DETERMINATES OF URBAN HOUSING ABANDONMENT AND HOMESTEADING

By

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ABSTRACT OF THE THESIS

Determinates of Housing Abandonment and Urban Homesteading

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Examination of Urban Homesteading as an urban renewal strategy for remediation for inner city housing abandonment. The previous research on causal factors of inner city residential abandonment are discussed. The two strategies of urban renewal are examined, rehabilitation of existing structures and redevelopment. The City of Philadelphia Urban Homesteading program is used as a data source for a regression analysis of demographic factors of abandonments and urban homesteading selection criteria. Conclusions of the research are the correlation between housing abandonment and urban homesteading selection criteria. Funding is the overshadowing factor in the success of urban homesteading and the driving force in residential abandonment.

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INTRODUCTION

This paper explores the concept of urban homesteading. It is divided into five sections, the first section is concerned with defining residential abandonment in inner-cities. Homesteading has been proposed as a remedy to this urban problem. The second section deals with the workings of urban renewal and housing rehabilitation. These programs being the base on which homesteading was formed. This section covers the previous research in the area, as well as an examination of homesteading as a tool for Housing Reclamation. Success factors for Urban Homesteading are postulated, and the Philadelphia case study is defined. The third section is a definition of the data examined and the structure of the data file. The fourth section presents the results of the analysis and the conclusions are detailed in section five. The statistical method used is presented in Appendix A. Appendix B is the keypunch format.

Chapter I

RESIDENTIAL ABANDONMENT

This essay is concerned with evaluating urban homesteading as a viable solution to urban decline and residential abandonment. The large urban areas of this country have experienced a general decline over the past decade. Quality of life has deteriorated to the point where some areas are unlivable. Flight to the suburbs by business and middle class residents has left a void in the city. City residents are generally of a lower income strata and least able to support city services used by both city and suburban dwellers. For example, city dwellers pay for maintenance of city streets through taxes, but both city and suburban dwellers use these streets. Also these city residents are least able to compete in the open market for decent housing, and so are left with inner city substandard housing as their income dictates.

One theory of housing usage suggests housing is recycled as a neighborhood changes. A particular structure when new is occupied by a strata of city immigrant. As the immigrants become upwardly mobile and move out, the structure is occupied by a new wave of immigrants. Inner city properties going through this process over time have become more costly to maintain because of age and therefore require higher rents to defray costs. The residents living in these properties become less and less able to pay the required rent. With a slow-down in the trend of in-migration, the housing structures are not being re-occupied; spawning a new phenomenon, housing abandonment. Property

owners not able to get higher rent for the property cannot maintain it and allow it to revert to municipal ownership through non-payment of taxes. These properties are generally in less desirable inner city neighborhoods, where the owner finds it impossible to sell the property at merely a breakeven price.

Abandonment has been defined by researchers in the HUD Publication Abandoned Housing Research: A Compendium by looking at 1) negative cash flows to the entrepreneur 2) non-payment of property taxes and mortgage or notes and 3) cessation of maintenance. Abandonments are occurring in large numbers in cities across the country. These abandonment cost municipalities in terms of lost revenue, losses in shelter for residents and social costs in neighborhoods. One proposed solution to the problem is Urban Homesteading.

Urban Homesteading is similar to homesteading in the late 1800's. The homesteader agrees with the government to work and improve the homestead for a specific period. In the urban case this homestead consists of an abandoned residential property within the city. The homesteader makes improvements on the property to bring it up to local housing code standards. During this rehabilitative period the homesteader pays no property tax. At the end of the period the homesteader is given free and clear title to the property. Homesteading provides the governing agency with a way to rid itself of properties acquired through non-payment of taxes. The properties become assets at minimal costs to the governing agency. Funds for rehabilitation are provided by the homesteader.

This essay will examine homesteading in Philadelphia, PA., in an attempt to make an evaluation of homesteading in general. By identifying characteristics of both homesteading and abandonment it may enable us to evaluate the prospective success or failure of homesteading. Where common characteristics indicate homesteading contains one of the characteristics of abandonment and may preclude failure if the characteristic is sufficiently significant.

In an attempt to develop characteristics common to homesteading and abandonment it was necessary to collect data pertaining to both phenomenon and comparing them for commonality.

Characteristics of the area were defined as those things that physically describe that area. Features such as population, income, number of structures and zoning were measured. Other non-physical features such as education level were measured. This characteristic data was collected on the specific area to be homesteaded. The individual homesteads were identified in each area. These areas and homesteads were identified through municipal records on homesteads and comparing this to US Census Bureau maps to identify the census tracts in question. Areas of high abandonment were identified through US Census Bureau vacancy data and City of Philadelphia vacancy data.

The purpose of this essay is not only to provide some measure of success of homesteading before the fact, but to act as a guide to urban planners involved in homesteading as a viable alternative to inner city abandonment.

Chapter II

URBAN RENEWAL AND HOUSING REHABILITATION

Review of Previous Research

This chapter will give some insight into the problem of homesteading and the overall problem of abandonment. This review is presented to cover first the base problem of abandonment and then past solutions to the problem are reviewed ending with a review of the literature pertaining to urban homesteading.

The costs of abandonment are losses of revenue to the municipality in property taxes, losses of shelter for low income residents and social costs to neighborhoods. It is relatively simple to put a dollar value on losses of property taxes and opportunity forgone for low income housing. What is difficult to measure is the social cost of abandoned housing. These costs affect not only the municipality, entrepreneur and tenant, but influence the neighborhood and community as a whole. Resultant social costs to the community are a decline in property values.

Abandoned housing incidence was positively correlated to crime in the Linton Study (1). Decline of public and commercial services are positively correlated to abandonment (Linton Study). There is also an esthetic loss to the community by having a blighted area in their neighborhoods.

The experts reviewed in the Compendium (2) have varying opinions on the cause of abandonment. It is intuitively clear that there is no one cause of abandonment, but rather

a bundle of factors contributing to the end product., abandoned housing. The causal factors for abandonment have been divided into internal and external or environmental factors. The internal factors being "defects" in the housing market structure, and other factors relevant to ownership of properties. Mismanagement of intercity rental properties is the first internal factor discussed. Contrary to the myth that a handful of slum landlords have large holdings which they are milking for all they are worth, Sternlieb found in his study of landlords in Newark, NJ that most had relatively small holdings of between two and six rental units. Their lack of professional skills in real estate management account more for the ills of intercity housing, than deliberate exploitation of tenants.(3) Other aspects of non-professionalism in management are speculation and resultant over-mortgaging. Feeling secure that his creditors or the municipality is not over anxious to acquire the property, the owner feels safe in divesting himself of the property by nonpayment of mortgage and /or tax notes. The most powerful internal factor is rising operating, repair and maintenance costs. These costs are so high relative to revenue from rent that the owner would rather abandon the property. (4)

The external factors are the social costs imparted by the environment of the city rather than housing market infrastructure. In the Compendium study and Sternlieb's article a common external factor is the transitional nature of the neighborhood. This shifting lends little stability to the neighborhood and sets a foundation for lack of confidence in the future of the area. This lack of confidence by residents and non-residents alike, leads to a laissez-faire attitude toward preserving the area. (5) In the Urban League study instability was reinforced in the Black community by the exodus of middle class families to the suburbs as the housing market eases.

Vandalism was a factor highly rated by the Urban League study and the study by Grigsby, Stegman, Rosenberg and Taylor. Repeated vandalism was a discouragement to owners to maintain their properties, and effected the decision to finally abandon the structure. External factors contributing to the overcrowding of existing dwellings were a relatively high influx of low income residents and a scarcity of low income housing. Overcrowding and the decline of low skill entry jobs combine to raise crime rates and the incidence of drug abuse in those areas (6).

It is obvious from the causal factors presented here that short term solutions will only by stop-gap measures dealing with effect rather than cause. If the market is allowed to function freely, abandoned city housing will continue to decay, while builders turn their attention to new construction in the wealthier suburbs. The costs of building housing for the poor is almost equal to the cost of building housing for the rich; therefore the builder will opt for the wealthier suburbs to maximize his returns. (7)

Recommendations by experts recognize a need for Federal intervention. Market conditions are not sufficient to produce new housing for the poor, and municipalities are not able to carry the full burden of rehabilitation.

The Linton study suggests there are three things that can be done. Abandoned structures can be left to deteriorate as is, the abandonment process can be accelerated and new construction begun or existing structures can be rehabilitated before the abandonment process becomes contagious.

The first recommendation is a do nothing solution. This solution does not even maintain the status quo, as time passes the situation of housing abandonment goes from bad to

worse. The Urban League study suggest that when 6% of the housing in a neighborhood has been abandoned the process has become contagious. At this point little can be done to reverse the process, and the neighborhood deteriorates rapidly.

The second solutions can be handled in two ways. The Federal government can continue to subsidize public housing projects, alternatively the government can let the market determine land use, and issue direct housing subsidies to individuals. These people could then chose their housing through the market. At this time this solution is politically infeasible. The housing market cannot quickly adjust from a dual housing market to a more equitable arrangement. Realtors will not give up the present structure of maintaining ethnically homogeneous neighborhoods. Not to mention those that practice outright discrimination.

The third solution of rehabilitating the existing housing in abandoned areas is the most feasible. Comparing costs of new construction and demolition to the cost of rehabilitation, in view of the housing shortage, makes rehabilitation an attractive alternative. New construction with existing technology takes time, and in the interim people are displaced. With minimal rehabilitation the structures can be occupied while the rehabilitation is being completed. Rehabilitation of housing has not been fully utilized in the past. Homesteading is a semi-private form of rehabilitation which can be implemented in a relatively short span of time.

Housing rehabilitation has traditionally been the domain of the public sector. To understand this relationship it is necessary to understand government policies directed at

housing problems. These policies have been primarily federally instituted, with the exception of housing code enforcement which is locally instituted.

Some critics have stated all that is necessary to stop housing abandonment before it starts, is housing code enforcement. Code enforcement has failed thus far because of the factor which appears to be inherent in local government- corruption. (8) An absentee landlord may own a model property on paper and in reality the structure is substandard. This comes about when it its less costly for the owner to pay off the inspector than bring his building up to standard. This inconsistency in city government has aided in the demise of federal programs aimed at controlling abandonment and fostering rehabilitation.

The primary federal programs aimed at rehabilitation in some form, are grouped under the general heading urban renewal. Citizens of the Black community have fondly renamed the programs "Negro Removal". Under the Housing Act of 1949, the federal government gave eminent domain powers to local planning authorizes (LPA). These powers included condemning and purchasing vast tracts of filtered housing and replacing it with new construction. The act stated that the area had to be residential either before or after rehabilitation, but not necessarily both. (9)

As it turns out, the areas were residential before the acquisition and not after. The bulldozer efforts at rehabilitation served to displace people, destroy standard housing along with the substandard, and reduce the number of low income units available.

Section 221D of the Housing Act of 1961 provided government interest subsidies for new construction. This amendment made possible the co-op's of the sixties. (10) The problem with this program was rents were not reduced enough to reach the poor. The tenants of

the new building were members of the corporation owning the building. Unfortunately the members of the corporation had to pay a rent large enough to cover the cost of construction. This rent was prohibitive for poor people. This program also failed to rehabilitate neighborhoods.

This program along with the general urban renewal legislation was government on the supply side of the housing market, by attempting to increase the supply of housing. In retrospect this strategy was viewed as depressing the price of housing, not only in the units directly effected. (figure 1) The lower price for housing (rent) was passed on to the general low income housing market. This has discouraged landlords from maintaining their properties because of low revenue. (11) More recently, the government has undertaken policies to increase the poor's effective demand. This has been achieved by subsidizing rents under section 235 of the Housing Act of 1965; and subsidizing mortgages under section 236. (12)

The purpose of this program is two-fold. The subsidy provides individuals with the ability to demand better housing and the additional rent provides the property owner with revenue to rehabilitate the property under section 235. Under section 236 the original owner was to rehabilitate his property enabling him to demand a higher sale price from the subsidized buyer. The subsidies were to make up the difference between 25% of the poor person's income and the rent required. All properties under subsidy in this program were to be inspected for code violations. (13) Again the system failed in this respect. Code enforcement was not maintained. As a result the federal government was subsidizing substandard housing which eventually was abandoned. The subsidized tenants did not have funds to maintain the property because the subsidy went directly to

the property owner. Section 235 and 236 were demand side intervention, designed to indirectly effect rehabilitation. (figure 2) through increased revenue.

Another federal program having a direct effect on housing rehabilitation is the income tax structure. Income tax laws allow rental property owners to take accelerated depreciation on capital costs, and until recently, excluded maintenance costs. The structure may be resold, and the new owner may take accelerated depreciation on the purchase price which is generally higher than the original cost. This provision encourages building a poor structure, not maintaining it, a high turnover rate of owners and finally abandonment. (14)

The private sector effects housing rehabilitation through financial institutions. The previously mentioned lack of confidence manifests itself in "red lining". Banks and other lending institutions draw a line around the area in question and within this area it is virtually impossible to secure a mortgage or home improvement loan. This fosters abandonment by preventing maintenance. (15)

Rehabilitation had taken a back seat to bulldozer redevelopment. But recently because of the resistance and unpopularity of redevelopment programs, rehabilitation has been taken out of mothballs. Under direct rehabilitation programs the federal government gives direct grants to LPA's to rehabilitate substandard housing. (16) Rothenberg states there are three reasons why rehabilitation is cheaper than new construction 1) there are no demolition costs 2) construction resources are being added to a structure that already embodies some social value. 3) the increase in quality of rehabilitated housing is less that new construction. With this attractive, cheap renewal tool at hand, it's amazing local

governments haven't fully utilized it. Myerson and Banfield explained the

phenomenon in Politics, Planning and the Public Interest. In Chicago in 1946 it was

found that rehabilitation was cheaper than new construction; it was also found that the

federal government provided larger subsidies for new construction than rehabilitation.

The larger subsidy for new construction decreases local costs and therefore new

construction was undertaken.

There are distinct advantages to rehabilitation as outlined by Rothenberg. Rehabilitation

is ineffective in an area of widespread contagious abandonment. This is borne out by the

Urban League study, sited earlier. In a situation of this type the cost of improvements is

completely lost because of location dynamics; the owner incurs a loss because of

declining property values in the blighted area. Rehabilitation cannot effect radically new

forms of land use as redevelopment can. Also there are high costs in code enforcement

and administration. Each structure must be handled individually; there are no economies

of scale. One glaring disadvantage is costs of rehabilitation may equal or exceed the new

market value of the structure. This is explained below using Schaaf's notation.

C= cost of rehabilitating

V_1= present market value

V_2= market value after rehabilitation

If $V_1 - V_2 > C$; it pays the owner to rehabilitate his property

If $V_1 - V_2 < C$; then the structure meets the criterion for non-maintenance. Unfortunately

in borderline abandonment areas $C > V$; this is the criterion for total abandonment.

It appears therefore that rehabilitation by the public sector is doomed to failure. The major causes being lack of federal funding, high costs of repairs relative to market value, and political externalities. This is precisely the conclusion drawn by HUD after investigative research under "Project Rehabilitation". Rehabilitation is an economically sound technique to deal with residential decline and abandonment. It's demise is political in nature. An effective program of rehabilitation requires active political and financial support to work. Under present conditions, this has not happened.

URBAN HOMESTEADING AS A TOOL IN HOUSING RECLAMATION

Urban Homesteading as a concept first appeared in the late sixties. As Sternlieb points out in his article in Challenge (a HUD publication) there is a need to transfer ownership from absentee to resident landlords. The reasons are basically social for such a transfer. A resident owner is more likely to maintain a property he resides in, than an absentee. The consequences are economic; maintenance of inner-city properties is a more efficient use of resources than abandonment. The mechanics of homesteading are purposed in House Bill HR10373 authored by Marjorie S. Holt (R- Maryland) (17) HUD-owned single family dwellings are made available for purchase at a price of one dollar. Applicants must meet eligibility requirements. In return, the applicant pledges to reside in and rehabilitate the dwelling for a period of five years. After the residence period expires, the property title would transferred to the resident and the property would be taxed at it's full valuation.

The goals of homesteading have not been fully specified. But it is not a program aimed at providing housing for the poor. Homesteading involves a sizable investment of the

homesteader's part. Poor people simply don't have the resources. Location dynamics may cause people who could participate in homesteading to seek housing in another housing market (the suburbs). Homesteading is a tool in the reclamation of the inner-city from abandonment.

Philadelphia Councilman Joseph E. Coleman set out pre-requisites for the program to work in general. 1) Participation by the federal government in providing funds for clearing unrehabilitatable structures; adjusting it's on-the-job apprentice workers to be utilized in the homesteading program; and guaranteeing long-term low interest bearing loans 2) participation by the cities through conveying conditional title to properties, granting tax exemptions and establishing a coordinating agency 3) participation by the financial institutions in lending money to homesteaders with federal guarantees. 4) participation of the applicant by rehabilitating the property. (18) Coleman's first prerequisite, federal participation by guaranteeing loans and providing expertise has not materialized. Federal funds or lack of funds, has been the downfall of public sector rehabilitation programs. The second requirement of Coleman's plan deals with the city conveying title of abandoned properties and waiving taxes. This is a touchy area; how can the city convey title of a abandoned building to someone, if it does not legally own the property. Jay Thal is Quest (a HUD publication), suggested giving the city's coordinating agency eminent domain over abandoned dwellings. He suggests "…that an abandoned property may be treated like an abandoned child ie, that it be recognized as a ward of the state." If this provision was made, conveyance of title would not be a problem. What would remain is the original question posed in this paper, how does one

define abandonment. In Philadelphia, with a reported 36,000 abandoned properties, abandonment is defined as the shutoff of all utilities for at least 6 months.

Robinson and Weinstein in an article in the Journal of Housing suggest this is a positive act by the owner and does not reflect neglect as a criterion for abandonment as defined by Sternlieb. The tax exemption given to the new resident owner is no loss to the city. In all probability the absentee owner had reneged on his property tax, especially if the utilities had been disconnected for more than 6 months.

 The five year exemption is an investment for the city. At the end of the residence period the property is taxed at it's full valuation. The new valuation is higher than the previous valuation under the old owner, because improvements have been made by the new owner.

Without federal and local support the urban homesteader cannot survive. Some homesteading programs leave the homesteader virtually on his own, specifically Wilmington, DE. (19) The Philadelphia and Baltimore programs are a little better in helping the homesteader secure a low interest rehabilitation loan.(20) Since the majority of homesteads are in the poorer areas of the city, financial institutions will have to abandon their red lining practices if homesteading is to succeed.

Homesteading faces the same disadvantages as federally sponsored rehabilitation programs like section 235 and 236. The difference is homesteading doesn't have the financial clout of the federal government. Homesteading puts rehabilitation into the hands of the private sector and gives them little if any tools to accomplish their goals. The root causes of abandonment still remain. Homesteading per se does not provide maintenance funds, end vandalism or provide better public services. Without external loan funds and

elimination of externalities these homesteading properties are doomed to be abandoned again.

The reasons for residential landlord abandonment will be the same as for absentee landlords, primarily lack of funds to maintain the property. The homesteader has an additional disadvantage he will lose his investment and will have to live in it. Without a coordinated effort between city, federal and private agencies, the homesteading program is doomed to failure. What is needed is not hit or miss programs but a comprehensive housing policy. This policy would have to be accompanied by the elimination of externalities ie; housing discrimination, vandalism and government corruption. This is obviously an ambitious suggestion and a means of implementation is unknown at this time. As with most socio-economic problems there is no definitive answer to the housing crisis in our cities.

SUCCESS FACTORS IN URBAN HOMESTEADING

The success or failure of urban homesteading will depend on a number of factors. It is safe to assume that the causes of abandonment will have a negative effect on homesteading. If the rehabilitated properties are subjected to the same stresses, the homesteaders will be forced to abandon these properties. For example if the external factors of vandalism, crime drug trafficking and lack of public services persist in the homestead area, the property values will continue to decline. While maintenance costs and taxes rise abandonment will occur throughout the neighborhood. Abandonment will occur at a rate greater than rehabilitation. Rehabilitation involves legal action and constructive renovation which takes time. The results are not immediately visible,

observers do not perceive improvements in the area. Abandonment is not a positive action, but a reaction. The Urban League study pointed out that when abandonment reaches 6% in an area, it is irreversible. Sternlieb noted that at some point abandonment becomes contagious and the neighborhood declines rapidly from that point on. Choosing an area of this type for a homesteading project, is to commit it to failure before it begins. The other factors determining success of a homesteading project, are the factors effecting success or failure of any other rehabilitation program.

Funds are all important in this aspect of evaluation of success or failure. A pilot homesteading project may appear to be highly successful because funds were available and the staff was able to give individual attention to each homestead and it's development. It appears there is no room for economies of scale in homesteading, the same as with a public sector rehabilitation program (Rothenberg). Each structure and perspective owner represent a unique situation. Therefore it would appear that funds would have to be allocated on an individual basis. If federally funded, there would exist regional disparities in renovation costs, accounted for by regional wage differentials for tradesman, materials costs and administrative costs. Regional adjustments would need to be made.

The structure of the law will have to be such as to allow homesteading to occur without the hang ups of other renewal and rehabilitation programs. Tax incentives and subsidies must provide for maintenance as well as capital costs. Federal matching funds will have to be structured as to encourage rehabilitation. This is to avoid the situation that existed in 1949 where it was to the LPA's advantage to use renewal as a tool rather that the less costly rehabilitation option.

Watchdog code enforcement is necessary during the rehabilitation process to insure renovation is up to standard. Coleman's proposal to involve job apprentices would aid homesteaders in effecting low cost remodeling. Of Coleman's prerequisites for homesteading, the only groups participating as outlined are the applicants and the city.

Without the financial support of the federal government and the lending institutions the homesteading program will suffer the same problems of rehabilitation programs. HUD "Project Rehabilitation" research showed the downfall of rehab programs, was lack of federal funds, high costs of repairs and political externalities. These same pitfalls exist for homesteading, as a semi-private rehabilitation program. Federal funds have not materialized in existing homesteading programs, and no legislation has been proposed to do so. Political differences between city and federal government, have always caused fiscal problems for the cities. Homesteading funds would be no exception.

As it stands, homesteading is not a program which will alleviate overcrowding conditions in low income areas or provide housing for the poor, although most urban homesteads are in poverty areas. Homesteading is out of the reach of the poor because of the capital outlay necessary to renovate a dwelling. Overcrowded conditions will still exist for the poor in homesteading areas. Overcrowding has been historically a pre-condition for crime. Without eliminating conditions, such as crime, which perpetuates abandonment, homesteading is caught in a vicious circle, and ending with further deterioration and abandonment. Along with the base homesteading rehabilitation, it is necessary to have ancillary activities to complement the rehabilitation process. Non- rehabilitatable structures should be cleared, parks and shopping areas created. Homesteading is best suited as a component of a total rehabilitation program, a program that not only

rehabilitates buildings, but rehabilitates neighborhoods. As conditions exist, homesteading will not make a very big dent in rehabilitating our cities. Unfortunately some HUD officials see it as a cure-all for their problem of HUD owned properties HUD doesn't know what to do with. They are trying to sell the idea to the public while solving their problem by passing the buck to the city government and local residents. Lack of federal funds for ancillary activities and lack of support from financial institutions will be the demise of urban homesteading.

PHILADELPHIA CASE STUDY

Data collected from the Philadelphia Homesteading project was subjected to statistical testing to ascertain if there is a correlation between residential abandonment and demographics of the area and applicants. Where a common characteristic of abandonment and urban homesteading is present indicates a significant probability urban homesteading will result in abandonment. The Philadelphia homesteading program does not receive any federal funding. The subject area is identified by census tract. Participants are selected from a list of applications submitted by interested Philadelphia residents. Participants are required to renovate the property that they buy from the city. They are required to live in the property for at least 5 years. At the end of five years they are conveyed free and clear title to the property. During the renovation period the resident does not pay property tax.

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Chapter III

DATA DEFINITION AND STRUCTURE

The data for this thesis are based on data collected by the author on Philadelphia,

Pennsylvania. The data were taken in 1974 using 1970 demographic data. The survey

was directed toward ascertaining the number of abandonments and homesteads and

demographic characteristics of the area. The statistical methodology can be found in

Appendix A.

The following describes the way the data was collected:

1. Sample Area:

A sample of 1970 census data was taken from Center City Philadelphia. The sample area

was the properties designated as available for homesteading by the City of Philadelphia.

The addresses were located by census tract, and environmental as well as demographic

data for each census tract was gathered. The elements were selected based on elements of

abandonment discussed in the previous research on the subject. Described below are the

data elements examined.

2. Region:

Regions distance from the center of the city were coded

     Code 1= 0 -.49 mile

     Code 2= .5 - 1.49 miles

     Code 3= 1.5 - 2.9 miles

     Code 4-= 3.0-4.9 miles

     Code 5= 5.0 – 6.9 miles

     Code 6= 7.0 – 8.9 miles

Code 7= 9.0 – 12 miles

Code 8= over 12 miles

3. The average value of the structures in the census tract. This includes all properties both

commercial and residential.

Code 1= $5500- $6499

Code 2= $6500- $7499

Code 3= $7500-$8499

Code 4= $8500- $9499

Code 5= $9500- $10499

Code 6= $10500- $11499

4. The number of structures in the census tract. This variable describes the density of the

area.

5. The number of vacant properties within the census tract. The number of vacancies

includes homes available for rent as well as sale. It also includes the properties identified

by the City of Philadelphia as abandoned. The City defines abandoned as non-payment of

property tax and utility shutoff of at least 6 months.

6. The vacancy rate. This number was calculated by dividing the number of vacancies by

the number of structures in the census tract.

Code 1= 0-5.9%

Code 2= 6-10%

Code 3= 11-15.9%

Code 4= 16-20.9%

Code 5= 21-25.9%

Code 6= 26-30%

Code 7= Over 30%

7. The median income of the census tract. This data was extracted from the 1970 United

States census data.

Code 1= $ 0-3k

Code 2= $3.1- 5K

Code 3= $5.1- 8k

Code 4= $8.1 – 10K

Code 5= $10.1 – 15K

Code 6= $15.1 – over

8. The crime rate, as measured by the Philadelphia Police Department by Police District.

The Police districts were mapped to the census tracts by address. The rate is defined as

the percent of crime of the total police district that occurred in the target census tract.

This is a comparative measure of relative crime by census tract.

Code 1= 5.0- 5.4

Code 2= 5.5- 5.9

Code 3= 6.0-6.4

Code 4= 6.5- 6.9

Code 5= 7.0- 7.4

Code 6= 7.5- 8.0

9. The unemployment rate by census tract was measured by the Department of Labor.

The overall unemployment rate for Philadelphia in 1974 was 8.4 %

Code 1= 6-6.9%

Code 2= 7.0- 7.9%

Code 3= 8.0-8.9%

Code 4= 9.0- 9.9%

Code 5= 10.0-10.9%

Code 6= 11.0- 11.9%

Code 7= 12% >

10. The number of abandoned residences was provided by the City of Philadelphia Office

of Urban Homesteading.

Chapter IV

RESULTS

Although MDA was originally selected as a statistical testing methodology, it was deemed a weaker measure than regression analysis and was bypassed. The regression analysis yielded the independent variables in the following descending order of correlation.

Dependent Variable

Y_1 Number of Abandoned structures

Independent Variable	**Coefficient of Correlation**
X_1 Unemployment rate	.644803
X_2 Median income	.530676
X_3 Vacancy rate	.528360
X_4 Crime rate	.469824
X_5 Average property value	.358080
X_6 Distance from Center City	.209674

Chapter V

CONCLUSIONS

The probability of residential abandonment incidence can be explained by the ranking of

the variables examined in the regression analysis. However, the solution to residential

abandonment in the inner city cannot be inferred from the statistics. While we can

describe what areas are likely to be abandoned and can predict with moderate certainty

where the abandonment will occur, we cannot with any certainty postulate how to prevent

it from happening.

Government agencies and the private sector have put forth a wide variety of actions to

react to the rise of residential abandonment, but have yet to find a preventative. The

results of this study can serve as a guide to these entities to look at the issue of residential

abandonment in a new light. They can look at the variables that contribute to residential

abandonment and work to prevent these variables from coalescing. Specifically,

concerned entities should concentrate on preventative measures, directed toward raising

incomes, increasing the value of neighborhoods in the inner city and reducing the

vacancy rate. Efforts should be directed toward increased economic health of an area, not

just the physical structures.

This study demonstrates that factors strongly affecting residential abandonment in the

inner-city are also factors that affect the likelihood of success in Urban Homesteading.

For Urban Homesteading to be effect these factors need to be addressed. Areas with high

unemployment, low median income and high crime rates are not areas where Urban

Homesteading is likely to succeed. These factors are strongly related to the incidence of

residential abandonment and left unchecked will have the same detrimental effect on Urban Homesteading efforts.

A key difference between homesteading in the 1800's and modern day efforts at homesteading are environmental. In the 1800's homesteads were isolated pieces of property independent of influence from settlements. In the urban setting, the homestead is completely dependent on the urban environment.

There needs to be a holistic approach to reclaiming inner-cities. Merely rehabilitating structures will not prevent further decay. There is truth in the old adage," a rising tide, lifts all boats", meaning increased economic health for the general populace, benefits all, including those distressed properties in the inner city.

FOOTNOTES

1. Linton, Mields and Coston, <u>A Study of the Problems of Abandoned Housing</u> U.S. Department of Housing and Urban Development 1971

2. <u>Abandoned Housing Research: A Compendium,</u> Department of Housing and Urban Development 1973 p.8

3. George Sternlieb "Abandoned Housing What is to be Done?", <u>Urban Land</u> March 1972 p.4

4. HUD, op cit p.13

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P

R

R1

D

S   S1   Q

Figure 1

P

R1

R

D1

D

S   Q
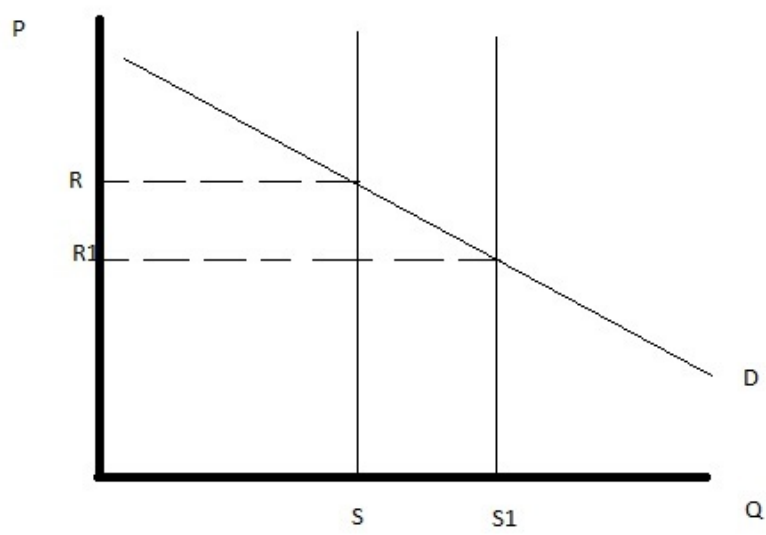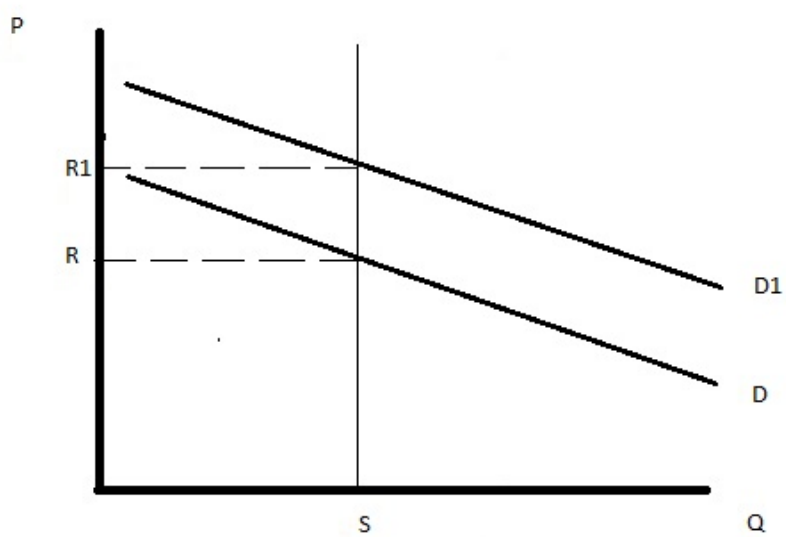
Figure 2

Appendix A

Statistical Methodology

Multi-variant Data Analysis (MDA) was originally selected as the statistical testing methodology. However the initial results of the MDA analysis were inconclusive, subsequently a simple regression analysis was substituted, and performed using least squares method.

Linear regression is a method of organizing data. Linear regression is simply an algorithm for drawing a line through various data points.   Linear regression typically uses the least squares method to determine which line best fits the data. R-Squared is a measure of how well the data points match the resulting line. The resulting measurement demonstrates how the dependent variable is influenced by the independent variable. The analysis was performed using the regression function within the data analysis function contained in Microsoft Excel 2010. The data source grid and resulting summary output are presented in Appendix C.

While this method was more time consuming, it did present a clearer view of the data. Each variable detailed in Exhibit A was regressed against the dependent variable- rate of residential abandonment, by targeted census tract. Each variable is listed separately and explained in descending order of correlation in Exhibit A.

Appendix B

Keypunch Format

Variable	Column	Data
-	1-3	Census tract
-	4-7	Year
X_1	8-10	Abandonments
X_2	11-15	# of Structures
X_3	16-19	Vacancy rate
X_4	20-23	Median income
X_5	24-27	Average value of structure
X_6	28-31	Total unemployment
X_7	63-66	miles from center city

Appendix C

Data Source

census tract #	val of structure	no, of structures	vacant prop	vacancy rate	median income	crime rate	distance	unemployment	abandonments	
						per 1000 res.	miles from city hall		#/#of structures	
279	9100	2875	16	0.005565217	9209	5.9	9.8	6.3	1	
277	9100	2281	3	0.001315213	9794	5.9	2.7	6	2	
175	5900	3474	72	0.020725389	7021	5.7	4.3	8.1	12	
165	5900	2155	69	0.032018561	5605	7.1	3.3	10.2	8	
139	5700	2614	115	0.043993879	4270	4.5	2.2	17.5	46	
108	6100	2835	161	0.056790123	5368	4	2.6	12.7	67	
106	6950	1133	100	0.088261253	6580	4	2.8	11.6	34	
104	7100	1495	42	0.028093645	6593	5.7	5.3	9.1	6	
101	8800	2789	33	0.011832198	9021	5.7	5.3	7.8	6	
114	10900	3059	31	0.010134031	9512	5.7	5.3	7.9	3	
113	9700	1636	43	0.026283619	9380	5.7	5.2	8.1	4	
83	9000	4357	37	0.008492082	8812	7.7	3.8	8	7	
84	8800	2202	37	0.016802906	8554	7.7	3.9	7.9	4	
85	8700	3632	46	0.012665198	8503	7.7	4	8.5	3	
		36537	805						203	

SUMMARY OUTPUT- Distance								
Regression Statistics								
Multiple R	0.520066							
R Square	0.270468							
Adjusted R Square	0.209674							
Standard Error	17.78262							
Observations	14							
ANOVA								
	df	*SS*	*MS*	*F*	*gnificance F*			
Regression	1	1406.842	1406.842	4.448912	0.056608			
Residual	12	3794.658	316.2215					
Total	13	5201.5						
	Coefficients	*andard Err*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*ower 95.0%*	*pper 95.0%*
Intercept	37.97776	12.10305	3.137866	0.008566	11.60747	64.34805	11.60747	64.34805
X Variable 1	-5.43287	2.575742	-2.10924	0.056608	-11.0449	0.17919	-11.0449	0.17919

SUMMARY OUTPUT- Unemployment								
Regression Statistics								
Multiple R	0.819833							
R Square	0.672126							
Adjusted R Square	0.644803							
Standard Error	11.9214							
Observations	14							
ANOVA								
	df	*SS*	*MS*	*F*	*gnificance F*			
Regression	1	3496.063	3496.063	24.59941	0.000331			
Residual	12	1705.437	142.1198					
Total	13	5201.5						
	Coefficients	*andard Err*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*ower 95.0%*	*pper 95.0%*
Intercept	-36.3175	10.72987	-3.38471	0.005421	-59.6959	-12.9391	-59.6959	-12.9391
X Variable 1	5.485311	1.105959	4.959779	0.000331	3.075634	7.894987	3.075634	7.894987

SUMMARY OUTPUT- Crime								
Regression Statistics								
Multiple R	0.714567							
R Square	0.510607							
Adjusted R Square	0.469824							
Standard Error	14.56474							
Observations	14							
ANOVA								
	df	*SS*	*MS*	*F*	*gnificance F*			
Regression	1	2655.92	2655.92	12.52015	0.004083			
Residual	12	2545.58	212.1316					
Total	13	5201.5						
	Coefficients	*andard Err*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*ower 95.0%*	*pper 95.0%*
Intercept	81.93389	19.4513	4.212258	0.001205	39.55315	124.3146	39.55315	124.3146
X Variable 1	-11.3744	3.214574	-3.53838	0.004083	-18.3783	-4.37044	-18.3783	-4.37044

SUMMARY OUTPUT- Income								
Regression Statistics								
Multiple R	0.752847							
R Square	0.566778							
Adjusted R Square	0.530676							
Standard Error	13.70341							
Observations	14							
ANOVA								
	df	*SS*	*MS*	*F*	*gnificance F*			
Regression	1	2948.097	2948.097	15.69944	0.001886			
Residual	12	2253.403	187.7836					
Total	13	5201.5						
	Coefficients	*andard Err*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*ower 95.0%*	*pper 95.0%*
Intercept	79.54049	16.81863	4.729308	0.000489	42.89584	116.1851	42.89584	116.1851
X Variable 1	-0.00841	0.002124	-3.96225	0.001886	-0.01304	-0.00379	-0.01304	-0.00379

SUMMARY OUTPUT- Vacancy Rate								
Regression Statistics								
Multiple R	0.751426							
R Square	0.56464							
Adjusted R Square	0.52836							
Standard Error	13.73718							
Observations	14							
ANOVA								
	df	*SS*	*MS*	*F*	*gnificance F*			
Regression	1	2936.977	2936.977	15.56342	0.001945			
Residual	12	2264.523	188.7102					
Total	13	5201.5						
	Coefficients	*andard Err*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*ower 95.0%*	*pper 95.0%*
Intercept	-1.98461	5.56234	-0.35679	0.727441	-14.1039	10.13469	-14.1039	10.13469
X Variable 1	635.8169	161.1683	3.945051	0.001945	284.6614	986.9724	284.6614	986.9724

SUMMARY OUTPUT- Value of Structures								
Regression Statistics								
Multiple R	0.638327501							
R Square	0.407461999							
Adjusted R Square	0.358083832							
Standard Error	16.02624518							
Observations	14							
ANOVA								
	df	*SS*	*MS*	*F*	*gnificance F*			
Regression	1	2119.414	2119.414	8.251866	0.014022			
Residual	12	3082.086	256.8405					
Total	13	5201.5						
	Coefficients	*andard Err*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*ower 95.0%*	*pper 95.0%*
Intercept	75.64561136	21.71243	3.483978	0.004513	28.3383	122.9529	28.3383	122.9529
X Variable 1	-0.0076603	0.002667	-2.87261	0.014022	-0.01347	-0.00185	-0.01347	-0.00185