in strategies B and C, it is again essential that the firm be able to predict the income and expense streams which will result from increased operating and replace-ment expenditures. In the case of strategy D (replacing the building), the firm must be able to project the cash flow and ultimate sales value of a new building prior to its construction. The firm is probably on its surest ground in respect of strategy E (abandonment of the building), since it can assess the full costs to be incurred with a high degree of accuracy. Finally, in the case of strategy F (selling the building), the key variable becomes the opportunity cost of capital, which can again be established with some degree of certainty.

Not only do the operationalized strategies identify and quantify the key variables central to the firm's decision-making process, but they also serve to further reveal the effects of certain antecedent conditions on the decision-making process of the house operating firm. For example, a house operating firm which has a substantial investment in equity or mortgage funds is unlikely to adopt strategy D or E (replacing or aban-doning the building), since these strategies will result in minimizing losses only when the firm has a limited investment of equity and mortgage funds in the building. Adopting strategy F (selling the building) will

be more appropriate when the opportunity costs of capital are high than

when the equity funds which are re-invested produce only low returns.

In considering this strategy, however, the firm must realize that the

market value of a building which violates the minimum housing regulations

is likely to be somewhat depressed, perhaps to the point of off-setting

the potential gains from re-investing the equity. Strategies A and B

are likely to be adopted when the condition of the building is only mar-

ginally lower than the minimum housing standards. Finally, the firm

which has a substantial mortgage debt and equity investment in a build-

ing of much lower quality than that prescribed in the minimum housing

standards will tend to minimize losses by remodelling, rather than by

the other strategies.

A.H. SCHAAF'S FORMULATION

Having presented the adapted version of Ratcliff and Schwab's

model for operationalizing decision-making, we will now examine the model

of A.H. Schaaf. Unlike the Ratcliff and Schwab model, Schaaf's model is

not aimed at the investment decisions of entrepreneurs per se. In fact,

Schaaf states that:

> Considerations such as the personal income tax consider-
> ations of rehabilitation and new construction expenditures,
> while of great importance to a private investor making a
> rehabilitation or replacement decision, do not concern us.[45]

However, he adds that this does not mean that the private profit cri-

teria will not be considered.[46] It can thus be concluded that although

---

[45]A.H. Schaaf, "Economic Feasibility Analysis for Urban Renewal
Housing Rehabilitation," p. 399.

[46]Ibid., p. 400.

Schaaf's model was developed primarily to determine the most efficient method of subsidizing housing improvement, it can nevertheless be applied in the context of the private investor or house operating firm. This conclusion is supported by our model's assumption that the house operating firm operates only one building, and consequently its decision-making is less affected by personal tax, depreciation rates and tax shields.

The Model and the Calculations

Schaaf's model deals only with the case where minimum housing regulations are enforced. He recognizes three basic strategies:

1. Rehabilitation to the code compliance standard,

2. Rehabilitation to the modernization standard,

3. Replacement.

The first of Schaaf's strategies, code compliance, is comparable to our strategies B and C, increasing replacement and operating expenditures respectively. It would, however, also be equivalent to our strategy A, remodelling, in cases where the building was so run down that increases in operating and replacement expenditures would not result in code compliance. The second strategy, modernization, is undoubtedly equivalent to our strategy A, but to a degree which surpasses the minimum housing regulations and thus may tend to move a substandard building further away from its point of maximum profit. The third strategy, replacement, corresponds to our strategy D, replacement.

The operationalized form of Schaaf's model takes into account the following variables: cost of new construction, cost of modernization, cost of code compliance, life of the structure, differences in rent levels and differences in maintenance costs. The basic formulation

of the model states that rehabilitation is preferred to replacement if:

$$C > R + M \frac{1 - (1 + i)^{-n}}{i} + C \frac{(1 - nr)}{(1 + i)^n} + D \frac{1 - (1 + i)^{-n}}{i}$$

Where: C = New construction cost.

R = Cost of rehabilitation.

M = Difference in maintenance costs between a new structure and a rehabilitated one.

D = Difference in rent levels between a new structure and a rehabilitated one.

i = Rate of discount.

n = Life of the present structure following rehabilitation.

r = Depreciation factor.

The above formulation serves only to compare rehabilitation of any standard and the cost of new construction generally since, as Schaaf states, it is not possible to represent all of the alternative investment situations in one generalized formulation.[47] Since it is conceivable that several standards of rehabilitation are feasible, the most appropriate standard is that which maximizes the difference with respect to the cost of new construction.

To account for the situation where the building is rehabilitated to different standards at different times, Schaaf extends his formulation in the following manner. Rehabilitation[48] is preferred if:

---

[47]Ibid., p. 403.

[48]Where the method of rehabilitation in this case is to rehabilitate the structure to the code compliance standard three times over and then rehabilitate to the modernization standard.

$$C > R_1 + \frac{R_1}{(1 + i)^{n_1}} + \frac{R_1}{(1 + i)^{2n_1}} + \frac{R_3[r_3(n_c - 3n_1)]}{(1 + i)^{3n_1}}$$

$$+ M_1 \frac{1 - (1 + i)^{-3n_1}}{i} + D_1 \frac{1 - (1 + i)^{-3n_1}}{i}$$

$$+ \frac{M_3 \frac{1 - (1 + i)^{-(n_c - 3n_1)}}{i}}{(1 + i)^{3n_1}} + \frac{D_3 \frac{1 - (1 + i)^{-(n_c - 3n_1)}}{i}}{(1 + i)^{3n_1}}$$

Where: R_1 = Cost of code compliance.

R_3 = Cost of modernization.

C = Cost of new construction.

n_1 = Life of structure rehabilitated to the code compliance standard.

n_3 = Life of structure rehabilitated to the modernization standard.

r_3 = $\frac{100}{n_3}$ percent.

n_c = Life of new structure.

M_1 = Difference in maintenance costs between a new structure and one rehabilitated to the code compliance standard.

D_1 = Difference in rent levels between a new structure and one rehabilitated to the code compliance standard.

M_3 = Difference in maintenance costs between a new structure and one rehabilitated to the modernization standard.

D_3 = Difference in rent levels between a new structure and one rehabilitated to the modernization standard.

An Example

The above formulation is illustrated by the hypothetical data in Table VIII below.

TABLE VIII

CHARACTERISTICS OF RENEWAL STANDARDS

Renewal standard	Renewal cost	Structural life (yrs.)	Expected average annual future maintenance cost	Expected average annual market rental value
Code compliance	$ 8,000	10	$2,000	$3,600
Modernization	$ 40,000	40	$1,000	$6,720
New	$100,000	50	$ 800	$9,600

Inserting these figures into the formulation, it becomes:

$$\$100,000 \ < \ \$8,000 \ + \ \frac{\$8,000}{1.06^{10}} \ + \ \frac{\$8,000}{1.06^{20}} \ + \ \frac{\$40,000\ [.025(50 - 30)]}{1.06^{30}}$$

$$+ \ \$1,200 \ \frac{1 - 1.06^{-30}}{.06} \ + \ \$6,000 \ \frac{1 - 1.06^{-30}}{.06}$$

$$+ \ \$200 \ \frac{\frac{1 - 1.06^{-(50-30)}}{.06}}{1.06^{30}} \ + \ \$2,880 \ \frac{\frac{1 - 1.06^{-(50-30)}}{.06}}{1.06^{30}}$$

$$\$100,000 \ < \ [\$8,000 + \$4,525 + \$2,492 + \$3,486 + \$16,524 + \$82,620 \\ + \$399 + \$5,947]$$

Solving this inequality results in the observation that new construction costs $23,993.00 less than the proposed pattern of rehabilitation in the example. Thus, it would be more appropriate to tear down and replace the existing structure than to bring it up to the code compliance standard three times at ten-year intervals and finally to modernize it in thirty years. It is noted that other methods of rehabilitation can be

tested as well by altering the formula only slightly. While it would be
pointless to list all the possible combinations of rehabilitation and
their corresponding variations in the equation, it is important to note
that the optimum standard of rehabilitation is the combination that max-
imizes the cost difference. If no combination has a total cost less than
that required for new construction, the latter is the optimum standard.

Discussion of Schaaf's Formulation

Unlike Ratcliff and Schwab, Schaaf does not restrict his model
to a particular investment period, but rather to the lifetime of the
structure undergoing analysis. This observation is particularly impor-
tant in that although extending the term of the model adds potential
flexibility, seldom will a house operating firm continue to operate a
building for the whole or even a large part of its economic lifetime.
In fact, Grebler[49] and Sporn[50] have found that average turnover rates for
slum properties range from once every eleven years to once every thirteen
years respectively. By fixing a term for the holding period, Ratcliff
and Schwab tend to reduce the uncertainty regarding future long-term pre-
dictions of income and expense streams. In Schaaf's formulation, it is
assumed that certain incomes and costs will remain constant over the long
term. Superficially, it would thus appear that Ratcliff and Schwab's
assumption regarding variations in the income and expense streams is more
appropriate. However, since in both models these streams must be esti-
mated, it is uncertain whether a variable estimate will yield a better

---

[49]Leo Grebler, Housing Market Behavior in a Declining Area (New
York: Columbia University Press, 1952), pp. 75-77.

[50]Arthur D. Sporn, "Empirical Studies in the Economics of Slum
Ownership," Land Economics, XXXVII (1961), p. 337.

result than a fixed estimate.

Schaaf's model does not account for the case where the property is either abandoned or sold. While this might be viewed as a shortcoming regarding the applicability of the model to the house operating firm, it should be remembered that these strategies are of only minor importance in our decision-making model. It has been noted that abandonment of the property is likely to occur only when the firm has a small investment in equity and mortgage funds in the property. Further, although sale of the property may appear to be a potentially important and more common strategy, the fact remains that the new owner will be faced with the same set of decisions as the original owner with one exception, namely immediate resale of the property. Thus, while Schaaf's model cannot account for the decision to sell the building on the part of the original owner, it can effectively deal with the alternative strategies available to the new owner of the building.

Perhaps the most significant shortcoming of Schaaf's formulation in its application to our decision-making model is that it does not account for the reversionary value of the property. Rather, it assumes that the building is rehabilitated, thus extending its life for a certain period of time, after which it ceases to have any value and is replaced. While this is an appropriate assumption given that the model was developed for a local housing authority, it is perhaps inappropriate in the case of a house operating firm which may wish to sell the building at some time in the future after it has complied with the minimum housing regulations. For a firm in this position, then, the formulation of Ratcliff and Schwab is more appropriate.

THE KEY VARIABLES

Having presented and discussed two alternative techniques for operationalizing our decision-making models, the next step is to extract from these formulations the critical variables which may be influenced by public policy. One such variable is the cost of rehabilitating a residential structure. This is particularly important to firms with buildings having optimum operating points lying below the minimum housing standards. Generally, the higher the minimum standards, the higher are the costs involved in meeting those standards. Since higher minimum standards involve higher costs to the house operating firm, it is apparent that public policy can potentially alter a firm's choice of strategies by varying the level at which the minimum housing standards are set.

A second key variable upon which public policy can exert an influence and thereby affect house operating firm decision-making is the property tax. Ernest and Robert Fisher have said:[51]

> In addition to providing revenue, the general property tax on real estate may be used to further the purposes of urban planning and public welfare. For by controlling the amount of taxes to be levied or exemptions to be granted against rights in different types of spatial units, public policy can influence the use of land and affect the distribution of wealth and income.

The relative importance of the property tax to the house operating firm cannot be denied. Nash,[52] for example, has estimated that property taxes represent in the order of 20% of the operating costs of

---

[51] Ernest M. Fisher and Robert M. Fisher, Urban Real Estate (New York: Henry Holt and Company, Inc., 1954), p. 456.

[52] W.W. Nash, Residential Rehabilitation, p. 171.

apartment buildings. Sternlieb[53] found that in substandard rental hous-
ing the median expenditure for property taxes represented 34.4% of all
operating expenses. Thus by varying assessment rates or adopting a sys-
tem of tax deferrals or exemptions, public policy may significantly
affect the operating position and ultimately the decision-making prac-
tices of house operating firms.

A third variable of vital importance to the house operating firm
is effective gross income. As stated earlier, this variable is a func-
tion of potential gross income times the occupancy rate. Again, this
variable can be indirectly manipulated by public policy. For example,
public land use and servicing policies affect the relative attractiveness
of a particular location and thus affect the demand for housing services
offered at that location. To some extent, then, changes in public policy
in this regard will result in changes in housing demand, which in turn
will affect the potential gross income, occupancy rates and ultimate
sales value of residential structures. Again the ultimate result may be
alteration of a firm's decision-making practices.

A fourth key variable is the firm's access to capital to make
improvements to its building. Naturally, for a firm operating a build-
ing with an optimum operating point lying below the minimum standards,
the tendency to rehabilitate the building declines, ceterus parabus, as
the cost of capital increases. Thus, through a system of low-cost loans
or grants, public policy can reduce the cost of capital and again may
potentially affect the decisions of a house operating firm.

---

[53]George Sternlieb, The Tenement Landlord (New Brunswick, N.J.:
Rutgers University Press, 1966), p. 78.

A final key variable which public policy may influence is the depreciation rate for residential structures. This is a particularly important consideration for house operating firms which own more than one building and are keenly interested in the potential benefits of a tax shield. Accelerated depreciation coupled with a high rate of turnover is generally not conducive to a high standard of maintenance or the rehabilitation of poor quality buildings. While a local housing authority is powerless to directly affect turnover rates or depreciation rates, it can exert pressure on the senior levels of government to effect changes in the latter regard. By restricting the opportunity for the use of accelerated depreciation rates, public policy might again affect the financial position of the house operating firm and ultimately its decision-making practices.

SUMMARY

This chapter has attempted to identify and quantify some of the key variables connected with our decision-making models. The formulations of A.H. Schaaf and Ratcliff and Schwab were considered. Only the Ratcliff and Schwab formulation can be applied in the case where minimum housing regulations are either not in existence or not enforced, and thus profit maximization is the decision-making criterion. However, in the case where minimum housing regulations are enforced, it is difficult to state which formulation is more appropriate. From the point of view of the individual house operating firm, Ratcliff and Schwab's formulation is more appropriate. On the other hand, from the point of view of a local housing authority attempting to eliminate substandard housing and utilize community resources efficiently, Schaaf's model is more useful.

In this chapter we have demonstrated how a house operating firm can indeed quantify the effects of alternative decisions with respect to the operation of its building. By examining the experience of selected communities, we will now attempt to determine the effect of housing code enforcement on the variables identified in this chapter as they relate to the decision-making practices of house operating firms.

CHAPTER FOUR

EXPERIENCE AND PROBLEMS IN HOUSING CODE ENFORCEMENT

INTRODUCTION

In this chapter we will investigate two aspects of housing code

enforcement. First, we will examine the effectiveness of code enforce-

ment as a means of eliminating substandard rental housing. Secondly,

we will try to determine how housing code enforcement has affected the

key decision-making variables relevant to house operating firms. For

the most part, the material presented in this chapter relates to the

experience of communities in the United States. Unfortunately, the lim-

ited experience of Canadian communities[54] in code enforcement has not

been sufficiently documented to warrant its inclusion in this study.

We must, therefore, rely upon the U.S. experience and assume that it is

relevant and applicable to the Canadian context.

The History of Housing Codes in
    the United States

The origin of housing codes in the U.S. can be traced back to

1867 and the New York Tenement House Law. This law concerned itself

solely with the gross physical characteristics of tenement buildings and

---

[54]Only the Province of Ontario has undertaken to enact legisla-
tion in the field of housing code enforcement per se. The remaining
provinces attempt to regulate housing conditions via a variety of spe-
cialized municipal codes, including zoning, building, fire and health
codes.

the control of physical abuses. Enforcement of this legislation was virtually non-existent; hence tenement conditions did not improve. For example, in 1894 the New York Tenement House Committee found that "in 3,984 tenements, with a population of 121,323, there were only 51 private toilets; others had to content themselves with access to toilets in yards, basements or halls."[55]

DeForest and Veiller[56] espoused the tenement reform cause and were largely responsible for the New York Tenement House Law of 1901. This law recognized the social requirements of light, air and space as well as the physical requirements set down in the earlier law. Most importantly, the law of 1901 focused on the problems of administration and enforcement of housing regulations. This constituted a vast improvement over the older law, which was characterized by a discretionary pattern of enforcement. It was this law, then, coupled with the continued efforts of Veiller, that shaped housing reform in the U.S. for the next twenty years.

Between 1901 and 1920 what might be described as the national housing movement came into being.[57] During this period Veiller published a "Model Tenement House Law" (1910) and a "Model Housing Law" (1914). As a result of his efforts, by 1917 Kentucky, Indiana, Massachusetts, Pennsylvania and California had enacted state housing laws.

---

[55]L. Friedman, Government and Slum Housing: A Century of Frustration, p. 30.

[56]Robert W. DeForest and Lawrence Veiller (eds.), The Tenement House Problem, II (New York: Macmillan, 1903).

[57]Roy Lubove, The Progressives and the Slums (Pittsburg: University of Pittsburg Press, 1963), p. 143.

Michigan, Minnesota and Iowa had followed by 1919. Finally, by 1920 about twenty U.S. cities had enacted new housing codes and twenty more had inserted housing provisions in their building and health ordinances. According to Lubove, virtually all of these cities adapted their codes from the New York version or Veiller's model laws.[58]

Between 1920 and the end of World War II, interest in housing codes diminished and the public housing movement came to the forefront as a cause among housing reformers.[59] However, with the creation of federal urban redevelopment by the Housing Act of 1949, interest in the housing code movement revived. At that time the focus of the movement shifted somewhat, from the use of housing codes in regulating tenement conditions to their use in aiding the redevelopment of "blighted" areas. In 1954 the status of housing codes was further improved when the concept of urban renewal was introduced to the Housing Act, along with the requirement of a "Workable Program."[60] Embodied in the Workable Program concept was the idea that a housing code would substantially aid in the arrest and removal of blight. By 1964 the adoption of a housing code became a requirement of the Workable Program under the revised Housing Act.

In 1965 the Federal Government extended the housing code legislation even further through additional amendments to the Housing Act.

----

[58] Ibid., p. 146.

[59] Friedman, op. cit., pp. 48-49.

[60] The Housing Act of 1954 stated that no city could qualify for urban renewal funds without a "Workable Program" to utilize appropriate private and public resources to eliminate and prevent the development or spread of slums and urban blight and to encourage rehabilitation.

Under Section 117 of this Act, federal financial assistance was made available in the form of grants to municipalities to assist them in planning and carrying out a concentrated code compliance program. Low-cost federal loans and direct grants were also made available to owners for rehabilitation of their properties to applicable code standards. While the full effects of this legislation are not yet apparent, it is reasonable to state that the past one hundred years has witnessed a sharp rise in the level of public involvement with housing codes. Indeed, the early outcry against the filthy crowded conditions of the old New York tenements has been replaced by a potentially massive transfusion of federal fiscal resources (via the Housing Act of 1965) into code enforcement programs.

The rate of adoption of housing codes by local governments in the United States increased rapidly with the revised provisions of the Housing Act. For example, by 1955 only 56 communities had enacted housing codes. By July 1961 this number had increased to 493, and by July 1965, to 736.[61] By 1968, 4,904 local governments had enacted housing codes.[62] Thus, while not yet equal to zoning by-laws in terms of the number of local ordinances adopted, housing codes appear to be rapidly approaching this level.

CODE ENFORCEMENT IN SELECTED U.S. CITIES

The history and development of housing codes having been briefly outlined, it is now proposed to examine the code enforcement programs

---

[61]Friedman, op. cit., p. 50.

[62]A.D. Manvel, Local Land and Building Regulation (Washington, D.C.: The National Commission on Urban Problems, Research Report No. 6, 1968), p. 23.

of selected U.S. cities in order to obtain an insight into the problems and key issues of code enforcement. This is achieved by detailing the experience of the cities of Baltimore, Philadelphia and Charlotte. The examination attempts to reveal those factors which either aid or hamper code enforcement.

Baltimore

Perhaps the most highly publicized and best documented code enforcement campaign in the U.S. was the Baltimore Plan, commonly referred to as the "Fight Blight" plan. Expressed in simplest terms, the city of Baltimore attempted to "enforce to the letter all the housing laws that were on the books and in that way compel owners of slum properties to vacate them or rehabilitate them to minimum legal standards."[63]

In order to get the program underway in 1947, the city established a separate "Housing Court" to deal with all housing law cases. Rather than waiting for complaints to come in, a score of policemen were assigned to a "Sanitation Squad" and block-by-block inspections of the slums were made in search of violations. By 1950, however, only 100 blocks had actually been inspected, while over 2,000 remained. The sheer number of inspections required pointed out the difficulty of undertaking such a large-scale campaign. Indeed, it was noted that as fast as inspections and improvements were made in one area, the surrounding unimproved area would tend to drag that area back down again.[64]

As a more practical alternative to this approach, it was decided

---

[63] M. Millspaugh and G. Breckenfeld, The Human Side of Urban Renewal (Baltimore: Fight Blight Inc., 1958), p. 3.

[64] Ibid., p. 4.

to limit a code enforcement program to a single neighbourhood. The area

chosen for test purposes (the Pilot Area) covered 14 square blocks in

East Baltimore. In this area were some 750 dwelling units, of which 90%

were rated as "substandard" and 40% as "seriously deteriorated."[65] The

area's population consisted mainly of Negro families, of which approxi-

mately 40% owned or were purchasing their own homes, while the remainder

rented accommodation.

The code enforcement program for the Pilot Area followed the

pattern given below:

1. Each house was inspected by a team of specialized inspectors,

   whose individual reports were then combined into a single

   report on the overall status of the house with respect to the

   code.

2. A notice of all violations was sent to the owner or landlord,

   who was given 30 days to correct the violations.

3. If, after the 30 days, repairs had been made, the case was

   closed. If, however, repairs were not made, the case went

   before a "Hearing Board," which either recommended court

   action or, in case of hardship, delayed such action until a

   solution was found.

4. Remedies for non-compliance included both a maximum fine of

   fifty dollars per offence per day that the offence continued

   and, in the extreme, an order to vacate the property, which

   thus cut off any rental income.

The pattern given above represents only part of the total program

---

[65]Ibid., p. 5.

for the Pilot Area. Administrative machinery, separate from the inspection-notification-court procedure, was also set up. The most noteworthy element of the additional machinery was the "Fight Blight Fund." This fund was organized on a non-profit basis to assist those owners who could not finance the required rehabilitation, no matter how long court proceedings were stayed. While the fund did, in fact, provide valuable financial aid through a system of low-cost loans, its main contribution was one of public education. Few of the applicants for loans from the fund had had any previous legal or financial experience and thus were easy victims for unscrupulous realtors, lenders and contractors.[66] Consequently, the Fight Blight Fund provided more in the way of needed advice and education and less in the way of actual financial assistance.

The Pilot Area campaign also included a program to rehabilitate the residents themselves. The organizers of the Pilot Area project felt that both formal and informal education, together with a program to increase neighbourhood morale and organization, were vital to the success of the enforcement program. The formal education program was not well received by the residents and was consequently considered a failure by the organizers. However, the informal education which the residents received through contact with the inspectors, volunteers and other workers proved highly beneficial. It served principally to raise the residents' faith in the enforcement program and its workers, reduce their fear of the landlords, and instill a desire to upgrade their neighbourhood.

Having outlined the Pilot Area enforcement campaign itself, we

---

[66] Ibid., p. 31.

will now examine some of the problems encountered and some of the eventual effects of the campaign.

With respect to the eventual physical effects of the campaign, Millspaugh and Breckenfeld found that of the 16,671 violations which were noted by the inspectors, 89 per cent were corrected in two years. "The U.S. Public Health Service, which made a 'before' and 'after' survey of the houses, reported that substandard conditions in the average dwelling had been reduced by 35 to 45 per cent. The most drastic changes were in maintenance, where researchers found an average improvement of 74 per cent."[67]

While the above statistics indicate a marked improvement in the average dwelling, they neglect the consideration of tenure. Most owner-occupants became at least somewhat involved in the campaign and often went beyond the minimum improvement standards. On the other hand, the absentee owners of multiple dwellings in the Pilot Area tended to make only those improvements necessary to meet the minimum standards, if indeed they made any improvements at all.

In the extreme case (but what later became almost the rule), the landlords attempted to shift the responsibility for repairs to their tenants. This was achieved by means of "contracts for sale," whereby the landlord "sold" his property to a tenant through a no-down-payment, weekly-instalment contract. "The landlord kept title and if any payments were missed he could declare the contract void, confiscate all previous payments as damages, and order the buyer to vacate the premises."[68] The great advantage of this arrangement was that the tenant-

---

[67]Ibid., p. 19.   [68]Ibid., p. 12.

buyer was responsible for all repairs.

In addition to the "contract for sale," landlords found other devices to avoid complying with the code enforcement program. The simplest and most common device was to choose to be tried in Criminal Court instead of the Housing Court. This usually meant a six months' delay in proceedings, during which time the landlord could arrange cheap repairs or sell the property. Alternatively, the landlord could simply choose to pay the fines, which often were lower than the cost of making the required repairs. If a landlord chose to make repairs, he could recover his costs by raising rents, and this is, in fact, what happened. During the first eighteen months of the code enforcement program, rents in the Pilot Area rose 17.6%, while in the remainder of Baltimore, they rose only 6.5%.[69]

Philadelphia

In Philadelphia, a program of code enforcement quite similar to Baltimore's was established in the late 1950's. Under the Philadelphia program, which was entitled the "Leadership Program," the results obtained in experimental areas were to provide an example or leadership for other areas. The experimental areas themselves ranged from a distinct slum to a moderately blighted area. The success of the code enforcement program varied almost directly with the housing quality in the area, which had been previously measured.[70]

Two significant observations emerged from the experience in

---

[69] Ibid.

[70] Office of Development Coordinator, City of Philadelphia, Partnership for Renewal: A Workable Program (Philadelphia, 1960), p. 13.

Philadelphia: first, the limited effect of code enforcement in areas where the housing stock is highly deteriorated; and secondly, the effect of the environment and physical infra-structure in which the housing stock is set. The areas in Philadelphia with the most dilapidated housing stock were those characterized by a mix of non-residential land uses which carried a non-conforming status under the zoning by-law.[71] For example, the housing stock might be set in a substandard environment created by objectionable non-residential land uses (e.g., slaughterhouses, junkyards and auto body shops) coupled with a lack of adequate street systems, off-street parking and recreational land.

Charlotte

In Charlotte, North Carolina, code enforcement attained a degree of success not found in either Philadelphia or Baltimore. The key to the success of the campaign in Charlotte lay in its flexibility. It was decided that property owners would co-operate most readily if they were allowed to make the required improvements at a rate which they could easily absorb.[72] The strictness characteristic of other code enforcement campaigns was not evident in Charlotte. Instead, a flexible system where owners could determine their specific rate of making improvements was instituted. Such a program reduced in part the major problem of relocation, which was encountered in the "hard-line" enforcement campaigns of other cities.

---

[71]Ibid., pp. 66-67.

[72]W.W. Nash, Residential Rehabilitation: Private Profits and Public Purposes, p. 106.

CODE ENFORCEMENT PROBLEMS

It appears useful at this point to consider the problems surrounding housing code enforcement. Broadly speaking, they can be categorized into four major problem areas: (1) administrative problems, (2) legal problems, (3) land use and servicing problems, and (4) market problems. Each of the problem areas is discussed below.

Administrative Problems

In the area of administration, problems may arise with respect to staffing, inspections, departmental relations and multiple standards. If a code enforcement program is to succeed, it is imperative that such problems be overcome. For example, staffing a code enforcement agency is a critical administrative problem, due to the complexity of the codes themselves. Carlton et al point out that initially three inspectors per 20,000 population are required. After the program has been in operation for some time, this number can be reduced to two per 20,000 population.[73] Assuming that a city can afford to employ such a large staff of inspectors, the problem of their selection and training still remains. Carlton estimates that housing code inspectors require at least five years' experience in a building trade, building maintenance or sanitation. Furthermore, he suggests that the inspectors must be able to explain to property owners the nature of a violation, why it should be eliminated, and how to correct it and to prevent recurrence of similar violations.[74]

---

[73]R.E. Carlton, R. Landfield and J.B. Loken, "Enforcement of Municipal Housing Codes," Harvard Law Review, LXXVIII (1965), 801-860.

[74]Ibid., p. 803.

In order to decrease the number of staff required or reduce the responsibility and thus the required training of the inspectors, a code enforcement agency might carry out only complaint-initiated inspections. Such a system might employ a team of inspectors, each having specialized knowledge. In total, the team would possess a full range of inspection abilities. Hence an inspector with specialized knowledge of the subject matter of the complaint might be able to make a quick inspection and thereby deal effectively with the complaint. Restricting inspections to those cases involving complaints will, however, certainly result in a non-uniform pattern of enforcement and may possibly lead to discrimination.

Even if a code enforcement agency possesses the required fiscal resources and properly trained personnel, administrative problems still remain. Indeed, it has been recognized that code enforcement agencies are not autonomous, but are subject to jurisdictional overlap with other departments of local government. In many communities the administrative basis for code enforcement has not been planned but has merely happened. Typically, responsibility and authority are fragmented and dispersed among several departments, including the building, plumbing, electrical, fire, health and, sometimes, housing departments. In Baltimore, for example, twelve different agencies representing four major departments bring cases into the Housing Court.[75] Departmental isolation, jealousy and pride often hamper co-operation, while co-ordination is hindered as each department carries on its own specialized inspection activities.

---

[75]Metropolitan Housing and Planning Council of Chicago, Conservation, I (Chicago: A Report to the Conservation Committee of the Metropolitan Housing and Planning Council, 1954), p. 97.

Consequently, strong centralized administration is necessary before code enforcement can be made effective. If a city seriously wants to achieve results from code enforcement, then the need for a separate and distinct authority to administer the program cannot be over-emphasized.

Adding further to administrative problems is the involvement of different levels of government in setting minimum standards. As mentioned previously, there is the potential in the United States for a transfusion of federal funds into housing rehabilitation. Since the legislation was enacted in 1965, a serious problem has arisen regarding the different standards of different levels of government. On the one hand, there exists a federal standard which must be met before an owner has access to funds to make repairs. On the other hand, there exists a set of typically lower local standards. The private owner thus finds himself facing the problem of meeting higher standards if he wishes to get low-cost federal money in order to make repairs. If he chooses to finance the rehabilitation of his property privately, he is required to meet only the local housing code with its attendant lower standards. This results in a curiously inequitable situation where a higher standard of rehabilitation is applied to the "poor" and a lower standard to those in better financial circumstances.

Legal Problems

The question of appropriate legal remedies for housing code violations is critical to any code enforcement program. A punitive approach involving fines, although widely used, has proven unsuccessful.[76]

---

[76]For an excellent discussion of the problems regarding code enforcement and appropriate legal remedies, see R.E. Carlton et al, "Enforcement of Municipal Housing Codes."

If the fine is too small, the owner will probably not make the required repairs, but will simply treat the fine as a small part of the cost of doing business. If the fine is too large, it may deplete the owner's financial resources so that he cannot comply with the code. While a range of fines exists between the two "extreme" cases identified above, the difficulties involved in determining an appropriate fine must be noted.

It has been the usual practice of criminal courts to levy a fine of an amount consistent with the seriousness of the crime. Thus, in theory the heavy fine acts as the strongest deterrent to the most culpable offenders.[77] It is uncertain whether such a theory is applicable to housing code cases. For example, violations of fire safety standards must be considered as very serious offences and, given the above, would thus require a heavy fine. However, since fire regulations are changed from time to time and the ascertainability of the law is therefore questionable, it is doubtful that the offenders are always culpable. In this case, therefore, a heavy fine would not always be appropriate.

The problem of mens rea can be overcome in part by considering the offender's attitude. It is reasonable practice to impose more severe fines on those offenders who have the necessary resources to make repairs but appear reluctant to do so, as evidenced by recurrent court appearances. For those offenders who might face financial hardship from any fine or who might fear the stigma of criminal prosecution, a small fine might induce compliance. Any fining practice, therefore, must be tempered by the responsiveness of the offender, the cost of compliance

[77] Ibid., p. 821

and the financial resources available to the offender. Only in cases where imminently dangerous conditions exist should the fining practice take into account the severity of the offence.

The difficulties encountered in regard to the fining process have hastened the search for other, perhaps more appropriate, legal remedies for code violations. To this end, four significant alternative remedies have been found which do not involve criminal prosecution or fines per se. They include the use of mandatory injunctions, vacate orders, repair by the city with lien on costs, and receivership. Each of these remedies is briefly discussed in turn.

The mandatory injunction is "an order of the court addressed to a defendant commanding or prohibiting specified conduct, with failure to comply punishable as contempt of court. . . . Rather than punishing for past conduct, the injunctive process compels compliance with law in the future.[78] The use of an injunction thus can both prohibit behaviour and demand behaviour; yet it is not without flexibility. It can be strictly enforced when conditions so demand; for example, when dangerous or hazardous conditions exist. It can be more leniently applied in hardship cases which involve non-hazardous conditions. In this case, the court demands compliance as and when funds become available.

The second remedy, the order to vacate, involves strong economic considerations for the owner of a substandard building. In effect, the owner's source of income (i.e., rents) is almost immediately cut off by the order to vacate. He can restore the source of income only by making

---

[78]Frank P. Grad, Legal Remedies in Housing Code Enforcement in New York (New York: Columbia University Legislative Drafting Fund, 1965), p. 87.

the required repairs to bring the building up to code standards. Once the repairs are completed, a new certificate of occupancy is issued and the building can be re-occupied.

This remedy is most effective under two conditions: first, the existence of a reasonably high vacancy rate; and secondly, the lack of an alternative use for the building. With respect to the first condition, it would be pointless to close up a building when no alternative accommodation is available. In essence, some shelter, regardless of is condition, is better than none. Concerning the second condition, if the building can be used for purposes other than residential accommodation, there is less incentive for the owner to make the required repairs to restore his income and "save" his equity. Essentially, then, while the order to vacate is potentially a powerful tool, it is generally used only when hazardous conditions exist.

The third remedy, in which the municipal government undertakes the repairs and then places a lien on the property for the costs incurred, appears to be an appropriate solution to effect prompt repairs. Naturally, some costs are incurred by the local government, as it must initially make funds available for the repairs. Unfortunately, the recovery measure (i.e., the lien) is tempered by the fact that in the case of foreclosure, the payment of local taxes, mortgages and prior liens takes precedence over the municipal lien. It is conceivable, therefore, that the municipal investment in repairs might be non-recoverable.[79]

---

[79]This is indeed a moot point. If, for example, foreclosure does occur and the building is vacated and boarded up or torn down, then neither are the costs to the municipality recoverable nor is any benefit derived from the repairs. If, however, after foreclosure the building is placed under new management and re-opened, the costs may still be recovered and some benefit from the repairs is certain to result.

This possibility suggests that the remedy should be employed only in cases where a short-term, relatively inexpensive program of repairs is required.

Where a longer-term repair program is required, another remedy, the use of receivership, may be applied. This remedy is invoked after the following procedure. The building is first thoroughly inspected and a notice of violation is sent to the owner, as well as any mortgagees and lienors of record, informing them of the required repairs. If upon re-inspection the offences against the code have not been corrected and the hazardous conditions persist, then a feasibility study is conducted with respect to the economics of repairing the structure in terms of its projected life span and projected rents. If the study shows that the building is worth saving, receivership proceedings are instituted.

In effect, the court appoints the municipal administration to assume responsibility for collecting rents and making repairs. Any excess monies are paid out by the receiver on unpaid taxes, mortgages and liens. The owner still remains responsible for operating the building and paying any outstanding debts. Finally, after the costs of repairs have been fully recovered, the owner regains control of his building. The receivership remedy is attractive in that it is:

> . . . the only legal weapon that generates activity by all parties who have an interest in the property. Property owners who studiously avoid service of criminal process suddenly appear at the department's offices to personally request the opportunity to comply with the violation schedules in order to avoid receivership. For the first time in its history, the department has obtained active response from mortgagees and lienors of record. Formerly complacent mortgagees and lienors are shocked out of their lethargy and actively pressure property owners to remove violations. In other words, everyone financially interested in the property becomes involved in the process of removing violations.[80]

---

[80]F.P. Grad, op. cit., p. 117.

In summary, when one compares the remedies involving court pro-
secution and punitive quasi-criminal fines with those involving economic
sanctions, it is immediately apparent that the latter go much further
in achieving desired code compliance.

Land Use and Servicing Problems

Usually, code enforcement programs have not fully considered
the effects of the physical environment on the housing stock. In other
words, attempts have been made to rehabilitate residential structures
without making corresponding improvements to the neighbourhood. As a
rule, most substandard housing is located in the older central portions
of the city--in short, those areas which tend to have the greatest mix
of incompatible land uses, the highest volume of through traffic, and
the smallest provision of public open space and other essential services.
Thus the implementation of a code enforcement program which does not
provide for improvement of the overall environmental conditions of an
area must be considered as an attack on the symptoms rather than the
causes of "blight."[81]

Since the housing stock cannot be treated independently of its
surrounding environment, it is evident that a code enforcement campaign
must inevitably be woven with a program to upgrade public utilities and
social services. This suggests that closer liaison must exist between
the agencies responsible for housing and planning. If, for example, an
older residential area is to be given over to industrial usage, it would
be pointless to attempt to enforce housing codes in that area. However,

---

[81]Reuel Hemdahl, Urban Renewal (New York: The Scarecrow Press,
1959), p. 31.

once an area has been designated for residential usage and code enforce-
ment has been applied to bring it up to standard, then all efforts pos-
sible should be made to provide the desired services and facilities.
Thus, the planning function should be: (1) to reduce the incidence of
through traffic; (2) to discourage the establishment of any further in-
compatible land uses and to encourage the discontinuance of those
already present; and (3) to provide the previously lacking open space.

The Market Problem

The question of vacancy rates is crucial to effective code
enforcement in rental housing. In this regard, E.M. Fisher's remarks
are most appropriate:

> Regardless of the menace of the slums, unless alternative accom-
> modations are available to its occupants, housing which threat-
> ens the public health, safety, and welfare cannot be abolished
> and regulations governing its use enforced. Public authorities
> cannot morally pursue a course which leads to throwing any con-
> siderable number of persons out onto the streets, whether they
> be families or roomers.[82]

With the above quotation in mind, let us examine the major
effects of a code enforcement program. Basically, housing codes have
the effect of upgrading building standards for existing structures. If
a landlord is required to make improvements to meet these standards,
he must recover the costs incurred in order to maintain the profit from
his operation. In the absence of rent control, the landlord's first
alternative is to raise the rents to cover these costs. The effect of
any substantial increase in rents is two-fold. One effect is that men-
tioned by Fisher, the dislocation of tenants; the other is doubling up.

---

[82]E.M. Fisher, "A Study of Housing Programs and Policies of the
Housing and Home Finance Agency," Interim Report on Housing the Econom-
ically and Socially Disadvantaged Groups of the Population (New York:
A.C.T.I.O.N., Inc., 1960), p. 25.

As to the latter, as tenants are forced to pay higher rents, they may choose to double up; this in turn defeats one of the basic aims of any housing code, namely the regulation of standards of occupancy.

With respect to the dislocation of tenants, the enforcement of a housing code may again be self-defeating. One of the severest criticisms surrounding urban renewal to date concerns the tremendous relocation problems it has caused. Ideally, the use of code enforcement as a tool in the rehabilitation process should raise the quality of the housing stock in a given area, while at the same time retain the existing residents within that area. This ideal cannot be met if vacancy rates within that same area are too low to accommodate those residents ordered to vacate under the code enforcement program. When vacancy rates are low, code enforcement may result in a level of resident dislocation which, although lower than that caused by the typical urban renewal project, is nevertheless quite significant. Thus, a vacancy study is one of the first prerequisites for a community implementing a code enforcement program. To date, most cities have proceeded without making such an essential study.

THE EFFECTS OF CODE ENFORCEMENT
ON DECISION-MAKING

Having identified and examined in some depth the key problems of code enforcement, we will now investigate the effects of code enforcement on house operating firm decision-making. It is apparent from the discussion that code enforcement programs to date have been relatively ineffective, especially in the sphere of rental housing. Generally, the house operating firm's decision-making alternatives have not been restricted to the degree assumed in our restricted decision-making model.

Under the terms of that model, it was inconceivable that a house operating firm could make substandard rental housing available for rent for any significant length of time after the imposition of a code enforcement program. However, such is obviously not the case. Substandard rental housing still exists in large quantities in cities where code enforcement has been active. In Baltimore, for example, two years after the Fight Blight campaign was instituted, the city was reverting to its former conditions.[83] Philadelphia's Leadership Program faced the same problem.[84]

Having recognized the difficulty of effectively enforcing minimum housing regulations, we are led to include another alternative in the restricted decision-making model. Essentially, this alternative consists of a series of delaying tactics employed by the house operating firm. In addition to these tactics, the firm would rely on the relative anonymity of its building in the context of the large stock of substandard rental housing present in most major cities.

The delaying tactics referred to above are discussed in depth by Frank Grad. Basically, they are a function of the difficulty of prosecuting those violating housing codes. In New York, for example, the prosecution of a recalcitrant landlord who adopts these tactics is a time-consuming process:[85]

> At present it takes 35 to 65 days in the "easy" cases from the inspection to the first return date in court--this is when there are no unusual problems . . . and the defendant responds without delay to a mail summons. Twelve to fifteen additional days will be required for the preparation of a white court

---

[83] M. Millspaugh and G. Breckenfeld, The Human Side of Urban Renewal, p. 21.

[84] City of Philadelphia, Partnership for Renewal, pp. 16-22.

[85] F.P. Grad, op. cit., pp. 40-41.

summons, and for personal service in advance of the return date. Again this assumes that the identity and whereabouts of the defendant are known. . . . If he evades service the time gap . . . may lengthen considerably.

In one "typical" court day, the gap between charge date and first return date ranged from 43 days to more than five months. From first return date to date of disposition, the time gap ranged from 1 1/2 months to 10 months. In the last case . . . three of the violations had been recorded as much as 3 1/2 years prior to ultimate disposition.

The anonymity mentioned above is clearly established by Lieberman in his study of the code enforcement programs in thirty-nine U.S. cities.[86] He found that 18% of the cities made inspections only upon complaint, rather than on a "systematic" basis.[87] Of those cities which did undertake "systematic" inspections, most adopted a very unsystematic approach:

For instance, several cities considered annual inspections of multi-family structures or of rooming houses prior to the issuance of the annual licence as a systematic house-to-house program. Other cities considered it a systematic program when public pressure required them to make a house-to-house inspection in a very bad neighborhood. Still others considered it a systematic program when they inspected vacant houses on an area basis or made survey inspection for the renewal agencies' rehabilitation program.[88]

It is apparent that if these "systematic" approaches are followed in a large metropolitan area, a house operating firm can be assured of considerable anonymity. Thus, unless the firm owns a building in a particularly bad area or houses a vocal tenantry, the threat of enforcement is less than imposing. Given this anonymity, together with an already ponderous court machinery, it is not expected that a house operating firm

---

[86]Barnet Lieberman, Local Administration and Enforcement of Housing Codes (Washington,DC: National Association of Housing and Redevelopment Officials, 1969).

[87]Ibid., p. 7.

[88]Ibid., pp. 7-8.

will react noticeably when minimum housing standards are "enforced."
Rather, it may be assumed that a firm will attempt to continue operating
a substandard building at its optimum operating point irrespective of
the threat of code enforcement.

Fortunately, not all firms can effectively ignore code enforce-
ment, as was discovered by Joseph Schwind, a slumlord in the Hyde Park-
Kenwood neighbourhood of Chicago:[89]

> In time Levi (the executive director of the enforcement
> program) gained the upper hand. Schwind was arrested. By
> early 1957, he was no longer managing properties. His fight
> had cost him $65,000 for building repairs, $7,000 in fines
> and $10,000 in legal fees.

However, in spite of this example and a limited number of others found
in the literature, it is the general rule that the decision-making prac-
tices of house operating firms owning substandard buildings are less
restricted as a result of code enforcement than is immediately expected.
Code enforcement was deemed to result in a shift away from the optimum
operating point for substandard rental housing structures, but to date
this result has proven elusive.

SUMMARY

In this chapter the discussion has centred upon the housing code
enforcement experience of communities in the United States. The success
of most programs appears to have been limited by a number of significant
problems, including: (1) budgetary and staff inadequacies, (2) the lack
of effective legal remedies, (3) inconsistent land use policies and in-
adequate servicing, and (4) the lack of sufficiently high vacancy rates

---

[89]M. Millspaugh and G. Breckenfeld, op. cit., p. 101.

in the substandard rental housing market.

As many inspection procedures are unsystematic or complaint-initiated, house operating firms may achieve a degree of anonymity with respect to violations of minimum housing standards in their buildings. The degree of anonymity increases with the size of a city's stock of substandard housing, as the probability of a particular violation being noted and acted upon decreases. If a house operating firm is singled out and accused of a violation of the code, it may adopt a tactic of delaying already ponderous court proceedings through non-appearance, change of venue and the like. In view of the apparent ineffectiveness of current code enforcement programs, therefore, it is concluded that our restricted decision-making model must be revised by the inclusion of one further alternative. Thus, avoidance of any improvements to the building followed by subsequent withdrawal or sale of the building becomes an alternative which at least some house operating firms supposedly regulated by code enforcement can consider.

In the final chapter of this study we shall focus upon the public policies which can be incorporated into code enforcement programs in order to eliminate this "delaying" or "avoiding" tactic as an alternative for house operating firms. The main question to which the final pages will be addressed then becomes: "How might a local housing authority improve its program of code enforcement to account for and manipulate house operating firm decision-making so as to benefit low income tenants and eliminate substandard rental housing?"

CHAPTER FIVE

DIRECTIONS FOR CODE ENFORCEMENT POLICY

INTRODUCTION

This chapter has two objectives. First, we will specify the
characteristics of a code enforcement program which could prevent house
operating firms from relying on delaying tactics or their anonymity to
avoid compliance. A community adopting such a program would be assured
that house operating firms would follow the pattern of decision-making
outlined in the restricted decision-making model. Consequently, since
the community could predict the pattern of responses of the house oper-
ating firms, it could adopt policies which would modify these patterns
and thus achieve the desired aims of eliminating substandard rental
housing while providing standard housing for low income tenants.

To achieve the second objective of this chapter, we will demon-
strate the practical application of the decision-making theory. Our
main concern here is to develop a set of housing policies which, when
combined with a code enforcement program, will induce house operating
firms to make decisions appropriate to the conditions in the rental
housing market. For example, when vacancy rates in non-luxury rental
housing are high, policies which encourage decisions to remove or with-
draw substandard buildings would be most appropriate. However, when
vacancy rates in that sector are low, the public objective would be to
stimulate the rehabilitation rather than the removal of substandard

rental housing to minimize dislocation of low income tenants, and thus different policies would be required. The exact nature of the policies selected is determined by their effectiveness in manipulating the restricted decision-making model.

FULFILLING THE CONDITIONS NECESSARY FOR MANIPULATING THE RESTRICTED DECISION-MAKING MODEL

If a local housing authority is to significantly affect house operating firm decision-making through code enforcement, certain conditions must be met. Basically, these conditions include adequate budgetary and administrative arrangements. When a code enforcement program is backed by a sufficient number of well trained staff, systematic inspection procedures, and a full range of legal remedies, it can reduce successfully the incidence of house operating firms avoiding or delaying enforcement. Upon effectively eliminating the opportunity for the firm to neglect its building, code enforcement programs can then be addressed to manipulating the other strategies as they are defined in the restricted decision-making model.

It is insufficient, however, to state simply that "adequate" budgetary and administrative arrangements are required. What constitutes "adequacy"? With this question in mind, we will attempt to prescribe those conditions which are necessary to make the restricted decision-making model truly "restricted."[90]

---

[90] In the next pages we rely heavily upon the work done in this area by Joseph S. Slavet and Melvin R. Levin, New Approaches to Housing Code Administration (Washington, D.C.: The National Commission on Urban Problems, Research Report No. 17, 1969).

Administrative Organization

A single administrative agency should have the authority and
responsibility for housing code administration.[91] This agency should be
separate from the various agencies responsible for the inspection and
control of new buildings, particularly in larger urban centres (over
100,000 population) where the stock of existing substandard housing is
usually most concentrated. The program administrator should be placed
on a level equal to that of other major department heads in local govern-
ment to ensure that the importance of the function of code enforcement
is not overlooked by the political decision-makers.

Budgetary Requirements

To ensure that house operating firm decision-making is truly
restricted by code enforcement, a local community will need to undertake
a "systematic" program. Such a program should exhibit at least the fol-
lowing characteristics:

1. It is a planned, rather than ad hoc, program.

2. It has recourse to a complete range of inspectional devices
   applied on a regular basis.[92]

3. It incorporates a full measure of administrative remedies
   and workable court remedies.

4. It is a program of services and incentives.

---

[91]Ibid., p. 98.

[92]These inspectional devices would include a range from a wind-
shield survey in basically sound neighbourhoods (with additional com-
plaint and spot check inspections to confirm suspicion of violations) to
a concentrated and detailed inspection system in obviously poorer
neighbourhoods.

In determining the minimum operating expenditure required for systematic code enforcement, account must be taken of: (1) population, (2) total housing stock, (3) relative deterioration of the housing stock, (4) workload standards and staffing ratios, and (5) salary levels for administrative, inspection and clerical positions.[93] With these facts in mind, Table IX below proposes the expenditure required for a community to undertake a systematic code enforcement program.

TABLE IX

PROPOSED PER CAPITA EXPENDITURE GUIDELINES FOR BASIC
SERVICES UNDER A SYSTEMATIC INSPECTION PROGRAM
IN HOUSING CODE ADMINISTRATION

Population Category	Percentage of substandard housing*				
	Under 20	20-30	30-40	40-50	Over 50
Under 5,000	$1.00	$1.00	$1.00	$1.25	$1.50
5,000 - 10,000	1.00	1.00	1.25	1.50	1.75
10,000 - 25,000	1.00	1.25	1.50	1.75	2.00
25,000 - 50,000	1.25	1.50	1.75	2.00	2.25
50,000 - 100,000	1.50	1.75	2.00	2.25	2.50
100,000 - 250,000	1.75	2.00	2.25	2.50	2.75
Over 250,000	2.00	2.25	2.50	2.75	3.00

*Based upon most recent Census.

Source: J.S. Slavet and M.R. Levin, New Approaches to Housing Code Administration, p. 152.

Staffing and Inspection Requirements

The number and training of inspectors are critical to the success of a systematic code enforcement program. There are certain rules of thumb concerning the number of inspectors required. For a five-year cycle of inspections, one inspector is required per 10,000 population or,

[93]J.S. Slavet and M.R. Levin, op. cit., p. 151.

alternatively, one inspector for each 1,000 substandard housing units.[94]

In addition to the latter requirement, there should also be one inspector for each 3,000 standard units.[95]

As to the training of inspectors, Slavet and Levin state that a successful systematic code enforcement program requires inspectors who are experienced in the fields of construction, repair, maintenance and occupancy of dwelling units, as well as in the field of human relations.[96] The scope of training required by an inspector is indicated by the following outline of his duties:

> Personally inspects dwellings to determine their fitness for human habitation by examination of their structural safety, sanitary facilities, means of egress, lighting, ventilation, electrical equipment, heating equipment, and refrigeration equipment. Inspections also include examination of dwellings for overcrowding and maintenance of structures and equipment. Fills out inspection record forms, prepares notices of violations, reinspects substandard dwellings, by persuasion and tact gains compliance of landlords and tenants, prepares other detailed records and reports and performs related work as required.[97]

It is contended, then that systematic code enforcement programs characterized by the above-noted budgetary, administrative and staffing conditions will restrict the opportunity of house operating firms to ignore the minimum housing regulations and maintain the status of their

---

[94]U.S. Housing and Home Finance Agency, Codes Administration, "Systematic Housing Code Compliance" and "Budgetary and Staffing," Workable Program Guideline, G-8 and G-2 (Washington, D.C.: U.S. Government Printing Office, 1965).

[95]J.S. Slavet and M.R. Levin, op. cit., p. 127.

[96]Ibid., p. 120.

[97]Advertisement for a Renewal Inspector I, City of Providence, Rhode Island, Department of Planning and Urban Development, March 1, 1968.

buildings. Thus the authority responsible for housing code enforcement will be able to concentrate upon manipulating the decision-making practices of house operating firms as outlined in the restricted decision-making model.

<div align="center">CODE ENFORCEMENT POLICY UNDER VARIED
MARKET CONDITIONS</div>

Let it be assumed that a community is engaged in a "systematic" code enforcement program characterized by the aforesaid administrative, budgetary and staffing requirements. The two basic aims of such a program will be to eliminate substandard rental housing and to increase the supply of standard housing to low income tenants. How might that community improve its program to account for and manipulate house operating firm decision-making so as to benefit low income tenants?

The answer to this question depends largely on the condition of the rental housing market in the community in question. As stated in Chapter Four of this study, the vacancy rate is the principal variable in the rental housing market which affects the potential success of code enforcement. It is this variable which directly affects the effective gross income as well as the reversionary value of a rental structure, and thus affects house operating firm decision-making. Moreover, it is this variable which affects the degree to which low income tenants may be dislocated as a result of code enforcement.

The remainder of this study examines the approaches that housing code enforcement programs might assume under varying vacancy rates. Two hypothetical cases will be considered, one assuming high vacancy rates and the other assuming low vacancy rates. Both cases focus on the manipulation of house operating firm decision-making through housing code

enforcement in order to eliminate substandard housing while providing low income tenants with standard housing.

Code Enforcement Under Conditions
of High Vacancy Rates

In the non-luxury rental housing sector, high vacancy rates threaten the cash flow position of a firm owning a substandard building. Consequently, it is expected that such a firm will defer as much as possible replacement and operating expenditures. It is also expected that the firm will not consider seriously the possibility of remodelling the building. There is one exception to this observation; namely, a firm may decide to undertake extensive remodelling to move its building out of the high vacancy non-luxury market into what might be a lower vacancy luxury market. Most often, however, just as high vacancy rates discourage new construction of rental housing, they also discourage improvements to existing structures.

The potential sales value of a rental structure is also depressed under conditions of high vacancy rates. This fact, together with the reduced cash flow, indicates a potentially lower rate of return from substandard buildings. When vacancy rates are high, therefore, house operating firms acting on the basis of profit maximization will generally defer expenditures and move their buildings downward in the rent-quality distribution. Again there is an exception to this rule. A few firms will choose not to defer expenditures but rather to lower rents, in the hope of attracting more tenants and thereby raising the effective gross income of their buildings. It is unlikely that such a strategy will be commonly chosen, as explained below. First, in order to induce tenants to relocate, the firm must offer a significant reduction in rent, most

likely a minimum of $10.00 per month. Let us assume for the moment that a firm operates a substandard building with 25 dwelling units rented at the prevailing market rate of $100.00 per month. Let us further assume that the building is 80% occupied. To raise occupancy levels to, say, 90% the firm offers a $10.00 reduction in rent. Assuming that this reduction is applied both to the occupied as well as the vacant units in the building, the monthly effective gross income of the building would be $2,025.00, as opposed to $2,000.00 prior to the rent decrease. If these figures are truly representative, then there is reason to doubt that many firms would risk dropping rents in order to gain such a marginal increase in revenue.

The imposition of an effective "systematic" code enforcement program under these circumstances can have a significant effect upon the firm attempting to maximize profit from a substandard building. While such a firm may choose from six alternative strategies (i.e., A - F in the restricted decision-making model), there are only two possible consequences of importance to the local housing authority: first, that the building is removed from the stock (either through abandonment or demolition), and secondly, that it is brought up to the minimum housing standards (either through increased replacement and operating expenditures, remodelling or reconstruction). Both of these consequences are desirable from the point of view of the local housing authority. In the first case, a house operating firm will most likely choose abandonment or demolition when its building occupies a low position in the rent-quality distribution due to profit maximization. The worst slums thus can be expected to be eliminated when vacancy rates are high and systematic code enforcement is implemented. In the second case, a firm will

most likely choose increased operating and replacement expenditures or remodelling when its building's optimum operating point is near to but below the minimum housing standards. Consequently, additions to the supply of standard rental housing can also be expected when high vacancy rates are coupled with effective systematic code enforcement.

The impact of code enforcement and high vacancy rates upon low income tenants is readily discernible. As the worst slums are removed, some degree of dislocation is inevitable. Given the high vacancy rates, however, it is assumed that substitute accommodation could most often be found by the dislocated tenant near his original residence. Such accommodation would be in buildings which had always met the minimum housing standards or which had been brought up to the minimum standards as a result of code enforcement. It is expected that few of the dislocated low income tenants would be forced to seek new accommodation outside their original neighbourhood. Since the critical issue in dislocation is not so much removal from one's household as removal from one's neighbourhood and its attendant social and physical relationships, the effects of dislocation in this case are not too harmful.

Apart from the limited impact of dislocation. there is another implication for the low income tenant. Due to increased costs, firms which bring their buildings up to the minimum standards may find it necessary to increase rents. Thus, while the low income tenant is assured of standard accommodation as a result of code enforcement and the prevailing market condition, he must also pay for it, either by doubling up or allocating a greater percentage of his income to housing. Neither of these results is very acceptable, however, considering the original intentions of the code enforcement program. Consequently, it is necessary

to inject into the program policies which can counteract these implications.

One such policy which might be appropriate in this case is the enforcement of rent control. Faced with rent control, firms operating very low quality buildings which would require significant increases in expenditures to meet the minimum housing standards will tend to withdraw their buildings from the housing stock. This fact has been documented in the city of New York. In that city, despite the fact that new residential construction has almost come to a standstill, 33,000 apartment units are being abandoned each year, mostly in the rent controlled sectors.[98] Landlords of these buildings cite the rent control measures as the reason for their decision to abandon.[99]

This outcome is desirable. The worst dwelling units are most likely to be abandoned first, since it is these buildings which require the greatest expenditure to be brought up to the minimum housing standards. However, such expenditures are strongly discouraged by the economics of rent control. Only those buildings which are marginally below the minimum housing standards will be retained in the stock, since only the firms operating such buildings will be able to absorb the increased expenditures in the face of fixed rent increases.

As more of the poorest quality buildings are withdrawn from the stock, the dislocated tenants will have to find accommodation in those buildings which meet or are only marginally below the minimum standards. Vacancy rates in these buildings will then tend to drop from their formerly high levels. As a result, the effective gross income for these

---

[98]"The Wildfire of Abandonment," Business Week, April 4, 1970, p. 57.

[99]"When Landlords Walk Away," Time, XCV, 8 (March 16, 1970), 64.

buildings will increase, thus tending to off-set the effects of rent con-
trol experienced in the poorest quality buildings. For buildings only
marginally below the minimum standards, then, the costs of meeting the
standards will tend to be balanced by the increased revenue due to higher
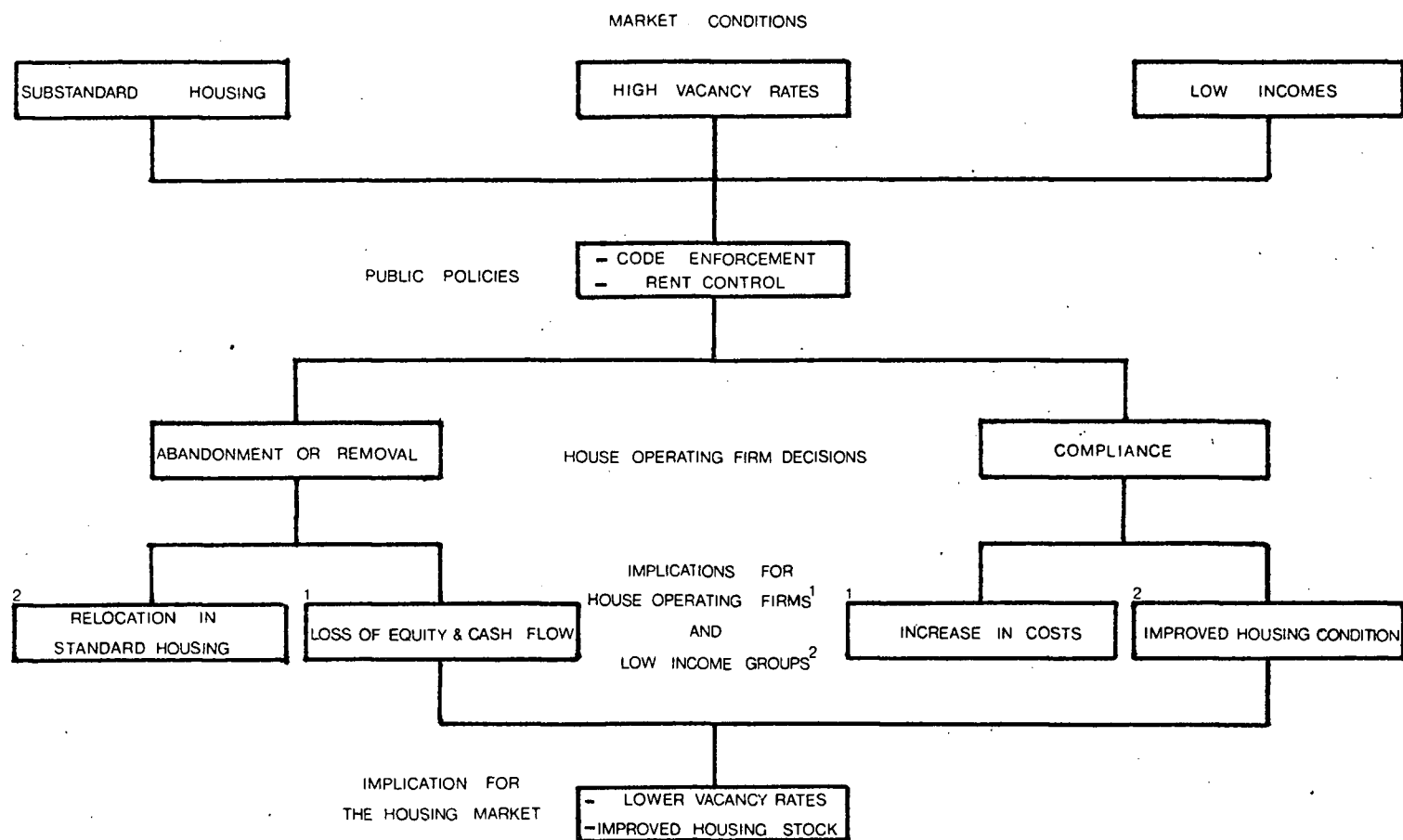occupancy rates.

In summary, then, under conditions of high vacancy rates in the
non-luxury rental housing sector, a combination of systematic code en-
forcement and fixed rent increases will persuade the owners of the poor-
est quality rental housing to withdraw that housing from the market.
Simultaneously, rental housing which is marginally deficient with re-
spect to the minimum housing standards will be brought up to these
standards, thus increasing the supply of standard housing for low income
tenants. Some dislocation of low income tenants will result as the poor-
est buildings are removed, but the availability of alternative housing
located nearby and regulated by rent control tempers the typically harm-
ful effects of dislocation. In Figure 9 below an attempt is made to
portray graphically the effects of code enforcement and rent control when
vacancy rates in the non-luxury rental housing sector are high.

Code Enforcement and House Operating Firm
Decision-making Under Conditions of Low
Vacancy Rates

When low vacancy rates exist in the market of non-luxury rental
housing, systematic code enforcement may create significant problems
regarding the dislocation of low income tenants. Thus, a local housing
authority must develop an approach very different from that adopted under
high vacancy conditions. The ultimate concern of code enforcement in
this case must be to stimulate rehabilitation of and thereby increase
the supply of standard housing, rather than to eliminate substandard

FIGURE 9

THE IMPACT OF CODE ENFORCEMENT AND RENT CONTROL
UNDER HIGH VACANCY RATES

MARKET   CONDITIONS

| SUBSTANDARD   HOUSING | | HIGH   VACANCY   RATES | | LOW   INCOMES |

PUBLIC   POLICIES

- CODE   ENFORCEMENT
- RENT CONTROL

HOUSE OPERATING FIRM DECISIONS

| ABANDONMENT OR REMOVAL | | COMPLIANCE |

IMPLICATIONS   FOR
HOUSE OPERATING   FIRMS[1]
AND
LOW   INCOME   GROUPS[2]

2 RELOCATION   IN STANDARD HOUSING
1 LOSS OF EQUITY & CASH FLOW
1 INCREASE IN COSTS
2 IMPROVED HOUSING CONDITION

IMPLICATION   FOR
THE HOUSING   MARKET

- LOWER VACANCY RATES
- IMPROVED HOUSING   STOCK

housing from the stock.

Let it be assumed that a community is able to apply systematic code enforcement and thus force house operating firms to withdraw or improve their buildings. Given the potential problem of wide-scale dislocation, if significant numbers of buildings are withdrawn, such a program may be too narrow in scope. Therefore, other policies must be incorporated into the systematic code enforcement program to account for the realities of house operating firm decision-making. The nature and extent of these policies are described below.

According to the restricted decision-making model, house operating firms will choose that alternative which involves the least loss in profit from their buildings. The local housing authority desires to eliminate the worst housing stock and to minimize dislocation. At the same time, it wishes to avoid burdening low income tenants with increased costs or forcing them to double up. Thus, there will inevitably be a conflict between the aims of the local housing authority and the decision-making practices of house operating firms. Resolution of this conflict can only occur through the manipulation of the losses involved in the alternative strategies open to the house operating firm.

To minimize dislocation and still keep housing costs down for low income tenants when low vacancy rates prevail, a local housing authority must ease the burden of house operating firms in meeting the minimum housing standards. To achieve this, it can choose from several courses of action. Direct measures include property tax deferral and abatement, direct grants and low-cost loans to house operating firms. Indirect measures include rent supplements to low income tenants and increased spending on public lands, works and services. Each of these measures is

discussed in the following pages in terms of its effect on the house
operating firm and the low income tenant.

Property Tax Deferral and Abatement. By deferring or abating
the property tax for selected buildings, a local housing authority could
substantially improve the cash flow position of a house operating firm
over the short run. Such an abatement would most likely involve an
agreement not to raise the assessment of a property during some limited
period if the house operating firm agreed to undertake specified improve-
ments in the quality of its housing services. For a firm owning a build-
ing only marginally below the minimum housing standards, such a policy
would tend to encourage increasing operating and replacement and, pos-
sibly, remodelling expenditures. Consequently, the building would be
brought up to the required standard.

The outcome for the low income tenants in such a building would
be favourable. First, there would be no dislocation, since the building
remains in use. Second, there would be only a limited, if any, increase
in rents, since the required increase in expenditures for the building
would be counterbalanced by the decrease in the property tax.

One potential drawback to the use of tax deferral and tax abate-
ment is a decrease in revenue to the local community over the short run.
Superficially, it would be expected that the community would have to
find alternative methods to raise revenue to offset this narrowing of
the tax base. This consideration is significant enough to discourage
the widespread application of tax deferral and abatement. Nevertheless,
it should not deter a narrower but concentrated application to certain
geographical areas which may ultimately require public redevelopment if
rehabilitation is not stimulated. Since public expenditures on such

redevelopment are likely to be far greater than the potential decrease in revenue due to tax abatement and deferral, it would appear to be short-sighted to reject this program outright.

Direct Grants and Low-cost Loans. For buildings which are substantially below the minimum standards but are still sufficiently sound to be rehabilitated, a policy of direct grants or low-interest loans may provide the appropriate stimulus for house operating firms to rehabilitate rather than withdraw their buildings. In exchange, the house operating firm would be required to bring its building to the minimum housing standards and, at the same time, agree not to raise rents.

A direct grant or low-interest loan will stimulate rehabilitation in the following manner. First, the house operating firm is supplied with a source of capital which otherwise must be borrowed at high interest rates over short terms and often with attendant bonus clauses.[100] Under the latter conditions, rehabilitation is out of the question unless substantial increases in rents can be anticipated. With a direct grant or low-interest loan, however, the house operating firm can raise its building up to the minimum standards without necessarily raising rents.

It might be argued that the improvements to the building will generate an increase in assessment, thereby increasing costs to the firm. In the absence of a policy of tax deferral or abatement, the profit position of the firm will undoubtedly be weakened. While this is true, it is doubtful that the loss in profit incurred by the firm due to increased taxes will be greater than the loss due to withdrawing the building from

---

[100]George Sternlieb, The Tenement Landlord, pp. 107-120.

service if it is not improved. Moreover, the firm may have an opportunity to reduce this potential loss through refinancing an improved building at lower interest rates and a better term. Lenders are likely to offer better loans in this case, as the risks are reduced and the collateral has been improved. Finally, the improved building will tend to have a higher resale value, thus again offsetting the effects of higher taxes and restricted rents upon the profit position of the firm.

The result of public policy in this case is again favourable for the low income groups. Dislocation will result only in those cases where buildings are at the bottom of the quality continuum and cannot be improved to the minimum housing standards. This form of dislocation is not undesirable, particularly if it does not occur on too great a scale. The exact extent to which it can be permitted to occur will be determined by the availability of alternative accommodation for the dislocated tenants and the extent to which the community is willing to commit additional funds for public housing. As a further consequence of this policy, low income tenants have access to improved housing at no increased cost.

There is a simple method for calculating the costs to the community: one needs only to weigh the costs of such grants or low-interest loans against the costs of building additional public housing. A formulation very similar to that of A.H. Schaaf as presented previously in this study can be employed for this comparison.

Rent Supplements. Another approach which might be taken by a local housing authority when vacancy rates are low involves the combination of systematic code enforcement with rent supplements. Thus, the worst buildings are eliminated and low income tenants are provided with rent supplements to acquire accommodation in those buildings which are

brought up to the minimum housing standards.[101] The supplements are required in this case since firms will increase their rents to cover the costs incurred in meeting the minimum housing standards. Without such supplements, the low income tenants would be forced to double up or to increase the allocation of their resources to housing. Both of these effects are, of course, undesirable.

A bonus of the rent supplement system lies in its potential to aid in the enforcement of the minimum housing regulations. Assume, for example, a delivery system whereby the tenants present rent supplement coupons to the landlord along with a partial cash payment. The landlord must then take the coupon to the local housing authority for payment. Before making payment, the housing authority would check the records for housing code violations. If those records revealed uncorrected code violations, the coupon would not be honoured and the house operating firm would be pressured, assuming that the firm could not evict the tenant. Suspension of payments when code violations are found thus has the dual effect of (1) assuring that public funds are not indirectly supporting substandard housing, and (2) providing additional incentive for the firm to bring its building up to the minimum housing standards.

While the costs involved in rent supplements are likely to be quite high, it is doubtful that the cost of subsidizing newly constructed public housing could be comparably low. Public policy has already acknowledged the importance and necessity of constructing public housing

---

[101]Note that the problems involved in the procedure of selecting the recipients of rent supplements are not discussed here, since our central concern is the effect that such supplements have on house operating firm decision-making. With this in mind, it matters little which low income tenants receive the supplements.

to aid low income tenants. Thus, it should be equally acceptable (if not more so, given the lower cost) to subsidize low income groups in the manner described above.

The implications of such a program include the removal of the worst rental housing and an increase in the supply of standard housing at rent levels which, due to subsidization, remain constant for the low income tenants. The program introduces an additional effective control over rental housing conditions. Finally, given the opportunity to obtain higher rents through the supplements, the majority of firms with substandard buildings would be willing to improve them. Consequently, the problems of dislocation would be minimized.

Increasing Public Expenditures on Community Facilities and Services. As noted earlier in this study, the most important variable which influences a building's value is its location. House operating firms consistently take this variable into account in their decision-making practices. For example, Sternlieb noted the following comments from slumlords in response to the question of whether their buildings could be made more profitable by improving them. One landlord said: "I won't touch them due to their poor locations."[102] Another said: "We wouldn't do a thing in this area for we wouldn't get our money back."[103] And finally: "Banks won't make loans in our area . . . but if we were in a better area, I would probably put on at least new aluminum siding. It pays."[104] It is immediately apparent from these comments that the house operating firm is strongly influenced by locational factors in its decision-making.

---

[102]Op. cit., p. 163.   [103]Ibid.   [104]Ibid., p. 155.

If public policy were directed toward improving the location and thus the resale value of substandard buildings through increased expenditures on community facilities and services, it can be expected that the firms owning such buildings would be motivated to improve them. Nash presents a strong case for the impact of public expenditures on community facilities and services when he states:[105]

> Community facilities and services will contribute to the desirability and stability of an area. New or improved schools, parks, transportation, trash collection and other services will improve the physical environment of the neighborhood, thus increasing its potential rent and decreasing its potential vacancy rate. A city can use a community facilities program to direct private investment into areas of its choice.

A program of increased public expenditures on community facilities and services is likely to be most effective when applied to a particular area, rather than on a city-wide basis. In determining the appropriate areas in which to increase expenditures, the local government should consider house operating firm decision-making and the role of mortgage lenders. Generally, conventional lenders are reluctant to finance rental housing in poor quality areas, where the need for rehabilitation or removal is often the greatest. Firms with buildings located in such areas must, therefore, turn to other lenders, who will take greater risks in exchange for higher interest rates and shorter terms. It has been previously noted that when vacancy rates are low, removal of any rental housing except that which cannot be rehabilitated causes serious dislocation problems. Thus, in order to encourage the conventional lenders to finance rehabilitation projects in poor quality areas, public policy must be directed toward improving those areas. This

---

[105]W.W. Nash, Residential Rehabilitation: Private Profits and Public Purposes, p. 191.

can be done by concentrating public expenditures on facilities and ser-
vices in poor quality areas which have a deteriorated, but still sound,
stock of rental housing.

It might be argued that such a policy tends to be discrimina-
tory, in that it favours investment in less desirable areas over invest-
ment in better areas. This argument may be answered as follows: First,
if rehabilitation is not stimulated when vacancy rates are low and the
firms choose to withdraw or remove a significant number of buildings,
substantial dislocation results. The dislocated tenants must be re-
housed, ideally in or near their former neighbourhoods. Assuming that
the community chooses to construct public housing at such locations, it
is probable that large expenditures on facilities and services will be
required for location improvements. Again, such expenditures will tend
to be made in a discriminatory manner, favouring one area over another.
Inevitably, then, the expenditures will be made, and the question be-
comes one of timing rather than discrimination.

Systematic code enforcement combined with increased public
expenditures on facilities and services in poor quality areas with a
deteriorated but sound housing stock yields important implications for
low income tenants. In the case where the worst housing is removed,
some dislocation of low income tenants will result. Remember, however,
that such a program is only appropriate for areas with a deteriorated
but sound housing stock. The majority of house operating firms in such
areas would have a substantial investment in their buildings and thus
would be more inclined to rehabilitate than to abandon or remove their
buildings. This is especially true considering that the program will
raise the buildings' ultimate resale value and stimulate availability

of better financing for improvements to substandard buildings.

It would be a mistake to apply the program in the areas with the poorest stock of housing. The realities of house operating firm decision-making indicate that in these areas, profit loss to a firm as a result of code enforcement will be minimized by abandonment or removal, rather than rehabilitation (even given the stimulus of the program in this direction). Increased public expenditures for facilities and services in these areas will not provide a sufficient stimulus toward rehabilitation. Given, then, that the program should be applied only in those areas described, it can be expected that dislocation of low income tenants will be minimized.

As rehabilitation is stimulated by the program, rent levels will inevitably rise as a result of the increase in the quality of housing services and the corresponding increase in the quality of the local environment. This implication for low income tenants is far more serious than the minimal amount of dislocation which will occur. In this case, tenants will experience significant hardships unless some form of rent supplementation is made available. Such supplements could be financed in part through the increased tax base of the rehabilitated buildings. However, if tax abatement or deferral is introduced into the program, then other sources of funding must be considered. The argument that the costs of this program are likely to be quite high can be answered simply by considering the costs of the alternative of building public housing to improve the housing conditions of low income tenants under low vacancy rates.

Summary. There exists a broad range of policy alternatives which must be incorporated into a systematic program of code enforcement in

order to improve housing conditions for low income tenants when vacancy
rates in the non-luxury rental housing sector are low. These alterna-
tives range from direct to indirect action. Direct action alternatives
include tax deferral or abatement, outright grants and low-interest loans
for rehabilitation. Indirect action alternatives include a system of
rent supplements and increased public expenditures for facilities and
services in areas with a deteriorated but sound housing stock. Each of
these policy alternatives has numerous consequences for the house oper-
ating firm. Thus each significantly affects the decision-making prac-
tice of choosing that alternative which minimizes the decline in profit
from substandard housing due to code enforcement. By intervening in the
house operating firm decision-making process, the policy alternatives
discussed in this section can have a substantial and, perhaps more
importantly, predictable influence on the housing situation for low in-
come tenants.

CONCLUSIONS

This study has attempted in a modest fashion to overcome what
is felt to be one of the most significant shortcomings in the planning
and policy-making fields, namely the lack of understanding of how the
private sector responds to programs instituted by the public sector.
Using the example of housing code enforcement, we have tried to estab-
lish the probable patterns of response in the private sector to publicly
instituted programs. To some extent, the study fails in its attempt to
empirically validate the pattern of decision-making proposed in the
sphere of rental housing. However, this shortcoming can be corrected
through further research which focuses on documenting the actual experi-
ence of proprietors of both standard and substandard rental housing.

Particular emphasis in such research should be given to an analysis of the shifts in expenditure patterns which are deemed to occur as rent levels and vacancy rates vary.

What does emerge from this study is a description of how knowledge of private sector decision-making may be applied by the public sector in selecting appropriate policies to achieve a given end governed by certain limitations. In this case, the end is the elimination of substandard housing while at the same time increasing the stock of standard housing available to low income tenants. The limiting factors governing this end include the minimization of dislocation for low income tenants, the minimization of increases in housing allocations or the doubling-up of low income tenants, and the minimization of public expenditures. Only through considering the response patterns in the private sector and by adapting policy alternatives to manipulate these patterns to achieve the desired responses, can the planning function increase its effectiveness. To the extent that this study has effectively illustrated this principle can some claim be made as to the validity of the hypothesis. In the declarative sense, then:

> An understanding of the decision-making practices of
> house operating firms is essential to the effective
> use of housing code enforcement as a tool to elimi-
> nate substandard housing.

Hopefully, this study has aided that understanding.

BIBLIOGRAPHY

Banfield, Edward C. and Morton Grodzins. Government and Housing in Metropolitan Areas. New York: McGraw-Hill Book Co., 1958.

Canada. Special Senate Committee on Poverty. Poverty in Canada. Ottawa: Information Canada, 1971.

Canada. Task Force on Housing and Urban Development. Report. Ottawa: Queen's Printer, 1969.

Carlton, R.E., R. Landfield, and J.B. Loken. "Enforcement of Municipal Housing Codes," Harvard Law Review, LXXVIII, (1965), 801-60.

Chicago. The Conservation Committee. Conservation. 3 vols. Chicago: The Metropolitan Housing and Planning Council, 1953.

C.C.H. Canadian Limited. Canadian Master Tax Guide. 23rd ed., Don Mills: C.C.H. Limited, 1968.

CMHC, Economics and Statistics Division. Canadian Housing Statistics. 1970. Ottawa: CMHC, March, 1971.

DeForest, Robert W. and Lawrence Veiller (eds.). The Tenement House Problem. 2 vols. New York: Macmillan, 1903.

Fisher, Ernest M. A Study of Housing Programs and Policies. Washington, D.C.: U.S. Housing and Home Finance Agency, 1960.

Fisher, Ernest M. and Robert M. Fisher. Urban Real Estate. New York: Henry Holt and Co., 1954.

Frieden, Bernard. The Future of Old Neighborhoods. Cambridge, Mass.: M.I.T. Press, 1964.

Friedman, Lawrence M. Government and Slum Housing: A Century of Frustration. Chicago: Rand McNally and Co., 1968.

Gilmore, Arthur W. Income Tax Handbook. 1970-1971. 20th ed. Toronto: Richard DeBoo Ltd., 1970.

Grad, Frank P. Legal Remedies in Housing Code Enforcement in New York City. New York: Columbia University Legislative Drafting Fund, 1965.

Grebler, Leo. Experience in Urban Real Estate Investment. New York: Columbia University Institute for Urban Land Use and Housing Studies, 1955.

_____. Housing Market Behavior in a Declining Area. New York: Columbia University Press, 1952.

Gribetz, Judah and Frank P. Grad. "Housing Code Enforcement: Sanctions and Remedies," Columbia Law Review, LXVI, (1966), 1254-90.

Grigsby, William. Housing Markets and Public Policy. Philadelphia: University of Pennsylvania Press, 1963.

Heilbrun, James. Real Estate Taxes and Urban Housing. New York: Columbia University Press, 1966.

_____. "Reforming the Real Estate Tax to Encourage Housing Maintenance and Rehabilitation," Land and Building Taxes, ed. Arthur P. Becker. Milwaukee: Committee on Taxation, Resources and Economic Development, University of Wisconsin Press, 1966.

Hemdahl, Rueul. Urban Renewal. New York: The Scarecrow Press, 1959.

Hummel, D.C. "The Impact of Codes on the Problem of Housing Our Nation's Poor," Building Official, II, (1968), 14-15.

Hunter, D.R. The Slums: Challenge and Response. New York: Free Press of Glencoe, 1964.

Knowles, Jr., Jerome. "City and Neighborhood Data and Analysis," The Appraisal Journal, XXXV, (1967), 260-68.

Lieberman, Barnet. Local Administration and Enforcement of Housing Codes. Washington, D.C.: National Association of Housing and Redevelopment Officials, 1969.

Loshbough, B.E. "Rehabilitation of Housing: Federal Programs and Private Enterprises," Law and Contemporary Problems, X, (1967), 416-38.

Lowry, Ira S. "Filtering and Housing Standards," Land Economics, XXXVI, (1960), 362-70.

_____. Housing Assistance for Low Income Urban Families: A Fresh Approach. New York: Rand Institute, 1971.

Lubove, Roy. The Progressives and the Slums. Pittsburg: University of Pittsburg Press, 1963.

MacFarland, M. Carter and Walter K. Vivrett (eds.). Residential Rehabilitation. Minneapolis: University of Minnesota Press, 1960.

Manvel, A.D. Local Land and Building Regulation. Washington, D.C.: U.S. President's National Commission on Urban Problems, Research Report No. 6, 1968.

Millspaugh, M. and G. Breckenfeld. The Human Side of Urban Renewal. Baltimore: Fight Blight Inc., 1958.

Nash, W.W. Residential Rehabilitation: Private Profits and Public Purposes. New York: McGraw-Hill Book Co., 1959.

Needleman, Lionel. Economics of Housing. London: Staples Press, 1965.

New York. Committee on Housing and Urban Development. Code Enforcement for Multiple Dwellings in New York City. New York: Community Service Society, (n.d.).

New York. State Division of Housing. Housing Codes, the Key to Housing Conservation. 3 vols. New York: Housing and Home Finance Agency, 1960.

Ontario. Association of Housing Authorities. Good Housing for Canadians. Toronto: 1964.

Ontario. Department of Municipal Affairs, Community Planning Branch. A Better Place to Live. Toronto: 1961.

Ontario. Department of Municipal Affairs, Community Planning Branch. Housing Code Programs: A Summary of Experience of Selected American Communities. Toronto: 1961.

Philadelphia. Office of Development Coordinator. Partnership for Renewal: A Workable Program. Philadelphia: 1960.

Ratcliff, Richard U. Real Estate Analysis. New York: McGraw-Hill Book Co., 1961.

Ratcliff, Richard U. and Bernard Schwab. "Contemporary Decision Theory and Real Estate Investment," The Appraisal Journal, XXXVII, (1969), 165-87.

Riis, Jacob. How the Other Half Lives. New York: Hill and Wang, 1957.

Robinson, H.W. The Economics of Housing. London: P.S. King, 1939.

Samuelson, Paul A. Economics. 8th ed. New York: McGraw-Hill Book Co., 1970.

Schaaf, A.H. Economic Aspects of Urban Renewal. Berkeley: Real Estate Research Program, Institute of Business and Economic Research, University of California, 1960.

_____. "Economic Feasibility Analysis for Urban Renewal Housing Rehabilitation," Journal of the American Institute of Planners, XXXV, (1969), 399-404.

_____. "The Potential for Subsidized Housing Rehabilitation," Proceedings of the American Real Estate and Urban Economics Association, V, (1970), 105-16.

Schoor, Alvin L. Slums and Social Insecurity. Washington, D.C.: U.S. Government Printing Office, 1963.

Schoor, P. "Only as Much as the Rents Will Bear," The Appraisal Journal, XXXV, (1967), 348-54.

Segal, E.A. "Housing Code Enforcement Program Directly Aimed at Slum Landlord is Getting Results in New Haven," Journal of Housing, XXVII, (1968), 74-77.

Shipp, Royal. "Evaluation of Federal Housing Programs: Progress and Prospects," Proceedings of the American Real Estate and Urban Economics Association, V, (1970), 81-104.

Slavet, Joseph and Melvin R. Levin. New Approaches to Housing Code Administration. Washington, D.C.: U.S. President's National Commission on Urban Problems, Research Report No. 17, 1969.

Sporn, A.D. "Empirical Studies in the Economics of Slum Ownership," Land Economics, XXXVIII, (1962),333-40.

Sternlieb, George. The Tenement Landlord. New Brunswick, N.J.: Rutgers University Press, 1966.

Stowell, K.K. Modernizing Buildings for a Profit. Englewood Cliffs, N.J.: Prentice-Hall, 1935.

"The Wildfire of Abandonment," Business Week, April 4, 1970, pp. 57-61.

U.S. Housing and Home Finance Agency, Codes Administration. "Budgeting and Staffing," Workable Program Guideline, G-2. Washington, D.C.: U.S. Government Printing Office, 1965.

U.S. Housing and Home Finance Agency, Codes Administration. "Systematic Housing Code Compliance," Workable Program Guideline, G-8. Washington, D.C.: U.S. Government Printing Office, 1965.

Wendt, Paul F. and A.R. Cerf. Real Estate Investment Analysis. New York: McGraw-Hill Book Co., 1969.

Wheeler, M. (ed.). The Right to Housing. Montreal: Harvest House, 1969.

"When Landlords Walk Away," Time, March 16, 1970, pp. 64-65.

Winnick, Louis. Rental Housing: Opportunities for Private Investment. New York: McGraw-Hill Book Co., 1958.