THE PROBLEM OF PRIVATE INVESTMENT
IN URBAN REDEVELOPMENT

Part of a Group Study
"The Nodular Metropolitan Concept"

by
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ABSTRACT

This study is divided into two sections. The first consists of a group study in which the Nodular Metropolitan Concept is introduced. The second consists of an individual research project in which the problem of private investment in urban redevelopment is investigated.

One of the objectives of the federal urban renewal program in Canada is the achievement of an efficient pattern of urban land uses. This is done by encouraging and facilitating the redevelopment of slums and blighted areas of the city to accommodate the highest and best use of the land. To accomplish this, much reliance is put on the role of private enterprise. In order to attract the interest of private developers, public assistance is called upon to provide cleared land at a price that makes it feasible for profitable private redevelopment.

In this regard, the Federal Government provides a program of financial assistance to municipalities wishing to undertake urban redevelopment. Under Section 23B of the National Housing Act, the Federal Government may contribute up to one-half the cost of acquiring and clearing land for redevelopment, installing public works and services, and relocating dispossessed persons. The balance of the costs are shared by the Provincial and Municipal governments.

Recorded experience has shown however, that the above objective
has not always been satisfactorily achieved. Anticipated private re-
development has not always materialized, with the result that public ex-
penditures to encourage and facilitate private participation has yielded
little or no returns. In many cases, the failure may have been due to
the lack of understanding of the local real estate market and the ob-
jectives of private investors.

The problem to which this study is directed is private invest-
ment in urban redevelopment. It is proposed to examine the factors af-
fecting the extent of private participation in government sponsored
urban renewal. Specifically, the study undertakes to test the hypo-
thesis that the extent of private investment in publicly initiated urban
redevelopment is influenced by such factors as: (1) project location,
(2) size of disposition unit, (3) re-use plan, (4) method of sale, (5)
timing of sale, (6) pricing of land, and (7) investment uncertainty.

The focus is on the disposal phase of urban redevelopment.
The point of view taken is that government, through its policies and
plans, can influence the outcome of its redevelopment program.

Rigourous testing of the hypothesis was precluded by the limit-
atations of time and resources. Consequently, the analysis has been con-
fined to the City of Vancouver's urban redevelopment program. A sample
survey was conducted in which selected investors in two Vancouver re-
development projects were interviewed. Each interviewee was asked if
the seven items hypothesized to influence private participation in urban
redevelopment was a factor in his investment decision. Secondly, to
determine the relative importance of each of these, the interviewees were asked to rank the three most important factors in their investment analysis.

The survey results showed that the seven hypothesized factors were considered in the investment decision making process. Of these, project location, price of land, and size of disposition unit were the most important.

The hypothesis was further tested against the actual experience of Vancouver Redevelopment Project Nos. 1 and 2. The evidence of these two case studies provided an additional basis for accepting the hypothesis.

Based on the research findings, it was concluded that the extent of private investment in urban redevelopment areas is conditioned by the seven factors listed earlier. Some of these appear to be more important than others, but this is likely to vary from one situation to another. However, since the study was necessarily restricted in scope, it was suggested that further testing be done. This would not only serve to test the general applicability of the hypothesis, but might uncover other facets of the general problem of private investment in urban redevelopment.
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SECTION I

GROUP STUDY

THE NODULAR METROPOLITAN CONCEPT
A. Basis of Study

A review of the following literature emphasises the uncoordinated state of city development. If it is possible for mankind to anticipate (plan for) the future, it is important to discover the kinds of changes that may occur. The purpose of this study is to identify underlying variables that are shaping urban society and structure; specifically to explore a form of development which is becoming evident in the city today. From this analysis it is apparent that specific functional nodes have formed naturally within the present urban system. This study assumes that present growth trends in the city can be recognized and analysed. Based on this analysis, it is believed that the most desirable trends can then be reinforced to shape future form and structure.

B. Approach

The approach to this study has been inter and multi-disciplinary. It is a postulate of this research that Community and Regional Planning must operate within a comprehensive and co-ordinated framework. In view of this, an attempt has been made to construct a preliminary model (see matrix, figure 1). Because of the limitations of time and personnel, only selected components of the conceptual model are explored. A more complete identification and analysis of all the model's components would result in a better understanding of the larger continuing urban growth process. The topics of individual studies are arbitrarily
selected on the basis of individual researcher's experience and interest. It is only on this basis that a significant contribution to the theory and practice of Community and Regional Planning can be made.

C. The Problem

By the year 2000, the urban population of the United States is expected to double. Moreover, people are expected to be more affluent as their personal income in constant dollars increases by fifty percent. While these anticipated changes have not yet been realized, the capacities of our cities are fast reaching their limits. For example, transportation facilities are already congested in the large metropolitan areas. Conveniently located land for housing is becoming scarce, and costs of providing public services and utilities are becoming prohibitive. The crucial problem arising out of this is how to plan our metropolitan areas so that they can accommodate the anticipated growth and change.

It is estimated that by the 1980's or at least by the year 2000, we will have to rebuild our cities to accommodate the anticipated population increase and to satisfy the preferences of a more affluent society. By the year 2000, more urban homes, places of business, and public facilities will have to be built than have been built since the first towns were started in North America. At least half of todays

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2Lowdon Wingo, Jr., Cities and Space, (Baltimore: Johns Hopkins Press, 1963), p. 11.

urban dwellings will probably require replacing because they will no longer serve the needs of families. In addition, half of today's urban business and industrial buildings will require replacing because they will no longer serve changing production and distribution methods.

It is likely that our cities will have to be restructured to accommodate radically new means of transportation. High density cities like New York have already found the cost of automobile travel to the city core prohibitive. In low density cities, such as Los Angeles, the cost in money, time and space of relying solely on the automobile is equally prohibitive. For example, two thirds of Los Angeles' downtown is given over to the automobile, about one-third of this to parking lots and garages and the rest to roadways and highways. Most of today's cities have grown with little planning. Although they urgently need rebuilding and restructuring, they have neither the money nor the authority. Our larger cities are beset with problems of slums, traffic congestion, sprawl, ugliness, housing; with the provision of inadequate open space; with air and water pollution; with outmoded forms of public administration and taxation. In addition, most cities have enormous problems with education, poverty and racial segregation.

Outdated, inflexible political boundaries have helped to encourage people and industry into the lower tax suburbs and to make planning extremely difficult. The wealthier families have escaped to the

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5 Ibid.
6 Los Angeles City Planning Department, "Major Issues for Los Angeles" May 2, 1966, p. 4.
suburbs leaving the central city to deteriorate. Our cities continue to use a tax system that penalizes improvements and subsidizes obsolescence, which inevitably leads to blight, sprawl and spread of slums.  

In spite of all these problems, which vary in degree across North America, our metropolitan areas continue to grow and cry out for imaginative solutions to making our urban environment more livable.

Planners like William Wheaton and Victor Gruen believe that the essence of urbanism is variety, and that only a vibrant night-and-day "downtown" (city core) can support the variety of shopping, services, contact, job opportunities, culture and recreation facilities needed to make a city an attraction. Any viable city core needs people living within and adjacent to the area - not just daytime commuters. The provision, through urban renewal, of a functional and livable habitat for these central city dwellers is the focus of the group research effort described in this thesis.

D. Urban Growth

1. Metropolitanization

Before discussing the central core area of the city, it is important to mention the general forces which have contributed to the growth of our metropolitan areas. Peter Hall described these forces in his book, The World Cities. The first is that total population has increased at a rapid rate and threatens to go on increasing. The second

factor was the shift off the land into industrial and service occupations in the cities. This, however, is no longer a major factor since over two-thirds of North Americans now live in urban areas. The third factor is that a large part of the urban growth is being concentrated in the already large metropolitan areas. This concentration probably is a reflection of the more diverse economic and social opportunities available in the large centres.

Metropolitan areas have grown faster than the rest of North America in every decade since the turn of the century, except for the depression years 1930-1940. By 1960 almost two thirds of the population of the United States lived in the Standard Metropolitan Statistical Areas delineated by the census. In Canada 87.5 percent were classified as urban (non-farm) population. This is a 109 percent increase from 1921-1961.  

Growth within the metropolitan areas has not been distributed evenly. The central areas of cities have grown relatively little, while the suburban rings have grown at a much higher rate. In some of the larger cities, central areas have actually lost population during the last decade. Some of the many reasons for the loss of population include lack of available space for further building, the obsolescence of housing and industrial plants in the core areas, and the unavailability of rapid, cheap methods of communication and transportation.

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The losses of population in the central areas do not necessarily reflect economic decline but rather the decentralization of population and institutions to the suburbs. Historically the natural clustering of commercial, industrial and residential activities was due in part to the absence of a well developed transportation system. Mobility was limited since few people had a personal mode of transport. When mass production and ownership of automobiles became a reality, the form of the city began to change. Since people were now able to travel longer distances in a shorter period of time, they began to move to the outer fringes of the central city. Decentralization of the residence also brought with it many retail and service enterprises. In addition, there has been a trend towards the decentralization of manufacturing and wholesaling firms seeking to escape the congestion of the central core.\footnote{R. Vernon, Metropolis, 1985, (Cambridge: Harvard University Press, 1960), pp. 116-120.} Another factor which has encouraged residential decentralization is the intervention of government in the housing market.\footnote{W.R. Thompson, Op.cit., p. 355.} Through the U.S. and Canadian Housing Acts, long term, low interest loans made single family home ownership possible on a larger scale and encouraged the development of suburban subdivisions.

It appears that the primary implications of increased mobility and government housing policy on urban form is a dispersion of activities. But while the city is becoming more dispersed, specialized functional areas appear to be developing. The decentralization of retailing, whole-
saling and industry has altered the function of the urban core. The core is evolving from a central business district to a central intelligence district. That is to say, tertiary and quarternary economic activities are becoming the predominate land uses. Financial and administrative offices, research and consultative firms, entertainment and cultural facilities are increasing in the core areas of cities. Those retail firms which remain downtown are becoming increasingly oriented to the daytime working population and to those people who live in or adjacent to downtown.

Within the core itself, specialized functional districts can be identified. For example, a financial district, a high order goods shopping district, and an entertainment strip may be easily observed. This clustering of like activities reflects the desire for face to face interaction or, as in the latter cases, the desire for consumers for comparisons.

Urbanism

Perhaps the first thing that strikes an observer of our cities is the tremendous change of rural to urban population during the last few decades. Though change is constant it is the accelerating rate of change in the age of automation which has wrought havoc with the "good old times". Changing life styles are part and parcel of rapidly growing

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13 Interview with Dr. Edward Higbee, Vancouver, B.C., November, 1967.
14 Interview with Dr. Walter Hardwick, Vancouver, B.C. April, 1967.
urban areas. The increasing acceptance of urbanism as a way of life has ushered in an urban society which exhibits an increasing affluence among the greater proportion of its members. The shorter work week, which is a consequence of automation, is making its appearance felt. Increasing leisure time and recreational pursuits are bywords of a more affluent society. The impact this has had so far on the urban scene is the increasing emphasis that is placed on the development of leisure time amenities and urban open spaces.\textsuperscript{17}

Another phenomenon of the age of automation is the increasing geographic mobility of the North American population. It is a fact that one out of five persons in the U.S. is now moving every year.\textsuperscript{18} This means that a working person in his life is likely to change his residence eight times and two or three of them would involve moves to an entirely different community. One consequence of this greater mobility is the loss of personal contacts with relatives and neighbours who are left behind.\textsuperscript{19}

In addition to urbanism as a way of life and increased geographic mobility, differences in urban residential location are becoming more pronounced. The growth of the city under a free enterprise system, or under any non-centralized system, is leading to a high degree of differentiation of residential areas by type of structure, quality of housing


and levels of rental values. Under a market system of allocating housing, where people live depends in large measure on the rent or sales price they pay. A considerable degree of residential segregation results between persons in various income brackets and between persons in various occupations. However, recent findings clearly indicate that racial and ethnic residential segregation are more than just economic discrimination. They have also led to the high degree of differentiation of residential areas, because even where economic differentials are diminishing, racial residential segregation persists.  

2. Megalopolis

The large scale movement of population into the outer rings of metropolitan areas, is, according to Jean Gottmann, ushering in a new phase of metropolitan development which he calls Megalopolis.

In regions such as the north eastern seaboard of the United States the outer rings of metropolitan areas have expanded to overlap with outer rings of other metropolitan areas. The result is a continuous band of urban and suburban development. This phenomenon is also called "strip city", "city region" and "super-metropolis".

The words megopolis and megalopolis are being heard with increasing frequency, usually applied to an almost continuous string of cities running from Washington, D.C. to Boston ...

The pattern does not consist of a string of metropolitan areas standing should to shoulder, fighting for space like a crowd in a subway, but of metropolitan areas in a functioning group, interacting with each other. In the same manner that economic

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development has made the size of the typical nation inadequate and has called for super-nations, it seems that soon - at least in historical time - urban units will go beyond the scale of the metropolis to the scale of the megalopolis. And just as the metropolitan area is not made up of an accumulation of little cities complete in themselves but on a system of specialized and therefore dissimilar areas, the various metropolitan units of megalopolis will specialize and become more different from each other than they are today.22

There are over a dozen areas in North America that could develop the same urban megalopolation form as the north eastern seaboard. For example, in California most of the population is in the densely populated San Francisco Bay areas and in sprawling Los Angeles. Indications now are that people eventually will fill an almost solid population belt running between the two areas through the Central Valley of California.23

E. Urban Form and Structure

There have been many efforts to analyse the form and structure of cities. "Form" means the physical pattern of land use, population distribution and service networks, while "structure" signifies the spatial organization of human activities and inter-relationships.24 Ideas such as Ebenezer Howard's Garden City movement and Frank Lloyd Wright's Broadacre Concept have had considerable influence in the decentralization argument while opposing views have reflected the "Save the Central Cities" movement. An example of a scheme developed for the retention of the central city was put forward by L. Hilberseimer during the early 1940's,

based on a "settlement unit". Such a unit contains all the essentials of a small community within itself and each unit is in turn connected to other units to create an overall system of self-contained centres. Hilberseimer's study applies such a system to the City of Chicago.

Recent efforts to analyse urban form and structure have focused attention on basic theories similar to Hilberseimer's approach instead of being largely intuitive as in earlier concepts. More scientific methods of analysis using computer techniques have been developed. With the use of models, many alternative forms of growth and change can be examined. Emphasis on transportation analysis has led to schemes such as the Year 2000 Plan for the National Capital Region and more recently to the Penn-Jersey Transportation Study, where future growth possibilities have been presented with clear alternatives. In the Penn-Jersey Study, since transportation policy was the factor most directly under the influence of the study's policy committee, alternative transportation systems were taken as the starting point for investigating different possible regional growth patterns.

Many theoretical studies of transportation and urban form have been made by planning teams, such as the proposal for North Buckinghamshire in England, and by architects such as J. Weber in his "Linear City Development" in 1965, but few of these radical ideas have been implemented.

27 Penn-Jersey Transportation Study, Prospectus, December 11, 1959, p.14
29 Brian Richards, New Movement in Cities, (London: Studio Vista
On a more academic basis, there have been approaches to the theoretical studies of urban form and structure by use of models, as exemplified by Melvin Webber and Kevin Lynch. Webber suggests that most of the models used currently are based on "static descriptive" relationships such as density gradients of population, rates of decline of manufacturing and other relationships observed in existing spatial patterns. These models concentrate on the results rather than on the cause of urban form. He stresses the need for analysis of the "dynamic behaviour" aspects of urban structure. Lynch and Rodwin suggest in their model, which deals with physical form, that this approach should be followed by studies of the "activity pattern" and its effect on urban form. Recent studies for the New Town of Columbia in the State of Maryland takes this approach and offers a better understanding of models in integrating transportation and urban form.


There are many choices for future urban form and structure. Catherine Bauer Wurster outlined four broad alternative approaches.

(a) Present trends projected. Region-wide specialization with most functions dispersed but with a push toward greater concentration of certain functions in the central cities. Perhaps unstable, likely to shift toward one of the other alternatives...

(b) General dispersion. Probably toward region-wide specialization of certain functions but a considerable degree of sub-regional integration might be induced.

(c) Concentrated super-city. Probably with a strong tendency toward specialized sectors for different functions.

(d) Constellation of relatively diversified and integrated cities. With cities of differing size and character, a range from moderate dispersion to moderate concentration would be feasible.

Any one of these four alternatives could probably apply in North America, depending on local conditions.

The city of Los Angeles recently carried out a study on urban form and structure in which the following four alternative concepts for urban growth were outlined. 34

(a) Centres Concept. This concept envisions large regional concentrations of residence and employment, which would be the focal points for solidifying new growth in the metropolitan area. It proposes a city of a highly urban character, while preserving single family residential areas and natural amenities. It attempts to minimize travel distances between home and places of daily occupation ....

(b) Corridors Concept. This concept proposes a highly urbanized metropolis, with concentration of employment, commercial services, recreational facilities and high density apartments located in corridors extending outward from the ...metropolitan core. This concept would require a mass transit system ....

34 Los Angeles Department of City Planning, Concepts for Los Angeles (Summary Pamphlet, September, 1967) .
(c) Dispersion Concept. This concept seeks an even distribution of activities, which would accommodate growth while preserving the characteristics that make Los Angeles unique among major cities; decentralization, owner occupied homes, and the automobile with its flexibility of movement. This concept attempts to keep travel distance from home to work and other daily activities at a minimum, by having jobs, consumer services, recreation and public facilities located close to the resident population ...

(d) Low Density Concept. This concept seeks to preserve the present residential patterns and life style of Los Angeles. It emphasizes the single-family detached house with low rise apartments in about the same proportions as now. The automobile would continue as the predominant means of transportation.

The four alternative concepts for the urban growth of Los Angeles are not unlike Catherine Bauer Wurster's four theoretical alternatives.

2. Nodular Metropolitan Concept

The Nodular Metropolitan Concept is another alternative for urban growth and development. This concept, which is the basis of the group study, is found to combine elements of the centres and corridors concepts as outlined in the Los Angeles study. For purposes of clarification at this stage of the study, the Nodular Metropolitan Concept is an urban system based on the following assumptions.

\[\text{Ibid.}\]
(a) Located in a large North American metropolitan region, containing a broad base of varied land use and widely diversified employment and offering a range of residential types.

(b) A region of highly urban character with a concentrated central core.

(c) Developed as a concentration of growth nodes at intervals along major transportation corridors. These nodes become centres for mixed usage or single uses of large proportions.

(d) Preservation of outer single family residential areas and existing natural amenities.

(e) Development of large areas between nodes as public recreation and open space.

(f) Development through a comprehensive plan which co-ordinates the tools of capital budgeting, proper enabling legislation and programmed phasing.

It is envisaged that this system will bring about a higher standard of living, create more opportunities for the enjoyment of the city and provide an environment which will stimulate and support present and future generations.

To achieve this desirable urban condition for the city, the need for increased participation by public and private sectors has been acknowledged.\textsuperscript{36} It is likely that totally new means of land use control

and administration would be needed. The enormous problem of rebuilding our cities will most certainly require the most advanced technology, especially in transportation and building.

3. Transportation Technology

There have been in recent years many innovations and research into modes of travel that, if implemented, could possibly play a significant role in making our cities more livable. Three recent innovations are:

(a) Conveyors or moving sidewalks
(b) Automated electric roads
(c) Mini-cars.

(a) Conveyors. The first proposal for implementing the moving sidewalk was in 1893 for the Columbia Exposition at Chicago and later at the Berlin Exposition in 1896 and Paris Exposition in 1900. Because of the problem of low speed and other practical difficulties in its day to day use, the moving sidewalk has not come into extensive use as an integral part of the urban transportation system. Its application seems particularly suitable where large numbers of people have to move between two levels or along corridors, e.g. at large airports (Los Angeles, San Francisco, Montreal) to save the passengers from a long walk, and in department stores where it can be used conveniently by trollies and prams. Along with escalators, the conveyor has potential for use in high density nodular developments.

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(b) Automated Roads. The General Motors Laboratories and Radio Corporation of America have been experimenting with automated roads with considerable success. A single cable is buried in a shallow trench just beneath the surface of the road and this cable, when energized, gives guidance through an electronic apparatus connected to the vehicles steering system. Secondary cables and detection loops adjust the speed of cars, keeping them at a safe distance behind the one in front. General Motors estimate that vehicles could cruise in groups safely at a controlled speed of 70 m.p.h., giving a capacity of 9,000 vehicles per lane per hour, the equivalent of building five additional lanes of motorway. The cost of construction of such a system, would compete favourably with contemporary highway construction.

(c) Mini-Cars. Mini-cars have come to the forefront only in recent years. Their sudden importance can be attributed to:

1. A critical shortage of parking space in the central core.
2. The extremely high costs involved for providing additional parking.
3. An increasing concern for air pollution in our cities.

Although no "on the road" model has yet been developed, many companies have produced prototypes. The most widely known mini car is the StaRRcar (for self transit rail and road) invented by William Alden. The StaRRcar can be driven along streets until

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38 Brian Richards, Op. cit., p. 77
39 Brian Richards, Op. cit., p. 78
the driver requires a faster speed in which case he merely
drives up a ramp to an elevated track joining, say, a 60 m.p.h.
train of vehicles. On pressing a dashboard button the vehicle
is automatically ejected at its pre-selected exit. A mass
shift to the use of StaRRcars would help alleviate the con­
gestion on the road network and would also decrease the pro­
blem of inadequate parking spaces in the central core of the
cities as three StaRRcars can fit into the space previously
occupied by one conventional car.40

Other modes of transportation include the monorail, cushion
craft, vertical takeoff and landing and helicopters. In recent years
millions of dollars have been spent on development but their applica­
tion has been limited to special purposes like the mini mono­rails for
secondary transportation at Expo '67 and the helicopter service between
Kennedy Airport and downtown Manhattan. For mass passenger transport
they apparently still lack the economies necessary to provide a truly
cost competitive corridor service.41

4. Building Systems

There are numerous illustrations of advanced ideas in building
systems that could possibly provide for high density core living for
the future city dweller. Three recent illustrations are:

Future Integrated Highway Concept*, presented at the Transportation Re­
of Commerce).

41 A.R. Rice, *Possibilities for Fast Surface Transport: The
Case for Fast Rail Service*, Planning 1966. Selected papers from A.S.P.O.
National Planning Conference, Philadelphia, Pa., (April 17-21, 1966)
pp.240
(a) Habitat. With the advent of Canada's Expo'67, the development of Habitat became a possibility. Moshe Safdie, the designer of the project, has used a basic building unit in various combinations to develop a number of housing types. Habitat has developed vertical and horizontal circulation systems creating three-dimensional spaces. 42

(b) Intropolis. A. Watty, the designer, has developed Intropolis as a system of multi-use blocks that can be connected in various ways to create higher or lower density of living spaces which are organized on a rational basis to give maximum flexibility and interaction. Three-dimensional spaces and circulation systems are evident as in Habitat. 43

(c) Urbanisme Volumetrique. This system is based on expanding structures leaving the ground free. A three-dimensional tubular structure with a series of slabs provides terraces for various builders to erect buildings, or to lay out roads and open spaces to create artificial landscapes. 44

The detail description of any single land use and related building technique as it could be applied to the nodular metropolitan concept of urban growth is beyond the scope of this study (see matrix, Figure 1).

5. Urban Pattern

With few exceptions, the form of North American cities is based on the grid pattern. Chicago, New York, San Francisco, Montreal and Vancouver are all examples of grid layout used to subdivide land and in providing services. It was a quick solution to rapid development in any direction and a direct result of large scale surveying emphasis. Depending on local physiographic features, access to all properties is nearly equal, and theoretically the only factor that affects a property's locational value is its relationship to the central core. The grid has been applied to such varied terrains as flat prairie and steep hillside. San Francisco is a good example of the latter.

F. Social and Spatial System

It appears that the changing urban form and structure is a process of continuous urban growth and development. This growth and development is an expression of the existing sociocultural system. There are certain social indicators, which are not only demographic in nature, but also of a social behavioural nature. Demographic characteristics are generally an expression of the growth, size and age composition of a population. But underlying this are social behavioural characteristics, namely the practices of a society, which are expressed in activities and responses of the population. These practices of a society to some extent determine the spatial characteristics of the land.

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48 Ibid., pp.207-245
Thus, a relationship between social and spatial characteristics exists. When changes are introduced in the urban growth and development process, they usually have an impact on the internal social and spatial relationship of the urban system. These incremental changes of the internal state of the urban system may range from "fixed" to "variable" states. Any shifts of the internal system from one state to another occur over time. These shifts represent incremental changes, depending on social reference structures and environmental manipulation. While there may be a number of external conditions which affect the urban system, there are at least two which should receive close attention in urban growth and development analysis; namely those as a result of planned change and those as a result of chance, where change is due to aggregate individual action.

G. Group Hypothesis

A review of the preceding urban growth concepts indicates that the nodular concept should be studied. Therefore the following hypothesis is formulated:

That the Nodular Metropolitan Concept provides a useful basis to initiate a study of urban living and planning.

Figure 2

Nodular Metropolitan Concept
H. Individual Thesis Topics

The topics chosen for individual research are as follows:

1. Ian W. Chang - "The Problem of Private Investment in Urban Redevelopment".


4. Ronald E. Mann - "The Role of the Time Element in the Urban Renewal Process."


The relevance of topic 1 to the nodular development concept becomes clear when it is realized that this concept requires a large amount of private capital to become a reality. Within the existing urban structure, it requires a heavy commitment of private funds for urban redevelopment. Under our market economy system, it is highly unlikely that such funds will be forthcoming unless there is a potential for profit. Assuming that it is decided to implement the nodular form of urban renewal, it would be mandatory for government planners to provide a favourable climate

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for private investment. It is true that public objectives in renewal are
to maximize community benefits, while private investor objectives center
on seeking opportunities for competitively attractive returns at minimum
risk. However, as Ratcliff argues, these two objectives need not be an­
tagonistic, but can co-exist with benefits accruing to both parties. 50
If this is true, then it behooves those persons charged with the respon­
sibility of formulating urban renewal plans and policies to understand
the motivations and investment calculus of the entrepreneur. Similarly,
it is just as important for the private developer to be sympathetic to
the social objectives of urban renewal.

50R. Ratcliff, Private Investment in Urban Redevelopment, Real
Estate Research Program, Institute of Business and Economic Research, Re­
SECTION II (I)

THE PROBLEM OF PRIVATE INVESTMENT IN URBAN REDEVELOPMENT
CHAPTER 1

INTRODUCTION

The age of chivalry is gone;
that of sophisters, economists,
and calculators has succeeded.

Edmund Burke

The Problem

Since its inception in 1949, the federal urban renewal programs in Canada and the United States have been the object of much criticism. The programs have been attacked for their presumed social, economic, administrative, and physical inadequacies. Martin Anderson, who is one of the harshest critics of urban renewal in the United States, argues that the program should be repealed on the ground that it has incurred great social costs, but has accomplished little.¹ Scott Greer, another analyst of urban renewal, argues that the program has been less than successful and suggests that further research be done before extending the program any further.²

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Although the number of critics of renewal abound, few have actually undertaken a comprehensive analysis and evaluation of the program, particularly at the micro-level. Anderson has produced a broad analysis, but it was approached from a macro point of view and does not appear to recognize the possibility that some projects may be more successful than others.³

It would be unduly optimistic and naive to assume that a comprehensive analysis and evaluation of specific renewal schemes or projects could be easily accomplished. In the first place, the urban renewal program is a broad and complex one. A second and perhaps more significant reason is that many municipalities are reluctant to permit an evaluation of their schemes or projects.⁴ However, this does not alter the fact that there is a vital need to examine the achievements of those schemes and projects implemented to date. This is necessary since the urban renewal programs in Canada and the United States appear to be gaining rather than diminishing in popularity.

Originally, it was intended to analyse and evaluate the economic achievements or urban renewal schemes in Canada and to see if any generalizations could be drawn respecting the relationship between economic efficiency and urban renewal plans. To this end, a comprehensive questionnaire was prepared and sent to various selected municipalities with completed urban renewal schemes. The intention was to apply a simple cost-benefit analysis to the survey results.

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However, the initial enquiries yielded few responses and those which were received were too incomplete to facilitate a proper analysis. This may be a reflection of the "reluctance to disclose information" problem pointed out earlier. Secondly, it became apparent that it is difficult to make a meaningful evaluation of any given urban renewal scheme without having fairly intimate knowledge of the municipality concerned.\(^5\)

Nevertheless, it is felt that the pilot project undertaken and the analytical framework devised may still be useful. Some of the problems of response and availability of data have been revealed. It appears that "on the spot" research is necessary. Secondly, it appears that a major difficulty in applying cost-benefit analysis to urban renewal is the problem of quantifying the benefits of renewal. As A.H. Schaaf writes, "Quantitative determination of the benefits of urban renewal is most complex and probably can at best represent only tenuous approximations."\(^6\) It remains for those with more time and resources to pursue the research further.

**Purpose of this Study**

While the objectives of the federal urban renewal program are broad and varied, it is possible to identify one objective which has assumed a dominant position. This is the objective of achieving a

\(^{5}\)Ibid., p. 1

Superior pattern of land utilization. That is to say, it is desired to refashion and rebuild the physical plant of the city according to modern concepts of urban efficiency. To achieve this objective, much reliance is placed on the role of private enterprise and capital. In order to attract the interest of private developers, governmental assistance is called upon to provide cleared land at a price that makes it feasible for profitable private development. This action of government in financing urban renewal fits within the framework of cost-benefit analysis. The public urban renewal agency possess broad powers of control over the redevelopment process and thus can influence the investment quality of urban renewal lands. It makes the most efficient use of public funds if it is able to encourage sufficient private redevelopment to increase the value of property in the renewal area, and thereby increase tax revenues. In strict economic terms, the public expenditure is only justified if this occurs.

The purpose of this study is to see if there is any relationship between the amount of private redevelopment and the specific plans and policies adopted by government. Two redevelopment projects in the City of Vancouver urban renewal program will form the basis of this research.

Although the emphasis is on economic efficiency, it is recognized that this is not the only investment criteria the local

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authorities should adopt, nor is it necessarily the most important one. William Ludlow points out that the social objectives of urban renewal often should be the main consideration. However, since the decision to undertake renewal necessitates the expenditure of large sums of public monies, there is a need to identify the economic costs and benefits of these investments.

Hypothesis

In order to facilitate a problem solving approach in this study, a hypothesis has been formulated. It is proposed that the research concentrate on testing the following hypothesis:

THE EXTENT OF PRIVATE PARTICIPATION IN GOVERNMENT INITIATED URBAN RENEWAL IS INFLUENCED BY SUCH FACTORS AS: PROJECT LOCATION, SIZE OF DISPOSITION UNIT, RE-USE PLAN, TIMING OF SALE OF LAND, METHOD OF SALE, PRICING OF LAND, AND INVESTMENT UNCERTAINTY.

The factors listed above were suggested by Richard Ratcliff in his study of twenty urban renewal projects in California. It is proposed to test the applicability of these factors to Vancouver's urban renewal schemes.

Methodology

As mentioned above, Vancouver is to be used as a case study. Specifically, Redevelopment Projects 1 and 2 will be analysed in depth.

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These two projects were chosen because they are the only ones to date in which land has been offered for sale to private investors.

The nature of this study does not lend itself to a statistical test of the hypothesis, since there is not a large enough number of observations with which to apply a meaningful non-parametric test. Ideally, a test such as the Chi-square should be based on at least twenty-five observations. We have only three. Therefore, it becomes necessary to limit our test to a purely descriptive one.

Preliminary steps consists of: (1) identifying those areas of Redevelopment Projects 1 and 2 which have been designated for private redevelopment, and (2) determining the extent of private participation within those areas. The extent of private participation may be determined by comparing the number of land parcels offered for sale by the city to the actual number of parcels sold to private redevelopers.

It was decided that the best way to test the study hypothesis was to interview a selected sample of the private developers participating in Redevelopment Projects 1 and 2. Use of a questionnaire was considered, but was rejected because of the possibility of low response in an already small universe. Also, it was felt that the direct interview technique would be more useful in that it might be possible to secure more detailed answers. Two of the hypothesized factors .. project location and timing of disposition .. may also be analysed in light of current theories of Metropolitan Vancouver's growth pattern and in light of known market conditions existing at the time the renewal
lands were offered for sale. This procedure can serve as a check for the answers received in the interviews. Essentially, each respondent interviewed was asked if each of the hypothesized factors was a consideration in their investment decision.

Scope and Limitations of Study

The scope of this study is limited by the fact that Vancouver does not have a very large, completed private redevelopment component in their urban renewal program. Schemes 3, 4, and 6 offer more private redevelopment opportunities, but they are only in the preparation stage at the present time. The primary implication of this is that it does not present a wide enough variety of private investment situations with which to fully test the hypothesis. In this study, we have only industrial re-uses and a small private housing re-use to analyse.

The term "redevelopment" is consciously used in this study as a deliberate substitute for the more comprehensive term "renewal". The reason for this is that the analysis is restricted to clearance projects where the drastic treatment of demolition is applied and the cleared land offered for sale to private developers. This concentration on redevelopment is necessitated by the fact that no rehabilitation has been undertaken to date in the Vancouver renewal program.

The main limitations on the study is the shortage of time and resources with which to carry out a more thorough research effort. An important ramification of this constraint is that it may be difficult to identify the true impact of all the factors hypothesized to affect the investment quality of urban renewal lands. That is to say,
the investment motivations of individual developers vary and consequently the importance of any one of the factors described earlier will vary accordingly. Without studying the motivations of a wider variety of investors, the representativeness of the survey results may be open to question.

In spite of these difficulties, it is our belief that the study can still be useful. It should help to determine if the factors suggested by R. Ratcliff and stated in the study hypothesis are generally applicable to the Canadian situation, and to Vancouver in particular. Such a study may provide a guide for future urban renewal planning, particularly if the study hypothesis is found to be acceptable. Even if it were not acceptable, the negative result may point the way for further research into the problem of private investment in urban redevelopment.

Definitions

Some of the abbreviations and terms frequently used in the study are listed and defined below:

1. N.H.A. refers to the National Housing Act.
2. C.M.H.C. refers to Central Mortgage and Housing Corporation.
3. Redevelopment means a program of acquisition and clearance of blighted or substandard areas and the rebuilding of these areas for appropriate uses.\(^11\)
4. Disposition Unit means the land which has been acquired and cleared and which is intended to be sold to either public or private developers. Sizes of disposition units

\(^{11}\text{N.H.A.: Urban Renewal, a pamphlet, C.M.H.C.}\)
include, first, the size of the project; second, sizes of parcels into which the project may be divided; third, the square foot sizes of specific uses.\textsuperscript{12}

CHAPTER 2

ECONOMIC ASPECTS OF THE FEDERAL URBAN RENEWAL PROGRAM

This chapter considers the meaning and causes of slums and blight, their economic consequences, the economic objectives of the urban renewal program, and some of the measures used to achieve these objectives. It is suggested here that a major economic consequence of blight is a misallocation of land resources and that a predominant aim of the urban renewal program is to secure the most efficient utilization of land. For the purposes of this analyses, the North American "free enterprise" value system is adopted; i.e. private investment is viewed as the principal vehicle, while government intervention is seen primarily as the stimulant.

Development of Urban Renewal Legislation in Canada

To put the study in perspective, it is useful to look back and trace the development of the federal urban renewal program in Canada. The propose here has been to describe a few key landmarks along the way.

Urban renewal, or urban redevelopment as it was then called,
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was introduced in Canada in 1949. In that year the National Housing Act contemplated for the first time the clearance of slum areas. Slums were thought of as areas of bad housing breeding intolerable social conditions, crime, vice, fire and delinquency. It was thought that federal aid would allow municipalities to get rid of these blighted areas in the community and to use the cleared areas for decent housing for low-income families. In 1954, the re-use provisions of the Act were slightly extended to include other public uses of land. However, very little was done under the 1949 and 1954 Acts. By 1956, under the impetus of experiments in Toronto and St. John's Newfoundland and with the inspiration of President Eisenhower's Committee's Report in the United States, it was realized that the narrow re-use of cleared land and other limitations of the 1954 amendments were far too restrictive and that fundamental broadening of the redevelopment program would have to be made.  

As a result, the Federal Government amended the Act in 1956. The changes were, for that day, far reaching. The Federal Government was empowered to share in half the actual cost to a municipality of acquiring and clearing blighted areas. The re-use of the land was removed from the restraints of public purpose. For the first time, it became possible for land to be cleared, for the people displaced to be rehoused elsewhere, and for the land to be re-used for the most appropriate purpose as determined by the municipality.  

2Ibid., p. 3.
3Ibid.
much to free urban renewal from the negative idea of eliminating intolerable conditions to the positive concept of city building.

The legislation enacted prior to 1964 constituted what Humphrey Carver called Round One of urban renewal in Canada. The aim was to look broadly at blighted housing areas and pick out particular sites for clearance and redevelopment, either for housing or for some other re-use. But the focus was on redevelopment sites.

Round Two, starting with the 1964 amendments to the N.H.A., saw the introduction of a new feature. This was the designation of an area for an "urban renewal scheme" which may involve several different kinds of renewal action, in addition to clearance and re-development. Also, unlike the previous legislation, it is now possible to use N.H.A. funds to renew non-residential areas. Within a scheme area existing housing can now be refinanced with NHA mortgage insurance and a municipality can obtain grants and loans for many different types of neighbourhood improvements.

Slums and Blight: Their Meaning

The terms "slums and blight" are key terms in the raison d'être of the urban renewal program, yet nowhere in the law are they defined, nor are there any commonly accepted standards in Canada by which their existence can be statistically measured. Nevertheless, the concept of urban renewal assumes that there are minimum standards and requirements for building and living conditions and that there is


\[\text{5}^{5}\text{Ibid., p. 7.}\]
a public responsibility to maintain these standards by preventing or arresting blight and by rehabilitating or redeveloping those areas which reach a certain level of substandardness.\(^6\)

Allen A. Twichell has suggested that the two basic characteristics of blighted areas are substandardness and either stagnation or deterioration.\(^7\) While this definition provides a useful point of departure, it does not answer the question, "'sub' what standard?" This is a most difficult question to answer because subjective value judgements are then introduced.

Otto Davis and Andrew Whinston define a blighted area as one where renewal would produce a net social gain, but where private action is lacking because of certain obstacles.\(^8\) Blight, in their words, is said "to exist whenever (1) strictly individual action does not result in redevelopment; (2) the co-ordination of decision-making via some means would result in redevelopment; and (3) the sum of benefits from renewal could exceed the sum of costs."\(^9\) Here blight is viewed as a relative concept. Although blighted areas are often characterized by substandard buildings, land sub-divisions and layout, and public facilities, not all substandard areas are blighted according to the above definition. An area is blighted if and only

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\(^9\)Ibid., p. 111.
if it fulfills all three conditions. Also, blight is not only a residential phenomenon since it may include industrial and commercial areas as well.

The Economic Consequences of Slums and Blight

Blight results from a complexity of interrelated physical, economic, and social forces. In operational terms, blight may be due to: (1) substandardness in original construction, (2) lack of maintenance, or (3) a substandard or non-conforming use. The first case reflects either a discrepancy in housing norms between builder and code-writer or a change in standards over time; the second reflects lack of capital investment; the third usually indicates a different use of the building or land than that originally planned.

Whatever the causes of slums and blight, the result is considered to be an economic liability to the city. In his article, The Challenge of Urban Renewal, Carter McFarland describes three common economic consequences of blight: (1) reduced tax revenues and increased municipal service costs, (2) inefficient land uses, (3) the flight of industry, commerce, and housing to the suburbs. The consequences are usually reflected in a decline in land values and in a deterioration of municipal fiscal position. A convenient feature of these negative effects is that they can normally be measured in dollars and cents. However, there is a host of consequences which

are still economic in nature, but which do not easily lend themselves to precise measurement. These include the social costs in terms of health and welfare problems arising out of poor living conditions, the costs of inconveniences and frustrations, and the many incidental effects resulting from congestion, poor location, and undue loss of time and energy.\textsuperscript{13}

The economic consequences of slums and blight take on added significance when it is realized that these are not confined solely within the blighted area, but may spread to other parts of the urban area. "Blight does not stand still. It has a way of spreading from house to house, from block to block, from neighbourhood to neighbourhood."\textsuperscript{14} These external diseconomies may be manifested in such occurrences as the decline in value of properties adjacent to the blighted areas or in the spread of crime and diseases to the rest of the urban area.

Public policies to mitigate against the economic effects of slums and blight have largely been based on the belief that most substandardness is produced by lack of maintenance. Lack of maintenance in turn is assumed to be the result of a lack of commitment to the house or to the neighbourhood. Lowden Wingo, Jr., appears to share this view when he argued that the phenomena of blight fits comfortably within a framework of economic analysis because of the


central role of resource allocation. He suggests that blight seems to refer to the condition of the urban physical plant which has been the subject of net disinvestment over a period of time. It is identified with properties on which outlays for repair, maintenance, renovation, and modernization have been less than those needed to maintain the property in its original condition, or at a stable level of economic productivity. William Grigsby refutes this argument as being a little naive. He suggests instead that most substandardness occurs as a result of substandardness in original construction. Nonetheless, the emphasis on maintenance seems to have prevailed in government renewal policies and legislation.

Role of Public Policy

To begin with, it should be recognized that urban renewal is occurring constantly as a normal private market operation. Every time a building is torn down and a new one put in its place, redevelopment has occurred. Similarly, when a homeowner or landlord repairs or paints his property, rehabilitation has taken place. Such actions are taken voluntarily by the owners of the properties with the expectation that the costs incurred will be more than offset by a resulting increase in the property's value, or by an increase in the satisfactions that the property provides its owner-occupant. If this was not expected, the action would not be taken.

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The existence of slums and blight is evidence that voluntary, privately initiated renewal has not - and presumably will not be - sufficient to eliminate those land uses which are generally considered unhealthy, unsafe, and inefficient. The lack of a profit potential has kept private investment away. But since slums and blighted areas have significant social, economic, and physical impacts, government has deemed it desirable to intervene in the renewal process.

The role visualized for public policy is one of bringing about renewal in situations where it might not otherwise occur. This usually means the creation of an environment in which private investments will be attracted. Two main approaches have been employed to try to achieve this objective. The first approach consists essentially of using public funds and the power of eminent domain to acquire and clear lands in an urban renewal area and then selling or leasing the land to private developers at a price related to "cleared" and serviced land in the area. A second and more recent approach consists of federal grants for the cost of public improvements in the renewal area --- landscaping, expanded recreational facilities, increased maintenance and protective services, replanning of streets and spot clearance --- and the insurance of mortgages secured by either rehabilitated or newly constructed properties in the renewal area. The latter method may be augmented.

with code enforcement.

Although government is now taking a fairly active part in urban renewal, their programs are still based on the philosophy that government should not enter where private enterprise can do the job. As a result, the federal program is viewed primarily as a catalyst to private action. Exceptions are public improvements such as public housing, parks, and streets.

Program Objectives

In the previous sections some of the causes and economic consequences of slums and blight were discussed. It was pointed out that a purpose of the federal urban renewal program was to mitigate against these consequences. Richard Ratcliff writes that, "The urban renewal program is a public response to the dynamics of the urban structure. The aids and incentives of the program would not be so necessary were it not for the ever increasing impact of social, economic, and technological change on long-lived physical urban facilities which are subject to constant wear and deterioration and difficult and expensive to modify."\(^{18}\) Given this general purpose, the next step would be to identify the specific economic objectives of the Canadian federal urban renewal program.

In his review of published urban renewal studies, Kevin Cross identified the most consistently recurring economic goals of renewal. These consisted of: (1) reduction of high per capita

service cost of blighted areas, (2) increase per capita tax revenues from blighted areas, and (3) encouragement of private investment. These three objectives may be viewed as the desire to improve the fiscal position of local governments and to raise the level of efficiency in the functioning of the urban mechanism. There is evidence that the aim of urban efficiency is predominant in current policy. For instance:

1. The 1964 amendments to the N.H.A. allowed for the renewal of non-residential areas.
2. The stipulation that urban renewal schemes be related to a comprehensive community plan.
3. The emphasis on community wide studies prior to preparing and implementing an urban renewal scheme.
4. The administrative emphasis on incorporating economic analysis into plan proposals.

Redevelopment as a Strategy

Redevelopment or clearance is the most drastic technique of renewal. It involves the acquisition of land through a municipality's power of eminent domain and the total demolition of all structures on the land. Historically, it was the first renewal technique adopted. While it has been heavily criticized for its bulldozer approach, it nevertheless is still an important renewal tool today, though emphasis is now put on rehabilitation and conservation where possible.

Renewal authorities may undertake clearance for the

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purpose of facilitating public improvements, such as streets, parks, and public housing, or to encourage private redevelopment. As suggested in an earlier section, public intervention has arisen out of the failure of the natural process of land use succession to arrest the problems of urban deterioration.

Richard Ratcliff offers several reasons why private land use succession has failed:

1. The units of ownership are too small for economic redevelopment in most cases.

2. The owners are often persons of small means or who are unaware of the potentials of renewal.

3. The degree of value decline among the individual properties in an area is variable so that many different stages in economic life are represented.

4. Private assembly into tracts of practicable size for redevelopment is difficult and costly because of the remaining value in many properties even in a blighted area, because owners over-value their holdings or because holdout owners exploit their monopoly positions.

For these and other reasons, private redevelopment is generally on a small scale and in most instances is economically feasible only when there is a strong demand for a given re-use and when the original structures are well depreciated. Under such a combination of circumstances there will be a favourable relationship between the cost of acquiring the site and its value when cleared and ready for redevelopment.

The last statement in the above paragraph is a key to the

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economic rationale of redevelopment. Land acquired and cleared may be
sold to private developers at a "write-down" price. This "write-down"
is usually justified on the grounds that it is necessary to overcome
the cost disadvantage of the market. All this would not be necessary,
if the private developer was not such an essential link in the urban
renewal process. But he is, and his importance seems to increase as
the size of the scheme increases. The economic objective of achieving
an optimal allocation of land, and hence improving land value, implicit-
ity assumes a flow of private capital. Without this flow, the program
will have failed in respect of its main economic objective, and the
public burden of the land "write-down" will not be justified.

Our purpose is to examine the extent to which the planners
and decision makers, through their urban renewal plans, affect the
investment quality of lands in the renewal area and thereby some of
the costs and benefits of the renewal program.

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21Louis Winnick, "Economic questions in Urban Redevelopment,"
CHAPTER III

EFFICIENCY IN GOVERNMENT URBAN RENEWAL EXPENDITURES

This chapter is concerned with pointing out the need for efficiency in government urban renewal expenditures and with describing a criterion which can be used as a measure of economic efficiency. Also included is a brief discussion of the role economists can play in helping to achieve efficiency in expenditures for renewal. As before, the focus is on government expenditures for urban redevelopment.

Growth of the Public Urban Renewal Program in Canada

From an inauspicious beginning in 1949, the urban renewal program in Canada has mushroomed to the point where it is now fairly well established in public policy. In June, 1967, thirty-eight urban renewal projects costing an estimated $225,437,000 had been approved for implementation under the National Housing Act.\(^1\) In addition, seventy-one applications to prepare urban renewal schemes have been approved since 1964 under Section 23A of the Act.\(^2\) If all the latter schemes are approved

\(^2\) Ibid.
the capital required to implement them should far exceed that which has already been committed.

The most striking feature of the growth of urban renewal in Canada is that it is a relatively recent phenomenon even though legislation has existed since 1949. Of the thirty-eight schemes approved for implementation, twenty-one were approved between January 1, 1964 and December 31, 1967, which could be attributed to the fact that the urban renewal provisions of the N.H.A. were broadened. 3

Unless there is a change in government policy, it may be expected that urban renewal activity in Canada will continue to increase. The Federal Government is actively promoting renewal. In a statement delivered in the House of Commons on May 23 and June 1, 1964, the Honourable John R. Nicholson, former Minister responsible for the operations of Central Mortgage and Housing Corporation, said,

"...Second, we can no longer rest content with a federal urban renewal policy, which is confined to clearance and redevelopment alone. Such a policy by implication accepts the process of decay and rot as if it were something inevitable and natural. We know there is no automatic private market process which regenerates urban areas as they decline. Therefore, the government believes that if there is to be such a regenerative process it must be developed as a matter of public policy. We propose to encourage and help the provinces and their municipalities to develop it together with the federal government and its agencies." 4

Subsequent speeches by officials of the Central Mortgage and Housing Corporation have continued to underline the problems of urban blight

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3 Canadian Housing Statistics - 1966 (Ottawa: Central Mortgage and Housing Corp., 1966), p.60.

and stressed the need for renewal. It also appears that urban renewal is a popular program with municipal governments who see it as a means of improving local housing conditions and the property tax base.\(^5\)

**The Need for Efficiency and the Criterion Problem**

"It should go without saying that all decision-making persons or groups attempt to economize, in the true sense of the word. That is, they try to make the 'most', as they conceive of the 'most', of whatever resources they have. Business firms may have a comparatively clear-cut notion of what they mean by the most, while consumers and governmental units have much more difficulty in defining it. But all of them, unless they make their decisions by drawing straws, are trying to do something in the best way possible with the resources that are available."\(^6\) This quote summarizes, in a general way, the definition of efficiency as used in this study.

The recent rapid expansion of the urban renewal program in Canada has already been described. Wilbur Thompson points out that, "Renewal programs are, moreover, up against the hard facts of a fierce competition for public funds with other powerful contestants, such as public health, juvenile delinquency, vocational training, general education, urban transportation, outdoor recreation, and other high priority programs. Realizing that enlarged urban renewal budgets will be difficult to achieve, any new over-all strategy or set of tactics that might

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exact more renewal leverage for each public dollar spent would be most welcome." The problem, as Thompson sees it, is one of economy and efficiency in urban renewal.

Granted the need for measuring the efficiency of public expenditures for urban renewal, we are then faced with the problem of selecting a method for measurement. The difficulty in measuring the efficiency of government expenditures is that, unlike private business firms, there is no convenient index of efficiency, such as profitability. Public expenditures for urban renewal are undertaken for the benefit of the community as a whole. Not only are many of the benefits difficult to quantify, but we must know what variables are relevant for evaluation and how they will be affected by a particular set of renewal actions. Also, since urban renewal is typically multipurpose, there is the problem of combining the different effects of urban renewal in order to produce a useful index for comparing the efficiency of alternative urban renewal policies.

The method most commonly suggested for analyzing the efficiency of public urban renewal expenditures is benefit-cost analysis. Benefit-cost analysis is that branch of economic analysis which is used when making decisions about public investment. While it has wider applications, and can be used in the private sector, it is most useful in the public, where private incentives for gain and market competitive forces do not provide straightforward guidelines for choice. Benefit-cost analysis

9 Ibid.
is most useful when faced with the problem of choosing among alternatives. It is less useful as a decision making tool when confined to the analysis of a single alternative.

The purpose in undertaking this brief discussion of benefit-cost analysis is to describe the larger analytical framework into which this study fits. For this purpose, public renewal expenditures may be viewed as a policy instrument designed to promote certain economic and social objectives. The community may be likened to a giant machine which transforms various inputs, both controllable and uncontrollable, into a set of outputs. Public urban renewal expenditures constitute a controllable input into this transformer. By varying this input, government can significantly influence the speed, character, and pattern of the community's growth and development. Given the goals of the community and their relative importance, one can then compare the efficiency of different public expenditure programs in urban renewal. This framework for appraising economic policy was developed by Jan Tinbergen and is shown schematically in figure 3.

Tinbergen divided all economic variables into three classes: exogenous-controllable; exogenous-noncontrollable; and endogenous. The entire set of variables is viewed as being linked together through a system of simultaneous equations. Given the values assigned to the independent variables, the corresponding values of the dependent vari-

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FIGURE 3
Framework for Evaluating Economic Policy

Exogenous-Controllable Variables
(i.e., policy instruments):
Community's urban renewal program;
selection of project areas;
acquiring and clearing a slum and disposing of the land for redevelopment in accordance with planned uses;
rehabilitation of structures by owners and improvement of public facilities by local government;
relocation program for families displaced by urban renewal;
method of financing urban renewal.

Exogenous-Uncontrollable:
Number of families, businesses, industries in the project areas and elsewhere in the city;
number of dwelling units, establishments and their conditions by type and by location;
current crime rate and incidence of contagious disease;
current fiscal position of city;
ratio of white and nonwhite population in the project areas and elsewhere in the city;
demand for housing and supply of housing.

The Response Mechanism:
(Model or other procedure for forecasting the impact of changes in policy instruments on the endogenous variables of the system.)

Impact on Endogenous Variables:
Effect of urban renewal on land value in project area and elsewhere in the city;
effect of renewal on fiscal position of city;
effect of renewal on quality of housing occupied by prerenewal families in the project;
contribution of national policy toward racial integration, etc.

Irrelevant Effects:
E.g., the redistribution effect of public renewal expenditures;
the transfer effect of interest payment on the obligations of local redevelopment agencies, etc.

Change in Social Welfare

Adapted from: K.A. Fox, "Economic Models for Area Development Research" (mimeographed), chart following page 13; and Arthur D. Little, Inc., op.cit., p.15
ables are uniquely determined. These equations also explain how and to what degree target or dependent variables are affected by changes in independent variables resulting from, say, shifts in government policy. In terms of the model, a shift in government policy causes the independent variables to take on a new set of values, which in turn causes the target or dependent variables to seek new equilibrium values. Given this system of equations, different government policies can be expected to produce different responses in the target variables. If in addition there exists a welfare function which defines the relative importance of different target variables, the policy maker may be in a position to not only distinguished between different policies, but also to select that course of action which produces the "best" results.

The above theory can be applied to this study since, as Ratcliff points out, "The Local Public Agency possesses broad powers of control over the redevelopment process."

Urban renewal actions taken by the government will induce specific responses from the private sector of the economy. If the objective is to encourage private investment for redevelopment, the government expenditure is considered economically efficient if it results in an increase in property values, not only in the project area, but also in the community at large. This may be a useful definition, but it does not help in ranking alternative projects. Our next concern is with criterion.

An acceptable criterion for efficient public renewal expenditure—would be to maximize gains minus costs, assuming gains and costs

\[ \begin{align*}
14 & \text{R. Ratcliff, Op. cit., p.16.} \\
\end{align*} \]
can be measured in the same units.  This is equivalent to making the most of whatever actions can be taken. To illustrate, suppose we have three possible courses of action, A, B, and C. The gains that could have been obtained by using the available resources in B and C are what have to be given up when the resources are used in A. These sacrifices are the costs of devoting the inputs to A, or the costs of obtaining the gains from A. When costs are viewed in this way, i.e. as gains that must be given up, it can be seen that to maximize gains minus costs is the same as maximizing total gains.

Mao goes a step further than the simplified example presented above. He argues, quite rightly, that since the benefits and costs associated with a renewal program are spread over time, and since a sum of money at different points in time has different economic significance, it is more appropriate to maximize the present value of net gains.  From this, he suggests that as a decision rule, government should undertake a project only if the value of its net social contribution (the difference between present value of benefits and present value of costs) is greater than zero.  Moreover, in order to maximize net social contributions, the government should keep on expanding its total renewal budget until no additional project makes a further contribution to net social benefit. For the marginal project, net social benefit is equal

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19 Ibid.
On the basis of Mao's criterion, it might appear that government is not justified in acquiring and clearing land if the present value of these costs exceed the present value of the proceeds from the sale of the land to private developers. This line of reasoning may be objected to, particularly if it is believed that in order to attract private developers, it is necessary for government to "write down" the cost of the cleared land. In defense of Mao, it would probably be fair to say that his criterion is intended to be applied to the entire urban renewal project and not to only one specific aspect of the project, such as private redevelopment lands. For if it were always possible for the proceeds of the sale of renewal area lands to exceed the cost of acquiring and clearing them, then it is questionable whether government should be in the land development business. Under this circumstance, private investors can do the job since it would always be profitable for them to do so.

All that is suggested here is the criterion advocated by Mao should not be used as the sole basis for deciding whether or not to undertake public acquisition and clearance of land for private redevelopment. As Ratcliff points out, the community wide benefits of improved efficiency in land use through private redevelopment may more than offset the deficit incurred in the public land disposition action. In addition, increased tax revenues from the redeveloped lands may, over a period of

time, close the initial deficit gap between cost and proceeds. Thus, it has not been expected that all the benefits of private redevelop-
ment are site-centered in the sense of contributing directly to the value of the cleared land for the specified re-use.

The criterion is useful however in comparing the relative efficiency of alternate proposals. It may be possible to calculate benefit-cost ratios for each alternative and to select that alternative which presented the highest B/C ratio. Although it is too restricting to be the basis of a decision rule, the criterion can serve as an indicator of the planning "efficiency" of the project planners. For example, those disposition units which result in a situation where the present value of land sale proceeds exceed the present value of costs of acquisition and clearance may reflect better land use planning and marketing.

The foregoing has emphasized the need for efficiency in government expenditures for urban renewal. It was also pointed out that government is in a position to influence efficiency by the economic policies it adopts. In this regard, two essential tasks need to be done. First, the benefits and costs of urban renewal must be identified. Second, benefit-cost analysis should be incorporated into the public decision making process. The economist can make an important contribution in these areas.

Role of the Economist

Davis and Whinston suggest two roles the economist can play
They liken his role to that of a consultant to an industrial firm. First, given the goals of the firm, he tries to find the best or most efficient means of achieving these goals. Second, he must try to clarify vague goals by pointing out possible inconsistencies and determining implications in order that re-evaluations and explicit statements can be made.

Given the objective of encouraging private investment in urban redevelopment areas, the economist should be called upon to identify and interpret the trends in urban land use, insofar as they reflect economic change. Also he can help in understanding the motivations and investment calculus of the private investor. Finally, the economist can provide information on current real estate market conditions. All these possible services of the economist can be utilized to enhance the marketability of the land and thereby increase the efficiency of public urban renewal expenditures.

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INVESTOR OBJECTIVES AND THE IMPACT OF GOVERNMENT

Because the role of the private redeveloper is an important one in urban renewal, it is pertinent to describe his investment objectives and his decision making process. In line with this, it is necessary at this point to elaborate on the impact local governments have on the investment quality of redevelopment lands.

Role of the Private Investor

Our cities have been built lot by lot, parcel by parcel, through the decisions and actions of public and private investors. Though government is a major developer of land -- for public buildings, parks and streets -- the development of urban land has been largely left to the private investor. Through the enforcement of building codes, zoning and subdivision controls, government is able to restrain undesirable private land uses. But, as Ratcliff argues, our economic system is so ordered that the individual investor or developer prospers

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most who serves the community best, since what benefits the community benefits the individual in the long run.\(^2\)

Since urban redevelopment in our large cities is seldom undertaken completely by government, private redevelopment is necessary and is encouraged. The larger and more diverse the project, the more important private redevelopment is likely to be. However, the participation of the private investor is purely voluntary and unless he is willing to undertake a commitment, the project will fail insofar as the private redevelopment aspect is concerned. Given this situation, it is important for planners to understand the objectives and calculus of the private investor.

**Investor Objectives**

Every investor in real estate expects to secure some return from his investment, otherwise he would not commit his capital. This return need not be in terms of a monetary income, but may be expressed in some personal satisfaction or in some other form of intangible benefit. In most cases however, the investment decision is closely tied to the cost-revenue relationship.

Ratcliff has identified four types of investors in terms of their investment objectives: (1) Investor for use, (2) Investor for regular return, (3) Investor for capital gain, and (4) Creditor-investor.\(^3\)


The first three types supply equity capital and are the generating force of real estate activity. In most cases they are joined in the investment by the fourth type of investor, the supplier of credit or loan capital.

Before going further, it is possible to eliminate certain parties who, although they may acquire interest in redevelopment lands, are not purchasers in the sense that concerns this study:

(1) Public or governmental agencies. These groups purchase or are given land for public uses such as schools, parks, or parking. However, these uses represent a collective investment by the community and are not competitive with private uses.

(2) Lending agencies. Although the mortgage lender is an investor and plays a key role in redevelopment, he is not an investor in the sense of owning land, but rather in an obligation secured by a real estate enterprise. The mortgage lender is not usually a bidder in the real estate market.

By eliminating these two groups, there remains three general categories of land purchasers who have been active in redevelopment areas: (1) the investor-user who acquires land as a site for conducting some specific activity, (2) the capitalist-investor who acquires land for income purposes, and (3) the builder who buys land for the purpose of building a structure which he then sells or leases to an
When discussing the investor-user, it is useful to categorize him as either a non-profit user or as a user for profit. The non-profit user usually seeks a site for some quasi-public or social purpose, such as a hospital, church, club, or senior citizen housing project. Like all other buyers, these users look for the lowest possible price. The upper limit of their price offer is often set by: (1) the price of competing sites which are at least as favourably located for the proposed use, and (2) by their financial resources.

Users for profit base the upper limit of their bids on their profit expectations at the location in question. In many cases, the enterprise has a number of locational choices, albeit with differing levels of marginal productivity. Some sites may be less productive, but are lower in price, while other sites may be very productive, but are expensive to purchase. The principal consideration for the user for profit in this case is the productivity-price relationship. His bid will be set at a price which will produce a productivity-price relationship competitive with that of other equally attractive sites.

The capitalist-investor attempts to use money to make more money through the medium of real estate productivity. It is true that some capitalist investors are mainly interested in a long-term investment that will yield a regular income, while others are chiefly interest-
ed in the potential for capital gain. But the distinction is not always clear since investors may shift from one position to the other as circumstances change. Long-term investors do not overlook the possibility of windfall gains and capital gain investors are well aware of the advantages of a regular return on investment. Therefore, it is equally useful for analysis to treat both groups as one since basically the same method of productivity analysis is applied by each group.

The builder-investor is, in a real sense, a capitalist-investor. For example, in the case of income properties, such as an apartment project, he may assume the position of a capitalist by contributing to the equity capital. This contribution may be in the form of an ownership interest of equivalent value. As a result, he may have an advantage in bidding for land which he can improve himself since his cash requirements would be lower than for non-builder investors. This affords him an opportunity for double profit (builder's profit and investment return) and gives him greater flexibility when offering a price.

The builder-investor also assumes the role of a capitalist if he leases the improved property to a user. This arrangement known as a lease-back appears to be widely used since it enables a user to set up his operation with a lower cash equity.

**Investors Productivity Analysis**

The preceding section outlined the purposes or objectives of

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8 Ibid.

9 Ibid.
investors seeking real estate. Essentially, these purposes included
the provision of a site for the conduct of some business or other
activity (investor-user) and the provision of an outlet for investment
funds (capitalist-investor).

The decision of whether or not to invest in a given piece of
real estate depends on its expected productivity. Since the primary
objective of investment is the enjoyment of benefits over and above the
return of capital, there would be no advantage to the investor unless
he could recapture the capital he put in plus either an interest re­
turn or a profit. The productivity of real estate is depended upon to
restore the original capital and to produce the incremental interest or
profit. Therefore the first step for the investor is to undertake some
form of productivity analysis. This means he must consider the develop­
ment potential of the property and forecast the net income it will pro­
duce.

Productivity of real estate is created by three main factors: (1) location, (2) neighbourhood, and (3) site. In addition to these
three factors, the local real estate market is an important factor to
be considered. Through the interactions of supply and demand forces,
the real estate market serves to translate productivity into a dollar
expression, both rental value and capital values. Although...

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10 R. Ratcliff, Real Estate Analysis, p. 103.
11 S. Kahn, F. Case, and A. Schimmel, Real Estate Appraisal
12 R. Ratcliff, Real Estate Analysis, p. 196.
their dollar expressions can vary with changes in market balances, in market prospects, and in the institutional framework within which the market operates. Consequently, an accurate forecast of productivity requires knowledge of underlying real estate market trends.

Of the three factors mentioned above, location may be the most important. Because of the common desire to reduce frictional costs of distance, investors are willing to pay in rent an amount up to the savings which they can make in transportation costs because of the accessibility of the site. Hence, the productivity of real estate is directly related to the element of convenience.

In addition to convenience, locational value is influenced by favourable and unfavourable exposure. Favourable exposure may be manifested as a choice view, exposure to sun and breeze, or close proximity to centers of fashion and prestige. Unfavourable exposure may occur as a consequence of unsightly views, noise, smoke, smells, and disturbances.

The neighbourhood affects real estate productivity in the sense that compatibility of land uses is likely to produce more efficient uses and generally higher property values in the area. This is an example of where sound planning and development controls can enhance the productivity of any given real estate in a neighbourhood.

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15 R. Ratcliff, Real Estate Analysis, p.64.
16 Kahn, Case and Schimmel, Op. cit., p.66
The site is an important factor in productivity because its physical characteristics determine the limits and costs of its potential uses. For example, odd shaped and irregular lots are difficult to develop and have fewer possible uses. Land which is marshy, rocky, or hilly may be too expensive for economical development.

The process of productivity analysis is a complex one requiring expert evaluation of the physical and locational characteristics of the real estate and of the dynamics of urban land use patterns. Along with his prediction of productivity, the investor may evaluate the risks and uncertainty bearing on the realization of his predicted productivity. When all these calculations are made, he utilizes the techniques of real estate appraisals to determine the amount he should pay for the property. This figure represents the upper limit of his bid and is termed the "investment value".

**Investment Criteria**

Private investors tend to look for the lowest total capital cost for the project relative to its productivity. In other words, they will attempt to maximize the productivity-price ratio. Lower land and development costs mean lower cash equity requirements, lower debt service on the mortgage, possibly a higher return on equity, and larger cash flow. The distribution of capital costs between land and improvements is also important since land is not a tax depreciable asset.

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18 Ibid., p. 69
Therefore, the larger the share of development costs that can be attributed to structural or depreciable costs, the more attractive it is for the private developer.\textsuperscript{21}

**Impact of Local Government**

Through their direct control over the redevelopment process and their plan designs, local governments play a major part in determining the investment quality of redevelopment lands. In fact the policies and decisions of the local government can be considered the key to a successful land disposition program. It has been suggested that to be successful, disposition must be preceded by a correlation of all efforts from the original conception, through planning, acquisition, appraising, negotiation, disposition, and administration, otherwise the final sales or disposition and development will not occur.\textsuperscript{22}

In terms of the earlier discussion on investor objectives, the essence of the problem is to provide redevelopment lands which are as productive as non-redevelopment area lands. Productivity it was observed, is influenced by location, neighbourhood, site, and the real estate market. The discussion turns now to the matter of how local government, through specific policies and practices, influence the productivity and thereby the saleability of land in redevelopment areas.

**Project Location**

The selection of an area for redevelopment is almost entirely

\textsuperscript{21}\textit{Ibid}.

within the hands of the local authorities. While the senior levels of government, particularly the G.M.H.C., review the proposed location, they seldom challenge the local authorities choice. Perhaps this is reasonable since the local planners are in a better position to judge the appropriateness of a particular area for redevelopment. As a result, the choice of the local planners usually commits the federal and provincial governments -- who provide the major share of the financing -- to that choice. Therefore, it is important that this choice be made realistically.

The location of the redevelopment project area largely determines the re-use of the land, which in turn establishes the investment quality of the cleared land. Because of this, a careful analysis of the possible re-uses which are appropriate for the area should be undertaken. A proposed re-use for which the productivity to the investor is too low relative to the cost of development will not result in a sale, or alternatively, it may result in low bids. If the investment value turned out to be zero, it is conceivable that the land could not even be given away, especially if a structure must be erected to make use of the site.

A second consideration is demand for the land. It would be wise to test investor demand for the land at the time of redevelopment under the assumption of the proposed re-use limitations. For example, establishment of a need for middle-income housing does not mean that the market will provide it.

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James R. Appel summed up the importance of location when he said, "Location is the most important consideration in real estate investment. If proper attention is given to land utilization and marketability studies, the plans for redevelopment of urban renewal areas should afford private enterprise with good opportunities for investment."  

Size of Disposition Unit

Size of the disposition unit is important in terms of city wide land needs and the space needs of specific activities. Care must be taken to avoid offering an excessive quantity of land to a weak or declining market. For instance, a large quantity of land near the urban core offered for commercial development may not be completely sold if the market is unable to absorb it. This might occur if the size of the city has not reached the stage to justify more commercial development, or if the pattern of retail activity has decentralized to the suburbs in the form of planned shopping centres.

It appears that there is an optimum size of land for any given use. If the parcel is too large for the specified re-use, it may prevent economical simultaneous development or it may be unsuitable for phasing. Also, the resulting price may be too high thus discouraging investors who either cannot raise the necessary funds or do not want to commit so much capital to a single enterprise.

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25 R. Ratcliff, Private Investment and Urban Redevelopment, p.18.
26 Ibid.
small, it may prevent the construction of an economically viable unit. Such a situation might arise where a shopping centre requires a larger space than is available for profitable operation.

As in the case of project location, market studies and studies of the space requirements of specific enterprises should be made to ensure the marketability of the disposition units. 27

Timing of Sale

In most cases, local authorities want to dispose of redevelopment lands as quickly as possible in order to hasten the enjoyment of community benefits, to reduce the costs of delay (caused by loss of tax revenues, interest on borrowed funds, and administrative expenses), and to give the impression of "getting the job done". Yet, the precise moment at which the lands are offered for sale could affect its saleability and the prices received. 28

Land offered for sale before acquisition and clearance is complete may not bring the highest possible price. Investors, particularly the smaller ones, will discount their bids if they cannot visualize the full developmental potential of the area. Large national developers on the other hand may not react negatively to a sale in the early stages of execution, since they are likely to be more experience and sophisticated and are able to see through present conditions. Furthermore, in a large, complex project, they may wish to buy early in order to have


time for the necessary engineering, architectural, and financial preparations.

Generally speaking, there are clear advantages to buy when the lands have been completely acquired and cleared. An investor will not have to tie up his capital while the land is nonproductive and he will not have to bear the risk of changes in market conditions which may make the land less attractive as an investment.

Another aspect of timing is the current state of the money market. Since most redevelopers use borrowed funds to finance their purchase and improvements, the immediate saleability of the redevelopment lands may be contingent upon the availability of mortgage funds. In a tight money market, such funds may not be available in sufficient quantity or at a low enough rate to enable redevelopers to proceed. This situation is largely beyond the control of the local authorities, but is a condition which should be recognized. If it is advantageous for the redevelopment lands to be disposed of in times of financial stringency, then the participating governments might consider some form of deferred payment arrangement. The costs of such an arrangement would however have to be weighed against the community-wide benefits that might be received as a result of the project area being developed immediately.

Re-use Plan

The re-use plan is the official map and document which specifies how land in a redevelopment area is to be used and the manner in which it may be developed. These limitations imposed upon the redevelopment

site can affect its investment quality. If the restrictions are felt to be too onerous, the developer may not be willing to pay the asking price or he may decide that he cannot operate within the limitations and refrain from bidding.

When the site is in a good location, it is not as likely that the restrictions on land use and development will hinder investor interest too much. But where the site is in a less favourably located area it may be advantageous to minimize the restrictions on redevelopment. First of all, the investor may be willing to pay more for the land if he is given a freer hand, and secondly, he may even be able to produce a better plan than that devised by the local planning agency. The community could be protected from undesirable or low quality developments by making architectural approval a condition prior to development. In practice such redevelopment areas could be zoned as Comprehensive Development Zones as defined in the City of Vancouver by-law. 30

Method of Sale

The method of sale is considered to be an important manipulative device in the hands of the local authorities for obtaining the most favourable price, rapid redevelopment and the most desirable re-use. 31 From the investor's viewpoint, the method of sale is a factor in the attractiveness of the investment opportunity. 32 It is a factor to the

31 R. Ratcliff, Private Investment in Urban Redevelopment, p. 22.
32 Summary of the Midwest Urban Renewal Clinic, Dayton, Ohio March 1957, Workshop Session No. 8, Sponsored by A.C.T.I.O.N.
extent that it affects the purchase price and the costs of preparing to make the offer.

In his study of American redevelopment experience, Ratcliff identified in pure or combined form, five common land disposal methods: (1) Sealed bids, (2) Auction, (3) Negotiated Sale, (4) Predetermined asking price, and (5) Plan competition. 33

The sealed bid method is the standard method of disposing of public property. It is the fairest to all bidders and tends to produce the best price in a competitive situation. 34 The main drawback of this method is that it tends to discourage those investors who prefer negotiation. It is a bothersome and risky method because there is no assurance of success for the cost and effort involved in preparing the bid.

The auction method is seldom used for the initial offering. It may be used following the opening of sealed bids to permit any of the bidders to raise their offer. This method works to the advantage of the local government because it usually results in a higher price being received in a competitive market situation. In addition, where there are two or more original bids that are the same, it can be used to break the tie.

The negotiated sale is the traditional private market method of exchanging real estate. Most redevelopers probably prefer this method because they are familiar with it and because it provides them

33 R. Ratcliff, Private Investment in Urban Redevelopment, p. 22
34 Ibid.
with the opportunity to bargain on a face-to-face basis.

From the standpoint of the public, this method enables them to select the redeveloper on the basis of certain other criteria besides price. It is easier to give preference to local developers or to put emphasis on reputation for good work, financial stability, a superior re-use proposal, and promptness of action. The primary objections to this method are the implications of preferential treatment, the chance that the highest possible price may not be obtained, and the fear that the relatively inexperienced public officials may be outmaneuvered by the more skilled private investor.

The predetermined asking price method of disposal has the advantage of simplicity, but is not as effective as the bid and auction methods in securing the highest possible price. Under this method, the price set is determined through standard real estate appraisal techniques. Experience has shown that the actual sale prices under the bid system may vary greatly from those established by appraisal. \(^{35}\) This means that the minimum sale price set by the local authorities may be too low to reflect the true land value or too high to attract offers.

Plan competition as a method of land disposal can be used in conjunction with or in lieu of price competition. Where it is used in conjunction, the criterion for the local authority would be to select that proposal which contains the best combination of price and redevelopment plan. Where the price is fixed, the criterion for selection boils

\(^{35}\) Ibid., p. 24
down to only the relative merits of the plans.

Plan competition is desirable as far as the public agency is concerned because it enables them to benefit from the talents of competent developers and their professional staffs. It is an expensive way of bidding and because of this, only those redevelopers with sufficient financial resources may be motivated to participate.

Pricing Problems

The minimum price established for redevelopment land is important in two respects. If it is too low, the site does not return its fair share of the costs of acquisition and clearance, thereby resulting in an unnecessary and unjustifiable public subsidy. If it is too high, offers to purchase will not materialize. Less harm is done in the latter case however, since the price can always be adjusted downward. The only loss would be a delay in the disposition program.

The problem for the local authorities is to establish a sounder basis for price determination. From the foregoing comments it should be clear that insofar as public economy is concerned, it is important that the "right" price be established. This would mean the adoption of a more realistic approach to real estate appraisal. In particular, less reliance should be put on the traditional cost and income approaches to valuation and more emphasis put on estimating the "most probable selling price" of the property under known conditions of its offering.

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36 Ibid., p. 26
Uncertainty

"The greater the uncertainty in an investment situation, the less attractive it is and the greater the price discount by the entrepreneur."37 Investors may choose not to invest in a given project if their predictions of productivity are subject to uncertainties. Uncertainty can be distinguished from risk in that risk can be predicted in terms of probability and can be allowed for in the investment calculation.

Although government has no control over a large number of uncertainties --- such as those resulting from a drastic change of land use and occupancy in a blighted area --- it would do well to minimize those uncertainties it does have control over. There are two kinds of uncertainties that concern investors which can be reduced by proper planning on the part of local government.38 Investors are vitally interested in receiving the prepared land as quickly as possible after consummation of the purchase. Long delays before delivery leaves the investor open to possible changes in market conditions, financing terms, and environment which could reduce the profitability of the site. A second type of uncertainty relates to the installation of public works necessary for the full utilization of the redevelopment site. Where the provision of these works is held up, the operating efficiency of the enterprise or the full enjoyment of the site will suffer, thus reducing productivity. If these uncertainties exist, the investor will

37 Ibid., p. 27
38 Ibid., p. 27-28
either discount his bid or refrain from bidding.

One way of reducing these uncertainties to the investor is to implement a master plan which will ensure that the project lands fit into a co-ordinated overall plan. Another measure is to set up a capital improvements program which will provide funds for continuing public work.
Before proceeding to an analysis of the survey results, it is necessary to describe the area of Vancouver designated for redevelopment under projects 1 and 2, and to summarize the redevelopment proposals for these areas. The ensuing discussion will be deliberately general and brief, because, insofar as this study is concerned, no special advantage is gained from a detailed description. The reader is referred to the appropriate publications of the City of Vancouver.¹

The First Step

Vancouver's urban renewal program started with the initiation of the 1957 Redevelopment study. This study, which was published in December, 1957, grew out of the City's first venture into public housing in 1952. With the completion of the Little Mountain public housing pro-

¹The following publications are recommended:
(a) Vancouver Redevelopment Study, City of Vancouver Planning Department, December, 1957
(b) City of Vancouver Redevelopment-Project 1, Technical Planning Board, City of Vancouver, November, 1959.
(c) City of Vancouver Redevelopment-Project 2, Technical Planning Board, City of Vancouver, July, 1963.
ject, the City began to consider public redevelopment on a city-wide scale. In June, 1955, the Technical Planning Board recommended that the City apply for federal aid under Section 33 of the N.H.A. to undertake a comprehensive review of Vancouver's housing conditions. Federal approval was subsequently received and the study began in July, 1956.

One of the main objectives of the Vancouver Redevelopment study was to survey the older, dilapidated areas of the city to determine how they could be improved as places to live and work. The broad terms of reference of the study were to select those areas of predominantly residential use which might require redevelopment during the next twenty years, and to produce a program of redevelopment, integrated with the City's Twenty-year Development Plan.

Based on results of the survey, two types of planning areas were suggested. These were labelled as: (a) Comprehensive Redevelopment Areas, in which large scale redevelopment was deemed necessary, and (b) Limited Redevelopment Areas, where spot clearance and varying rehabilitation measures were proposed. It may be noticed that during this period, the emphasis was on redevelopment of blighted housing areas, since there was no legislation for renewing non-residential areas.

A preliminary draft report of the Redevelopment study was reviewed by City Council in September, 1957, in conjunction with the


\[\text{Vancouver Redevelopment Study, p.2.}\]

\[\text{Ibid., p.4.}\]
proposed 1959-1963 Five Year Plan of Capital Expenditures.\(^5\) As a result, $3,000,000 of a recommended amount of $4,000,000 was included in the Five Year Plan as the City's share of the net cost of redevelopment projects. The 1959-1963 Five Year Plan was later extended to 1965 and a further $1,000,000 was allocated for this purpose.

The final report of the Redevelopment Study was completed in December, 1959, and was approved in principle by City Council in February, 1958.

**Redevelopment Project No. 1**

Following Council approval of the 1957 study, the Technical Planning Board was instructed to take steps to implement the study recommendations.\(^6\) This consisted of preparing and submitting applications to the federal government for financial assistance to undertake two directly related projects. The objective of the first project was to acquire, clear, and dispose of land in Redevelopment Project No. 1. under Section 23 of the N.H.A. The objective of the second and complementary project was to provide a "bank" of subsidized low-rental housing under section 36 of the N.H.A.

**Project Location**

Redevelopment Project No. 1 is situated in Comprehensive Redevelopment Areas 'A' and 'D' (see map in Appendix A). Area 'A' is bounded generally by Main Street, the Burrard Inlet waterfront, Semlin

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\(^5\)City of Vancouver Urban Renewal Program: Proposed Study under Part V of the National Housing Act, City of Vancouver Planning Department, August, 1966, p.5.

\(^6\)City of Vancouver Redevelopment-Project 1, p. 1.
Drive, Hastings Street, McLean Drive and False Creek Flats. Area 'D' is bounded generally by Burrard and Granville Streets, First Avenue and Broadway. These two areas were found to contain the highest percentage of substandard residential structures in the four Comprehensive Redevelopment areas.\(^7\)

Although ninety percent of area 'A' was zoned for industry and commerce, it was used predominantly for residential purposes.\(^8\) Some industry did infiltrate into the area, but industrial use was generally precluded by the small lots and by difficulties of land assembly. Most of the residential properties (eighty-eight percent were over forty years old) has passed their point of maximum depreciation and tax revenues for the area had thus diminished far below its economic potential.\(^9\)

For the purpose of redevelopment, area 'A' was further divided into three sub-areas: A-1, A-2, and A-3. These are delineated on the map in Appendix A.

Area 'D' was zoned predominantly for industry except for approximately three half blocks on the north side of Broadway which were zoned commercial, and approximately four blocks between Sixth and Eighth Avenues which were zoned for medium density multiple dwellings. Although this area was largely zoned for industry, it contained a substantial proportion of residential uses (seventy-nine residential structures as against one hundred and eight industrial or commercial premises).\(^10\)

\(^7\)Ibid., p. 6.

\(^8\)Vancouver Redevelopment Study, p. 6.

\(^9\)Ibid.

\(^10\)City of Vancouver Redevelopment - Project 1, p. 47.
Many of the houses existing there were considered among the worst in the city.  

As in the case of area 'A', area 'D' was sub-divided for the purpose of redevelopment. Project 1 includes that part of area 'D' known as area D-4. Boundaries of this sub-area are shown in the map in Appendix A.

Redevelopment Plan

As approved by the three levels of government, Redevelopment Project No. 1 involved the acquisition and clearance of some twenty-eight acres within an overall area of seventy-five acres. The cleared lands were to be used for public housing, industry, and park replacement.

To provide the "bank" of housing for persons displaced by clearance, the MacLean Park and Skeena Terrace public housing projects were built. These units provided accommodation for 1,230 persons.

It was decided that the residential portion of area 'A' was of sufficient size, is sufficiently well supplied with social and cultural institutions, and is well located with respect to downtown that its development as a residential neighbourhood was deemed desirable. With this in mind, City Council, on April 29, 1958, rezoned a gross area of about ninety acres from commercial and industrial to residential, as recommended by the 1957 Redevelopment study.
It was proposed to acquire and clear the existing structures in area A-1 to provide sites for industry and public housing. Five industrial lots averaging about 259,000 square feet were thus created.\textsuperscript{16} In addition, ten acres were provided for the Raymur Place public housing complex.\textsuperscript{17}

In area A-2, the plan was to clear the land to provide space for a new park replacing the old MacLean Park. This site was thought to be more desirable because of its better location in relation to the overall neighbourhood.

Originally, the intended re-use for area A-3 was as a private housing development. However, after protracted negotiations between a prospective developer and the City, no agreement was reached and the proposed development was dropped. Following this, the City decided to turn the cleared land in A-3 over to be used for an extension of the MacLean Park housing project.\textsuperscript{18}

In area D-4, a more limited program was proposed, aimed at eliminating the worst housing and certain residential structures which are not expected to be cleared by natural redevelopment. No major street changes were proposed for this area. Scattered sites were to be acquired and cleared and resold for light industrial use, and for the possible development of a team track to service the area.\textsuperscript{19} Twenty-eight industrial parcels were created by the consolidation of some sixty lots

\textsuperscript{16}City of Vancouver Property and Insurance Department files.
\textsuperscript{17}Urban Renewal in Vancouver, Progress Report No. 7, p. 4.
\textsuperscript{18}City of Vancouver Redevelopment - Project 1, p. 9
\textsuperscript{19}Ibid., p. 10
within area D-4.20

Estimates of Costs

Under the terms of the N.H.A., the costs of acquisition and clearance, and the recoveries are shared between the senior levels of government. The Provincial government could, if it desired to, share its portion with the municipality. In British Columbia, the cost sharing and recoveries are shared on the following basis:

Federal Government (C.M.H.C.) - fifty percent
Provincial Government - twenty-five percent
Municipality - twenty-five percent

A summary of acquisition and clearance costs for project Nos. 1 and 2 are set out in Appendix B.

Redevelopment Project No. 2

Redevelopment Project No. 1 was in the nature of a pilot project. To continue the program of acquisition and clearance for residential, industrial, and public uses undertaken in Project No. 1, Redevelopment Project No. 2 was initiated. The principal aims of Project No. 2 were: (a) to continue the program of eliminating poor housing, (b) to create effective areas for redevelopment, (c) to create adequate areas for housing (both public and private) of people displace by future clearance, and (d) to improve neighbourhood conditions through public works.22

Project Location

Like Project No. 1, Project No. 2 lies within Comprehensive

22City of Vancouver Redevelopment - Project 2, p. 6-9.
Redevelopment Area 'A'. Again, for purposes of redevelopment, area 'A' was further sub-divided into sub-areas: A-5, A-6, and A-7.

**Redevelopment Plan**

Project No. 2 involves the acquisition and clearance of about twenty-nine acres, within an overall area of sixty-four acres, for residential, industrial, and public uses.²³

It was intended to create a substantial number of industrial sites of varying sizes in area A-5 by the clearance of residential and certain non-residential structures.²⁴ The total area of industrial sites to be created was approximately sixteen acres.

The four blocks in area A-6, together with sections of Georgia Street and Dunlevy Avenue, were recommended for redevelopment for public and private residential use, primarily to provide accommodation for people displaced from a future redevelopment project in this area.²⁵ Area A-6 was divided into two sections, A-6 north and A-6 south. A-6 north was to be sold to private developers for low and medium density housing developments. A-6 south was allocated for a public housing site.

Area A-7 was recommended for acquisition and clearance to provide a site for a school recreation site for the adjoining Lord Strathcona elementary school.²⁶

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²³ *Urban Renewal in Vancouver, Progress Report No. 7*, p. 5.
²⁴ *City of Vancouver Redevelopment - Project 2*, p. 13.
²⁶ *Ibid.*, p. 18
Summary of Findings

The survey results appear to give weight to the acceptability of the study hypothesis.¹ Four of the seven factors hypothesized to influence the extent of private participation in urban redevelopment were found to be relevant. These are: project location, size of disposition unit, pricing of land, and investment uncertainty. Each of the ten investors interviewed stated that these were factors in their investment decision. The remaining three factors -- re-use plan, timing and method of sale were less important, judging from the survey results. Slightly over one-half of the interviewees said that these were considerations in their decision to invest.

Each respondent was asked to rank in order of importance, the three most important factors bearing on their investment decision. Re-

¹The survey data is summarized in Appendix E.
1.60

Results show that project location, size of disposition unit, and price were the most important. Of these, project location was by far the most highly ranked. This was followed by price, second, and size of disposition unit, third. Other factors were not ranked often enough to be included.

A statistical test was applied to see if there was any concordance among the interviewees in the ranks they assigned to the above three factors. Using Kendalls Coefficient of Concordance test, it was found that at the .05 level of significance, the respondents were applying the same standard in their ranking. In other words, the agreement between the ten interviewees was the result of their using some common criterion for ranking and is not the result of pure chance.

Problems of the Survey

Although the survey results tend to favour acceptance of the hypothesis, no conclusive statement should be made without further testing. The reliability and validity of the survey results need to be verified with a larger and perhaps more representative sample than was available for this study.

Two problems arising out of the survey approach could have affected the reliability of the survey results. First of all, it was not possible to arrange a personal interview with all selected respondents with the result that four telephone interviews had to be used. The drawback of the latter survey method is that it does not provide

2A description of the test and the calculations on which this statement is based is contained in Appendix F.
either the scope or depth of the face-to-face interview. Also, respondents may be less disposed to give unqualified answers to an interviewer they have not met or seen. To the extent that this is true, the answers received via telephone may not be truly representative.

The second problem stemmed from some respondents' unfamiliarity with certain terms used in the questions. Terms such as re-use plan, timing of sale, method of sale, and uncertainty were not recognized and in some cases were not fully understood, even after being defined and illustrated with examples. Either the respondents had never considered these factors in their decision making process, or if they had, they understood them in different terms.

By definition, a "no" answer means that the respondent does not consider a specific factor relevant to his investment decision. The total number of "no answers may reflect an upward bias if the respondents do in fact consider these factors but in a different frame of reference from that which was presented them. The same sort of inconsistency could also have occurred in some of the "yes" answers. For example, where the respondent may not have thought about the relevancy of the question put to him, he might have answered "yes" because he felt that this was the "proper" answer. If this is true, then the total number of "yes" answers will also reflect an upward bias.

Simple logic tells us that both of the above situations cannot occur simultaneously in a situation where the answers fall into one of two possible categories. Based on impressions gathered during the inter-
views, it is suggested that the total number of "yes" answers may be high for the reason described above. Specifically, this may be the case with such factors as timing and method of sale, and uncertainty. This proposition seems reasonable when viewed in the contest of Redevelopment Project No. 1. Most of the investors interviewed bought Project No. 1 land for their own use. The City did not put the land on the market until it was ready for immediate re-use, thereby reducing investment uncertainty for the purchaser. In addition, most of these investor-users had no previous experience with purchasing redevelopment land and hence may not have particularly strong opinions about the sealed bid method of land purchase. What this suggests is that, in the case of Project No. 1, the neophyte investor had no reason to consider all the factors assumed to affect his investment decision and as a result, his answer to the questions on timing and method of sale and uncertainty may be largely based on a hypothetical situation.

To some extent, the lack of concern for certain factors -- such as the ones mentioned above -- may be significant in that it indicates these factors are not in fact relevant to private investment decisions in urban redevelopment. Before it can be stated as a truism however, additional testing of the hypothesis will have to be done.

The Survey as a Method of Hypothesis Testing

Because survey research is now widely practiced, there are as many definitions of the word "survey" as there are people who have written about them.\(^3\) The lack of an all encompassing definition reflects the

diversity of definitions. One point on which there is agreement however is the general consensus that survey research is a quantitative rather than a qualitative method, requiring standardized information from and/or about the subjects being studied. Standardized information has been defined as the data which is received by asking all subjects the same questions. The most common methods of data collection are the personal interview, mail questionnaires, and telephone interviews.

What is the relation of the survey method to economics research? James N. Morgan points out that economics is the study of how economic systems work, or ought to work, in the allocation of resources to serve the various ends of society. In the process, economists study the forces that affect the aggregate flows in the system and the way the aggregates influence one another and fit together in a complete structural system.

Two kinds of assumptions are made in structural dynamic models of economics. One set consists mainly of identities and definitions; such as the equation for Gross National Product, \( Y = C + I + G + X \). The other assumptions are basically behavioural relations, mostly at the aggregate level. These include relations between aggregate investments and interest rates, or between aggregate consumption and aggregate income. Behind these aggregate assumptions are many implicit assumptions about the behaviour of individual actors -- consumers, producers, and investors.

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4 Ibid.
5 Ibid.
8 Ibid.
Morgan argues that progress in economics requires both a theory of behaviour of these individuals and a method of going from this to the behaviour of aggregates. It also requires estimates of the actual strength of the relationships, i.e., measures of the strength with which different factors actually affect the behaviour of the individuals. Further, such estimates should be quantified to the fullest possible extent.

The type of research proposed by Morgan can be best undertaken through a survey. The sample survey is the only practical way to assess or estimate the present state of affairs with regard to some variable that changes over time for a large group of subjects. If the variable did not change over time, the answer could be determined by experiment. But economic variables, such as price, do change over time; hence the experimental method is not appropriate.

Case Analysis of Redevelopment Projects 1 and 2

The survey research just described has yielded data which tends to favour acceptance of the study hypothesis. If the hypothesis is in fact true and generally applicable, it should help to explain the success or failure of the City of Vancouver's redevelopment land disposition program. Put another way, the experience of Redevelopment Projects No. 1 and 2 should serve to support the above proposition.

It is proposed to analyze both Project No. 1 and No. 2 to see if there is any relationship between their degree of success in attracting

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9 Ibid.


11 Ibid.
private redevelopment and the policies and plans adopted for these two projects. Such an approach would not duplicate the findings of the survey, but would either strengthen the initial findings or case grave doubts over them. As Wilson Gee points out, the case method, while distinct in itself as a method, bears a direct relation to the other technical methods.  

12 The case study is complementary to the sample survey.  

13 The sample survey measures many people on few characteristics, usually at one point in time.  

14 The case study examines intensively many characteristics of one "unit", usually over a long period of time.  

Redevelopment Project No. 1

All of the thirty-three lots in areas A-1 and D-4, assembled for sale to private developers, have now been sold.  

16 Proceeds from the sale of the five industrial parcels in area A-1 amounted to $112,544.  

17 Cost of acquisition and clearance for area A-1 totalled $824,500, but this included the cost of acquiring and clearing ten acres for the Raymur Place public housing project. The proceeds from sales in area D-4 were $504,000 compared with acquisition and clearance costs of $630,000.

Area A-1 and D-4 are located in what is considered the outer ring of Vancouver's central core. The lots offered for sale within these areas have a minimum frontage of fifty feet. A developer could purchase as much land as he needed, so long as his proposed use complied with the

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14 Ibid.  
15 Ibid.  
16 Records of the Property and Insurance Department, City of Vancouver.  
17 All revenue and cost figures are from Property and Insurance Department, City of Vancouver.
the City's Zoning and Development By-Law or was approved by the Technical Planning Board. Sites in A-1 and D-4 were fully acquired and cleared before being put on the market. Method of sale was initially by sealed tender with an undisclosed minimum price.

Based on the comments of the respondents interviewed, the prime reason for the successful marketing of the land in areas A-1 and D-4 was location. The City had selected these sites for redevelopment because of their adverse blight conditions. In the re-use proposals, the need for good industrial sites in the inner city was suggested and the success of the disposition program would indicate that this proposal was economically viable. Most of the industrial firms in A-1 and D-4 have a trade area predominantly oriented to the central core of Vancouver. Eight of the ten developers interviewed pointed out that this was the most influential factor in their investment decision.

The need for optimum size industrial lots was a consideration in the preparation of redevelopment plans for Projects 1 and 2. Recognizing that a reason for the lack of industrial development in area A-1 was the unavailability of adequate size lots, the City undertook to create generous size industrial lots backing on to the Great Northern Railway tracks. Similarly, in area D-4, twenty-eight industrial lots were created by consolidating some sixty lots, many of which were originally twenty-five feet wide.

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18 City of Vancouver Redevelopment - Project 1, p. 9.
In the case of area A-1, selection of developers was based on the bidder's price and development proposal, while in area D-4, selection was made on the basis of price only. In the former case, the bidding went to a second stage when it was discovered that the prices bid were below the City's undisclosed minimum. Tenders were subsequently invited to make a second offer over the counter, changing the method of sale to negotiation. It is possible that the initial bids on A-1 were discounted in order to compensate for the higher developmental standards required by the City.

No judgement has been made on the relative merits of the alternative ways of selecting developers. The intention here was merely to give an example of how the two methods affected both the speed with which the sales were completed and the prices that were initially offered. In the case of area A-1, certain public objectives had to be accommodated. Because the Raymur Place public housing project was to be built directly across the street from the industrial sites, the City decided that these should be of a quality commensurate with the residential character of the neighbourhood.

Before being offered for sale, all the land in areas A-1 and D-4 were fully acquired and cleared. This was probably the most effective way of timing the sale since both the scale of the entire undertaking and the nature of the operations of the purchasers are relatively
The prices established by the City for land in areas A-1 and D-4 were realistic and competitive. Average price per front foot for sites in A-1 was $139.\textsuperscript{23} When this figure is compared with the $250-400 per front foot value of industrial land in the Powell and Hastings Street area, or with the $150-240 value for the Clark Drive area, it is easy to see why prices in A-1 were very attractive.\textsuperscript{24} Similarly, the average price per front foot of industrial land in area D-4 was $300, compared with $300-400 for the Cambie to Main Street area (between Second and Sixth Avenues).

By not disclosing the minimum acceptable price, the City utilized an effective way of ensuring that it received the best offers possible, under conditions of competition. Experience has shown that a published minimum price also tends to become the maximum price offered.\textsuperscript{25} By not advertising the minimum price, the City can hedge against a low valuation on their part by allowing the forces of market competition to operate.

Since the properties in A-1 and D-4 were delivered to the purchasers without delay and since all the necessary public improvements were installed within a reasonable time, the developers were not faced with any market or use uncertainties. The City's policy is to dispose of redevelopment land as quickly as possible and the promptness with which

\textsuperscript{23} Calculation based on actual sale prices obtained from Property and Insurance Department, City of Vancouver.

\textsuperscript{24} Comparative industrial land values obtained from Trend News, 1965, published by the Vancouver Real Estate Board, p. 7.

\textsuperscript{25} R. Ratcliff, Private Investment in Urban Redevelopment, p. 23.
they were able to act is largely the result of the timing of the land sales.

Redevelopment Project No. 2

To date, only two of the seven parcels offered for sale in area A-6 (North) have been sold. These two parcels, sold for $39,200 each, are expected to be used for a row housing project built under the Strata-Titles Act.

Except for the church and senior citizen's housing parcels, the five remaining are designated for private, low to medium density housing. The project is located within the Strathcona redevelopment area and is about one-half mile from the central core. Average area of the private housing parcels is 27,700 square feet. Method of bidding has been by sealed tender. Bidders are informed of the sale price set for each parcel. Quality of development proposal was the chief factor in the selection of developers. The re-use plan called for the proposal to be in harmony with the City's recommended form of development and to conform with the City's Zoning and Development By-Law.

Why have sales in A-6 (North) not been as successful as those in areas A-1 and D-4? The reason may be that the expected productivity of the site for the designated re-uses are not sufficiently high to attract private investment. In other words, the level of rents that could

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26 Records of Planning Department, City of Vancouver.

27 City of Vancouver, Strathcona Redevelopment: Call for Development Proposals, p. 8.

28 Ibid.
be obtained does not appear to be high enough to enable investors to amortize their costs and secure an attractive rate of return on their investment. This argument for not investing was alluded to by a prominent, large real estate developer interviewed.

The incompatibility of the stipulated re-uses and location is a major reason why the three remaining private housing parcels are still unsold. It is open to question whether the area is viable enough to sustain low to medium density housing at economic rentals. Based on current per square foot construction costs of $10.00 - 12.00 for three storey frame apartments, the rental required to yield a ten to fifteen percent return on investment is in the range of $120-140 per suite per month. The realities are that the people who presently live in the Strathcona area have relatively modest incomes. Data compiled for the Vancouver Redevelopment Study estimated 1961 median monthly income for all families at two hundred and ninety-nine dollars. Similarly, for single person households under sixty-five years of age, median monthly income was estimated to be one hundred and fifty-two dollars. If the same gross debt service ratio standard (the ratio of income to mortgage payments) used by mortgage lenders can be applied to renters, then the families in the Strathcona cannot afford to pay more than about eighty dollars per month (twenty-seven percent of gross annual income) for rent.

Incomes have undoubtedly increased since 1961, but it is unlikely that

29 Calculation based on discussion with a professional real estate appraiser. Construction cost estimates obtained from Real Estate Trends in Metropolitan Vancouver, 1966, published by Vancouver Real Estate Board.

30 Vancouver Redevelopment Study, Table 14, p. 47. Income figures were projected from 1957 based on the assumption that incomes had risen 21.5 percent, the wage rate increase recorded for Vancouver between 1957 and 1962.

31 Ibid.
they have increased sufficiently to enable the present Strathcona residents to pay the $120-140 monthly rents. Assuming that no more than twenty-seven percent of annual income should be devoted to shelter, the required income to pay rents of $130 per month is about $6000. An annual income of $6000 would represent a sixty-seven percent increase since 1961.

There is the possibility that people from outside the Strathcona area would occupy the new housing if it were built. But this is by no means certain and may be dependent on the complete renewal of the area. If investors are concerned with this element of uncertainty and do not wish to, or have to, take the risk, they will not act.

The developmental restrictions imposed on investors was another factor hindering the sale of the remaining parcels. It may be a source of irritation to investors when they are told they must conform to both the City's Development and Zoning By-Law and the development concepts for A-6 (North). In a situation where site productivity is comparatively limited, such restrictions tend to further lower investment returns. To mitigate against this, the investor will discount his bid if he is interested in purchasing the property.

In view of the foregoing discussion, the productivity-price relationship of the land becomes critical. Based on the original prices asked for the land parcels, the per square foot values are as follows:
<table>
<thead>
<tr>
<th>Parcel Description</th>
<th>Planned Re-Use</th>
<th>Sale Price a</th>
<th>Total Area Sq.Ft.</th>
<th>Price per Square Foot</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Church</td>
<td>$44,500</td>
<td>33,000</td>
<td>$1.34</td>
</tr>
<tr>
<td>B</td>
<td>Senior Citizen's Housing</td>
<td>53,000</td>
<td>30,360</td>
<td>1.74</td>
</tr>
<tr>
<td>C</td>
<td>Low Density Multiple Housing</td>
<td>39,200</td>
<td>29,040</td>
<td>1.34</td>
</tr>
<tr>
<td>D</td>
<td>&quot;</td>
<td>&quot;</td>
<td>&quot;</td>
<td>&quot;</td>
</tr>
<tr>
<td>E</td>
<td>Medium Density Multiple Housing</td>
<td>65,000</td>
<td>32,470</td>
<td>2.00</td>
</tr>
<tr>
<td>F</td>
<td>Low Density Multiple Housing</td>
<td>26,700</td>
<td>19,800</td>
<td>1.32</td>
</tr>
<tr>
<td>G</td>
<td>&quot;</td>
<td>42,100</td>
<td>29,040</td>
<td>1.44</td>
</tr>
</tbody>
</table>

Compared with other land values within the City of Vancouver, the above prices are the lowest to be found. The only other area in Metropolitan Vancouver in which a comparable price exists is the City of North Vancouver, and this is for frame construction apartment sites only. From this, it is

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a Descriptive data taken from City of Vancouver document, Strathcona Redevelopment: Call for Development Proposals, p. 8.

b Sale price of parcels obtained from Planning Department, City of Vancouver.

obvious that selling price is not the chief obstacle to investor interest. Rather, the productivity-price relationship is the critical consideration.

Under current market conditions, there is no incentive for developers to go into the Strathcona area. Apartment vacancy rates in Greater Vancouver are currently in the order of one of two percent — an extremely low figure. This means that a developer will concentrate his attention in areas of the city where he can obtain the most attractive returns on his investment. Present apartment rents in Greater Vancouver run from an average of eighty-five dollars per month for a bachelor suite to an average of one hundred and fifty dollars per month for a two bedroom suite. The Strathcona area, it was argued, would not likely generate such an income because of the income characteristics of the residents.

It might be suggested that it would be feasible to accept a lower income level because the cost of land in A-6 (North) is comparatively low. However, building construction costs of at least $10.00-12.00 per square foot would seem to rule out this possibility.

As further evidence of the fact that investors view A-6 (North) as a risky multiple housing area, it was discovered — through discussions with City personnel and an investor — that few if any investors are willing to use much of their own funds to undertake development. Also, with the present shortage of mortgage funds, lenders have become very

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selective in their placement of loans; preferring to lend only on prime quality projects.

The method of sale established for A-6 (North) was another impediment to investor interest. The City fixed the selling price of each parcel and reduced the bidding to a plans competition. Because of the expenses involved in preparing proposals which are not guaranteed of being accepted, many potential investors are reported to have shied away from bidding. A coincident event which may have accentuated the problem was the decision by the local Architectural Association to ask its members to refrain from participating in redevelopment proposals for A-6 (North).

It is interesting to note that as a result of the poor sales in A-6 (North), the City apparently revised its policy on land disposition in this area. A Tender advertisement dated April 2, 1968 asked for sealed tenders, but suggests that the fixed land price - plans competition method of selecting developers has been waived. The advertisement asks for offers on each parcel, though pointing out that the highest offer or any offer may not necessarily be accepted.

Implications of the Case Analyses

The two case studies presented were particularly useful for testing the study hypothesis because of their contrasting outcomes. Project No. 1 was successful in terms of private redevelopment, while Project No. 2 was not. Examination of Project No. 1 revealed that the factors assumed to influence private investment were present or deliberately
allowed for. Such was not the case in Project No. 2. Therefore, as a preliminary observation, the findings of the survey appear to be valid.
SUMMARY AND CONCLUSIONS

Basis for Study

This thesis started out by suggesting that a major objective of the federal urban renewal program in Canada is the achievement of an efficient pattern of urban land uses. To accomplish this objective, much emphasis is put on the role of private enterprise. In this regard, it was argued that unless favourable investment opportunities are presented in redevelopment areas, little or no private investment will take place. This will not only mean that the hoped for private redevelopment will fail to materialize, but in addition, the public funds expended to attract such redevelopment will be wasted.

In view of these realities, it was argued that local governments or planning agencies must understand and accommodate the objectives of private investors. This is in no way a suggestion that the social and physical objectives of the community should be sacrificed. It is
believed that the broader goals of the community and the more limited economic objectives of the private entrepreneur can be reconciled to the benefit of both parties. For example, private redevelopment of a commercial district can rejuvenate the economic and social vitality of that district -- a benefit to the community -- and at the same time produce an attractive investment return to the developer.

The success of a redevelopment land disposition program is very much within the control of the local government. Through their manipulation of seven key factors affecting the investment quality of redevelopment land, they influence the amount of private redevelopment that will occur. These factors, identified by R. Ratcliff, are: project location, size of disposition unit, re-use plan, timing of sale, method of sale, price and uncertainty. The purpose of this thesis was to test the hypothesis that these factors influence the extent of private participation in urban redevelopment. Research was conducted using both the survey and case study methods. Vancouver Redevelopment Project Nos. 1 and 2 were examined in the case studies.

Research Conclusions

Analysis of the survey results show that there is a good basis for accepting the hypothesis. However, no final statement should be made until further testing substantiates the reliability of the survey findings.

The hypothesis was tested against two cases. Redevelopment Project Nos. 1 and 2 were both examined to see if there was any relation-
ship between the amount of private redevelopment undertaken and the presence or absence of the seven independent factors or variables. Again the evidence pointed to the acceptance of the hypothesis.

Of the seven factors bearing on the private investment decision, project location, price, and size of disposition unit were found to be the most important. In almost every case, project location was cited as the major consideration. There is little doubt that this was the chief factor in the success of areas A-1 and D-4 of Project No. 1. Location was also found to be the principal reason why area A-6 (North) of Project No. 2 has not been as successful.

Suggestions for Future Research

Although our pilot research seems to have confirmed the thesis hypothesis, there is no reason why it should be accepted without further verification. Some of the problems of the survey have been discussed in Chapter 6. In light of these problems, the survey should be extended to a larger and perhaps more diverse sample. In addition, steps should be taken to improve the contents of the survey questionnaire so that it is more lucid and less ambiguous.

Some of the other items which may be suitable for additional research include the following:

1. Other types of redevelopment projects. Our study has been confirmed to industrial and housing re-uses. It would be useful to examine projects consisting of commercial and mixed re-uses to test the generality of the hypothesis.
2. Larger redevelopment projects. The projects that were studied here are relatively small and involved small local investors. It would be desirable to observe the behaviour of the major investors or developers in order to see if the hypothesis applies to the same extent. Such investors are most likely to be found in the larger redevelopment projects.
APPENDIX B

SUMMARY OF ACQUISITION AND CLEARANCE COSTS

The following tables summarize the estimated costs of acquiring and clearing lands in Redevelopment Project Nos. 1 and 2. It should be emphasized that these costs are preliminary totals and do not necessarily reflect the actual final costs. They are presented here in order to give some idea of the scale of costs involved in both projects.

TABLE B-11

Net Costs of Acquisition and Clearance\(^a\)

<table>
<thead>
<tr>
<th>Project No. 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Costs of Acquisition and Clearance</strong></td>
</tr>
<tr>
<td>Areas A-1, A-2, and A-3 (27.22 acres)</td>
</tr>
<tr>
<td>Area D-4 (8.91 acres)</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
</tr>
</tbody>
</table>

| **Recoveries** | |
| Areas A-1, A-2, and A-3 | 873,657 |
| Area D-4 | 598,156 |
| **1,471,813** | |

Net cost of acquisition and clearance
(rounded to nearest $1,000)

\(\text{\$3,772,000}\)

\(^a\)City of Vancouver Redevelopment-Project 1, p.11.
APPENDIX A

CITY OF VANCOUVER URBAN RENEWAL PROGRAM

- REDEVELOPMENT PROJECT NO. 1
- REDEVELOPMENT PROJECT NO. 2
- URBAN RENEWAL SCHEME NO. 3 (proposed)
- URBAN RENEWAL SCHEME NO. 4 (proposed)
- BLOCK 42 - BLOCK 52
- FEDERAL - PROVINCIAL PUBLIC HOUSING (EXISTING)
- FEDERAL - PROVINCIAL PUBLIC HOUSING (UNDER CONSTRUCTION)
- FEDERAL - PROVINCIAL PUBLIC HOUSING (PROPOSED)

Scale: feet

3000 - 0 - 3000 - 6000
### TABLE B 2

Net Costs of Acquisition and Clearance<sup>b</sup>

**Project No. 2**

<table>
<thead>
<tr>
<th>Costs of Acquisition and Clearance</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Areas A-5, A-6, and A-7 (28.0 acres)</td>
<td>$5,954,650</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Recoveries</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Areas A-5, A-6, and A-7</td>
<td>$2,098,050</td>
</tr>
</tbody>
</table>

Net cost of acquisition and clearance (rounded to nearest $1,000) $3,857,000

<sup>b</sup>City of Vancouver Redevelopment - Project 2, p. 20
APPENDIX C

LAND DISPOSITION DATA

Redevelopment Area A-1

<table>
<thead>
<tr>
<th>Location</th>
<th>Land Re-Use</th>
<th>Sale Price</th>
<th>Date of Sale</th>
<th>Type of Investor</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>DL 182</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Blk.79, Lot A</td>
<td>Light Industrial</td>
<td>16,200</td>
<td>16/2/65</td>
<td>Income</td>
<td></td>
</tr>
<tr>
<td>2. &quot; Lot B</td>
<td>&quot;</td>
<td>22,500</td>
<td>30/3/65</td>
<td>User</td>
<td></td>
</tr>
<tr>
<td>3. Blk.80, Lot 1</td>
<td>&quot;</td>
<td>23,750</td>
<td>16/3/65</td>
<td>Builder</td>
<td>Sold to a User</td>
</tr>
<tr>
<td>4. &quot; Lot 2</td>
<td>&quot;</td>
<td>25,800</td>
<td>16/2/65</td>
<td>Income</td>
<td></td>
</tr>
<tr>
<td>5. Blk.95, Lot E</td>
<td>&quot;</td>
<td>24,194</td>
<td>2/3/65</td>
<td>User</td>
<td></td>
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</tbody>
</table>

Redevelopment Area D-4

<table>
<thead>
<tr>
<th>Location</th>
<th>Land Re-Use</th>
<th>Sale Price</th>
<th>Date of Sale</th>
<th>Type of Investor</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>DL 526</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Blk.218, Lots 32-33</td>
<td>Light Industrial</td>
<td>15,000</td>
<td>18/5/65</td>
<td>Income</td>
<td></td>
</tr>
<tr>
<td>2. &quot; Lots 30-31</td>
<td>&quot;</td>
<td>15,000</td>
<td>27/4/65</td>
<td>&quot;</td>
<td></td>
</tr>
<tr>
<td>3. &quot; Lots 25-26</td>
<td>&quot;</td>
<td>15,000</td>
<td>29/12/64</td>
<td>Builder</td>
<td></td>
</tr>
<tr>
<td>4. Blk.2A, Lot 12</td>
<td>&quot;</td>
<td>-</td>
<td></td>
<td>User</td>
<td>City exchanged this lot for another held by current user.</td>
</tr>
<tr>
<td>5. Blk.228, Lot 42</td>
<td>Commercial</td>
<td>22,150</td>
<td>6/4/65</td>
<td>&quot;</td>
<td></td>
</tr>
<tr>
<td>Location</td>
<td>Land Re-Use</td>
<td>Sale Price</td>
<td>Date of Sale</td>
<td>Type of Investor</td>
<td>Remarks</td>
</tr>
<tr>
<td>----------</td>
<td>-------------</td>
<td>------------</td>
<td>--------------</td>
<td>------------------</td>
<td>---------</td>
</tr>
<tr>
<td>6. B1k.228, Lots 5-6</td>
<td>Commercial</td>
<td>14,500</td>
<td>6/4/65</td>
<td>User</td>
<td></td>
</tr>
<tr>
<td>7. &quot; Lots 9-10</td>
<td>Light Industrial</td>
<td>14,500</td>
<td>30/3/65</td>
<td>&quot;</td>
<td></td>
</tr>
<tr>
<td>8. &quot; Lots 15-16</td>
<td>&quot;</td>
<td>15,000</td>
<td>24/11/64</td>
<td>Builder</td>
<td></td>
</tr>
<tr>
<td>9. &quot; Lot 33</td>
<td>&quot;</td>
<td>6,100</td>
<td>29/12/64</td>
<td>Income</td>
<td></td>
</tr>
<tr>
<td>10. B1k.229, Lots 9-12</td>
<td>&quot;</td>
<td>28,500</td>
<td>29/12/64</td>
<td>User</td>
<td>Sold to Another User</td>
</tr>
<tr>
<td>11. B1k.230, Lots 5-6</td>
<td>&quot;</td>
<td>14,500</td>
<td>26/4/66</td>
<td>Income</td>
<td></td>
</tr>
<tr>
<td>12. &quot; Lot 39</td>
<td>&quot;</td>
<td>6,150</td>
<td>28/6/66</td>
<td>User</td>
<td></td>
</tr>
<tr>
<td>13. &quot; Lots 35-36</td>
<td>Commercial</td>
<td>15,300</td>
<td>19/7/66</td>
<td>&quot;</td>
<td></td>
</tr>
<tr>
<td>14. &quot; Lots 30-32</td>
<td>Light Industrial</td>
<td>20,500</td>
<td>12.10/65</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. B1k.238, Lots 8-10</td>
<td>&quot;</td>
<td>21,000</td>
<td>9/2/65</td>
<td>&quot;</td>
<td></td>
</tr>
<tr>
<td>16. &quot; Lots 14-16</td>
<td>&quot;</td>
<td>21,000</td>
<td>24/6/65</td>
<td>Income</td>
<td></td>
</tr>
<tr>
<td>17. &quot; Lots 34-35</td>
<td>&quot;</td>
<td>16,666</td>
<td>19/1/65</td>
<td>&quot;</td>
<td></td>
</tr>
<tr>
<td>18. &quot; Lots 32-33</td>
<td>&quot;</td>
<td>17,500</td>
<td>8/6/65</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. B1k.239, Lots 7-8</td>
<td>&quot;</td>
<td>15,200</td>
<td>19/1/65</td>
<td>User</td>
<td></td>
</tr>
<tr>
<td>20. &quot; Lot F</td>
<td>Commercial</td>
<td>5,500</td>
<td>8/8/67</td>
<td>&quot;</td>
<td></td>
</tr>
<tr>
<td>22. B1k.249, Lot A</td>
<td>&quot;</td>
<td>13,876</td>
<td>3/11/64</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23. &quot; Lots 16-20</td>
<td>&quot;</td>
<td>50,000</td>
<td>28/9/65</td>
<td>User</td>
<td></td>
</tr>
<tr>
<td>24. &quot; Lots 23-25</td>
<td>Light Industrial</td>
<td>36,000</td>
<td>29/12/64</td>
<td>&quot;</td>
<td></td>
</tr>
<tr>
<td>25. B1k.250, Lot 38</td>
<td>&quot;</td>
<td>6,500</td>
<td>8/6/65</td>
<td>Income</td>
<td></td>
</tr>
<tr>
<td>27. &quot; Lot 8</td>
<td>&quot;</td>
<td>12,200</td>
<td>2/2/65</td>
<td>&quot;</td>
<td>Sold to another User</td>
</tr>
<tr>
<td>28. &quot; Lots 11-14</td>
<td>&quot;</td>
<td>36,000</td>
<td>29/12/64</td>
<td>&quot;</td>
<td></td>
</tr>
</tbody>
</table>

SOURCE: City of Vancouver, Property and Insurance Dept.
APPENDIX D

SURVEY METHOD

The following is an outline of the survey method used in the study. The results of the survey are summarized in Appendix E and are analyzed in Chapter 6.

A. Identification of survey area:

This was done by reviewing the urban renewal program of the City of Vancouver. Since the study was only concerned with private investment, only those areas designated for private redevelopment were selected for survey. Four areas (three in Redevelopment Project No. 1 and one in Redevelopment Project No. 2) were identified, but only three were actually surveyed -- Areas A-1, D-4, and A-6 (North). The fourth, Area A-5, has not been offered for sale to private developers as yet.

B. Identification of survey universe:

A list of all the persons or organizations purchasing land in the three redevelopment areas was compiled from records of the Property and Insurance Department of the City of Vancouver. Thirty-four purchasers were identified.

C. Selection of sample:

Out of the universe of thirty-four investors, a sample of twelve was chosen. Limitations of time and personnel prevented the use of a
larger sample. In Area A-1, since only five parcels were involved, it was decided to survey all five. In Area D-4, twenty-eight parcels were offered for sale. Instead of choosing a simple random sample, an attempt was made to obtain a sample which covered a wide geographic area. A sample of eight (28.6 percent) was selected.

D. Survey technique:

After the sample of investors was selected, an interview questionnaire was prepared. The use of interviews was favoured because it offers a greater opportunity to obtain more detailed information than would be available from a mail questionnaire.

Each respondent was asked if the factors listed in the hypothesis was a consideration in his investment decision. Yes or no answers were requested. Finally, each respondent was asked to rank the factors in their order of importance. Originally, the intention was to have respondents rank every factor on the list, but a pilot test showed that this was difficult to do. It appeared that the most positive responses were received for up to three ranks, and that beyond this, the survey, respondents were simply guessing. Consequently, in the balance of the survey, respondents were only asked to rank the three most important factors in their decision making.

E. Responses and difficulties:

Out of a sample of twelve investors, it was possible to contact and interview only ten. Generally speaking, the interviewees were cooperative. However, two of the respondents appeared to harbour some suspicions as to the purpose of the research and as a result, may have held back on their replies.
APPENDIX E

SUMMARY OF SURVEY RESULTS

Two summary tables are presented here. Table E-1 shows the number of "yes" and "no" answers received to the question, "Was (the specific factor) a consideration in your investment decision?" Table E-2 shows the respective ranks applied by the respondents to the seven investment factors.

<table>
<thead>
<tr>
<th>Investment Factor</th>
<th>Was Factor Considered:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Project location</td>
<td>10</td>
</tr>
<tr>
<td>Size of disposition unit</td>
<td>10</td>
</tr>
<tr>
<td>Re-use plan</td>
<td>6</td>
</tr>
<tr>
<td>Timing of sale</td>
<td>6</td>
</tr>
<tr>
<td>Method of sale</td>
<td>5</td>
</tr>
<tr>
<td>Pricing of land</td>
<td>10</td>
</tr>
<tr>
<td>Uncertainty</td>
<td>10</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>57</td>
</tr>
</tbody>
</table>
**TABLE E-2**

**SUMMARY OF RANKS**

<table>
<thead>
<tr>
<th>Investment factor</th>
<th>Number of times ranked&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>First</td>
</tr>
<tr>
<td>Project location</td>
<td>8</td>
</tr>
<tr>
<td>Size of disposition unit</td>
<td>2</td>
</tr>
<tr>
<td>Re-use plan</td>
<td>0</td>
</tr>
<tr>
<td>Timing of sale</td>
<td>0</td>
</tr>
<tr>
<td>Method of sale</td>
<td>0</td>
</tr>
<tr>
<td>Pricing of land</td>
<td>2</td>
</tr>
<tr>
<td>Uncertainty</td>
<td>0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>12</strong></td>
</tr>
</tbody>
</table>

<sup>a</sup>It should be noted that where the total of the number of times ranked is less than 10, either no rank was applied or fewer than 10 of the respondents applied a rank to that factor. It will be recalled that each respondent was only asked to rank the three most important factors in his investment decision.
APPENDIX F

APPLICATION OF KENDALLS TEST

From table E-1, it can be seen that project location, size of disposition unit, and pricing of land have received the most emphasis. Since it is useful to see if there is any communality of judgement amongst the ten respondents, a statistical test of association is applied to the factor rankings.

M.G. Kendalls test of concordance is used here.¹ This test is used to measure the degree of association between three or more rankings of N objects or variables. It involves the calculation of the coefficient of concordance, W.

The following summary has been abstracted from table E-2. It shows the respective ranks applied to the three most important factors and will be used for the calculation of the coefficient of concordance, W.

1.90

TABLE F-1
RANKING OF THE THREE MOST IMPORTANT INVESTMENT FACTORS

Factors | Respondents | \( \Sigma k = R_j \) |
---------|-------------|------------------|
      | N/k | A | B | C | D | E | F | G | H | I | J |
---|-----|---|---|---|---|---|---|---|---|---|---|
Project location | 2 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 12 |
Size of disposition unit | 1 | 3* | 3 | 3* | 1 | 2* | 3 | 3 | 3 | 2* | 24 |
Price | 1 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 1 | 19 |

**Method**

To compute \( W \), the first step is to find the sum of ranks, \( R_j \), in each row of the above \( N \times k \) table. The \( R_j \)'s are then summed and divided by \( N \) to obtain the mean value of the \( R_j \)'s. Finally, the deviation of each \( R_j \) from the mean value of \( R_j \) is calculated and the sum of the squares of these deviations found. Knowing these values, the value of \( W \) can be computed using the following equation:

\[
W = \frac{1}{12} k^2 \frac{s}{(N^3 - N)}
\]

where \( s \) = sum of squares of the observed deviations from the mean of \( R_j \), that is,

\[
s = (R_j - \bar{R}_j/N)^2
\]

\( k \) = number of sets of ranking, i.e. the number of judges.

\( N \) = number of entities (Objects or individuals ranked)

\( 1/12 k^2 (N^3 - N) \) = maximum possible sum of the squared deviations, i.e. the sums which would occur with perfect agreement among the \( k \) rankings.

*These ranks are inserted as a dummy rank to facilitate the calculation of \( W \). The respondent did not explicitly apply a rank to these factors, but implied that this is the rank he would apply.*
Calculations

(a) Preliminary:

From table F-1, \( R_{10} = 55 \),

Hence, \( \overline{R}_{10} = \frac{R_{10}}{N} = \frac{55}{3} = 18.3 \),

Therefore, \( s = (12 - 18.3)^2 + (24 - 18.3)^2 + (19 - 18.3)^2 = 72.7 \)

(b) Calculation of \( W \):

\[
W = \frac{72.7}{1/12 (10)^2 (3^3 - 3)}
\]

\[\therefore \ W = .36\]

Reference to the Table of Critical Values of \( s \) in the Kendall Coefficient of Concordance shows that at the .05 significance level, \( W = .36 \) is significant.\(^2\) This means that in 95.0 percent of the cases that might be examined, the respondents would apply the same standard of ranking.

\(^2\)Ibid., p. 286.
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