A SPATIAL ANALYSIS OF SOCIOECONOMIC AND DEMOGRAPHIC CHANGE IN THE LOWER MERRIMACK VALLEY AND LAWRENCE, MA 1980 - 1990

by

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Submitted to the Department of Urban Studies and Planning
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ABSTRACT

The U.S. economy has experienced dramatic economic changes since the late 1960's including a decline in low-skill manufacturing jobs that once supported a substantial middle-class. Many of these jobs have migrated south, out of the central cities of the Northeast. Many others have moved out of the U.S. entirely. According to much of the current urban poverty debate, these changes have adversely affected the welfare of populations living in central cities, particularly low-income Blacks and Latinos in the Northeast. As a result, these groups have grown increasingly more isolated, both physically and economically, from the mainstream.

Using the Lower Merrimack Valley as a case study, a region located in the northeastern corner of Massachusetts, this thesis applies the thematic mapping capabilities of a Geographic Information System (GIS) and uses spatial analysis techniques to identify and describe socioeconomic and demographic changes in this region between 1980 and 1990. This regional analysis illustrates dramatic patterns of ghettoization and spatial isolation taking place in the city of Lawrence, Massachusetts relative to the surrounding working-class and high-income municipalities. The results of this analysis also indicate that growing poverty and spatial isolation in this small city are explained only in part by economic restructuring. Other complex forces behind these patterns include an enormous influx of Dominican and Puerto Rican immigrants to the region, uneven growth in the regional economy, and dynamics within the regional housing market.

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The creative process never takes place in isolation. It can be as frustrating as it is stimulating -- particularly a process that attempts to understand complex changes in the global economy, untangle the intricate issues of urban poverty, and explore the capabilities of a new computer technology. This thesis has made some small strides in these directions, but not without the help and support of many friends and colleagues.

I thank Lyna Wiggins, Kelly Robinson, and Leticia Rivera-Torres for their patient help and support directing this thesis. My approach and the new ideas synthesized in this thesis evolved out of many a late night turned early morning with Ricardo Mireles. Thanks to the Lawrence community for the time they spent with me during the summer of 1991 while I was working in Lawrence. It was during this time that I grew to know and better understand this complex city. The numbers and statistics presented in this thesis do not come devoid of an understanding of the people behind them. Thanks also to those who have provided me with the data to complete this thesis: the librarians at MIT's Roach and Dewey libraries, Todd Maio at the Massachusetts Department of Public Welfare, the economists at the Massachusetts Department of Employment and Training, and the staff at the MISER State Data Center. Thanks to all my friends and professors at DUSP have made this experience a memorable one.

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FOREWORD

This thesis documents socioeconomic and demographic changes that have taken place in Lawrence, Ma. and the Lower Merrimack Valley between 1980 and 1990. I grew up in the region - in Essex County and on the North Shore of which Lawrence and the Lower Merrimack Valley is a part. The region is home for me.

The images that first come to mind when I think of home are cold, white New England winters, hot summers, and the spectacular colors of fall foliage. I think of long, rolling hills and open farmland slowly being encroached upon by growing suburban developments. I think of white, colonial architecture, quaint village centers, and large red brick mill buildings. I think of Lawrence as an important industrial center, home to the Industrial Revolution. I also think of it as a city with a large, blue-collar, Anglo-European immigrant population that works in the textile mills and shoe factories.

I have always been curious about cultures and ways of life different from my own. This curiosity to understand the complexities of many new worlds that opened up for me after I left the borders of my youth, have guided my life and my work since. While I was still in college, I spent a month traveling and hiking through some of the remotest areas of Mexico. This was my first exposure to a "Third World" country. I have wonderful memories of the people I met and some of the beautiful land I traveled through.

In 1986 I spent a month and a half in Nicaragua. I lived in the town of Esteli in northern Nicaragua - a region that was considered part of the war zone at the time. I had read and heard so many conflicting stories about the situation in Nicaragua that I wanted to

discover the reality for myself. I experienced first hand the cruelty of a country both at war with itself and a pawn to greater economic and military forces. In 1988 and 1989 I traveled and worked in Bulgaria, India, Nepal, Thailand, Bangladesh, Philippines, Papua New Guinea, and China. I also spent a year and a half living and working with the Salvadoran refugee community in San Francisco.

These experiences have made me acutely aware of the permeable, and sometimes not so permeable boundaries, that separate people and nations. If we have money, we can jump on a plane and find ourselves half way around the world in eight or ten hours. Children in the remotest areas of Papua New Guinea, living without running water and electricity in their villages or a road that connects them to the capital city, watch Rambo at a theater in the nearest town. The sounds of Bob Marley jam in a disco in south-central China as the youth painfully try to emulate Western music and fashions from songs, images, and styles that are slowly leaking into their country. Refugees, economic and political, are flooding national borders and are migrating to the large, international cities around the world. For these refugees, international boundaries are ones of economics and opportunity. Other people, with information and affluence move global capital between London, Tokyo, and New York at the speed of light, rapidly changing the structure of the world's economy. For them, telecommunications have folded both time and space.

Seven years ago I left home for the first time to explore the rest of the world. Two years ago I returned to complete my Masters in City Planning at MIT. In this short period of time many changes have taken place in the Boston area. Many more immigrants from all walks of life now live in Boston. Salvadorans and Puerto Ricans make their homes in Chelsea. Large numbers of Latinos now live in Springfield, Holyoke, and Worcester.

Lawrence and Lowell are no longer home to Anglo-European immigrants, instead, Lowell is home to eleven thousand Cambodians, Laotians, Asian Indians, and other Asians. Twenty nine thousand Hispanics, mainly Dominicans and Puerto Ricans, now live in Lawrence. Aspects of my image of home have completely changed.

Without exception, wherever I have traveled, the communities and the people I have lived with or stayed briefly have welcomed me with open arms. I have shared their food, their homes, and their friendship. We have both learned a great deal from each other. Sadly, that hospitality is often not reciprocated to recent newcomers who have come to make my home their own. They often face a hostile environment of discrimination and misunderstanding, language barriers, and a declining window of opportunity as low-skill manufacturing jobs that have traditionally provided a stepping stone to upward mobility have gradually dwindled. High expectations in the "Land of Opportunity" often become shattered dreams as immigrants face high unemployment, under-employment, or simply struggle to survive.

In the current and highly charged environment of economic downturn, limited jobs, and dwindling opportunity, fear and insecurity can exacerbate racism, discrimination, and hostility. For those with jobs and opportunity, it is easy to blame the victim. Those without opportunity often remain powerless to forces beyond their control.

It is my strong belief that planners, policy makers, and those in positions to institute change must move away from a mentality of "blame the victim" to one of "understand the complexity of the victim's situation." We must all have faith in the power of human potential and must work to better understand how to harness that potential. Everybody

loses in a society of growing income polarization and poverty. Anger and racism will become more violent and the divisions between the have's and the have not's will deepen. We deny ourselves the potential richness of engaged and shared human diversity. By ignoring, ostracizing, or blaming those we don't understand or whose situation we fear, development, human or economic, will not take place. This does not mean the importance of individual responsibility should be disregarded nor that those who are unemployed or disempowered cannot create opportunity for themselves, instead it means that all sides must work together towards creating an environment that creates opportunity, offers hope, and rewards initiative.

Through this thesis I hope to shed light on the complex socioeconomic changes that have taken place in Lawrence and the Merrimack Valley from a local, regional, national, and global perspective. Growing unemployment and poverty in the region can seem intractable at times, particularly in the current economic environment. A step away from "blame the victim" towards a more complex understanding of the situation, will hopefully be a step towards solution.

CHAPTER 1

INTRODUCTION

1.1 Spatial Polarization of Poverty Within the Lower Merrimack Valley

Powerful forces of polarization are at work on the American urban and suburban scene perhaps serving to maintain concentrated poverty in a growing number of poor areas. Using spatial analysis techniques, including the thematic mapping capabilities of a geographic information system (GIS), I show that the Lower Merrimack Valley, a region located in the Northeastern corner of Massachusetts, is no exception to this trend.

My research reveals striking patterns of ghettoization and concentrated poverty within Lawrence. It also reveals the growing spatial polarization and isolation of poverty in Lawrence relative to the surrounding region. For example, between 1980 and 1990 the number of persons living in poverty in Lawrence grew from 19.3% to 27.5%, representing an increase of 8.2 percentage points. This was in sharp contrast to the other municipalities in the region that either maintained their 1980 poverty levels or experienced declines. Other socioeconomic indicators including per-capita income; total employment, joblessness and unemployment; and welfare dependency showed similar trends.

Because socioeconomic conditions in Lawrence are much more severe than those in any of the surrounding municipalities, I have chosen to analyze patterns of ghettoization in Lawrence from a regional perspective. I compare changes in poverty rates, rates of female headship, employment, housing variables, and other socioeconomic indicators

between Lawrence and the surrounding cities and towns from 1980 to 1990. I also examine socioeconomic changes at a micro level within Lawrence, using census block groups as the unit of analysis. This approach reveals several important regional and structural factors contributing to the growth and concentration of poverty in Lawrence.

1.2 Identifying the Urban Poverty Literature

The urban poverty literature discussed in this thesis and used to structure my research, largely refers to work that has contributed to the *urban underclass* debate. This debate has been led by influential academics including William J. Wilson and John Kasarda. According to these academics, growing and concentrated urban poverty is primarily explained by economic restructuring, including the loss of manufacturing jobs in central cities and employment growth within the service sector. Central cities have experienced growth in high-skill service sector jobs, whereas growing numbers of low-skill service jobs have moved mainly to the suburbs. These dynamics have created both a skills and a spatial mismatch between the low-skilled, inner-city labor force and the job supply. They have resulted in high rates of joblessness, unemployment and concentrated poverty. Because high proportions of inner-city Blacks and Latinos were traditionally employed in manufacturing jobs, they have been the groups hardest hit by these economic changes.

Many other explanations for growing urban poverty have also been offered and debated, particularly the importance of labor market and residential discrimination. In addition, theories of global economic restructuring, more complex than those offered by Wilson and Kasarda, have been proposed to explain fundamental changes in the organization of production globally and changes in the use of labor in large, central cities. Relationships

between these structural changes, recent immigration from lesser developed countries, and urban poverty have been discussed by academics including Castells, Portes, Mollenkopf, Sassen, and others.

In addition, most of the urban poverty debate and the economic restructuring literature is based largely on cross-metropolitan studies and studies in large metropolitan areas or large central cities including New York, Boston, Chicago, and Los Angeles. Very little work has been done to understand concentrated poverty in other urban settings including small, central cities and their corresponding regions. The Lower Merrimack Valley, which consists of three cities and twelve towns, is a small region. It had a 1990 population of 288,280. Lawrence is the largest city in the region with a 1990 population of 70,207. Although Lawrence is considered a central city, it is not a large, central city - as Boston is to the Boston metropolitan area, for example. Because of these characteristics, much of the urban poverty literature and the economic restructuring literature is limited in its ability to explain the patterns of ghettoization taking place in Lawrence.

These bodies of literature describe conditions of growing and concentrated poverty in cities where the ghetto poor live segregated from, but in close proximity to, thriving commercial districts (like Wall Street and Boston's Financial district) and old established or newly gentrified residential neighborhoods (like the Upper East and now West Side of New York or Boston's Back Bay). Although large segments of these cities suffer from severe and growing poverty and economic decline, many also have segments of their economies that are strong, specifically their financial and producer services industries. In the case of Lawrence, no segment of the economy is particularly vital. In addition,

Lawrence has no opulent commercial districts or gentrified residential areas. Instead, the pattern of ghettoization taking place in Lawrence is best described as one in which the entire city is rapidly becoming an urban ghetto relative to the surrounding municipalities.

1.3 Understanding Ghettoization and Uneven Economic Development in Terms of Politically and Socially Defined Places

Because of the complexity of the issues involved and the uniqueness of every urban setting, important limitations will always be found in any body of literature that tries to generalize situations. In the case of Lawrence, for example, an important and perplexing question remains unsatisfactorily explained by the urban poverty or the economic restructuring literature:

> *Why do people continue to move into a city where conditions are bad and getting worse, particularly when socioeconomic conditions in the surrounding municipalities are significantly better and appear to be improving?*

Lawrence lost a total of 7,000 jobs between 1980 and 1990, while its population experienced a net increase of 7,000 persons or 11%. Upon closer inspection detailed demographic data show that the Hispanic population (primarily Dominicans and Puerto Ricans) grew by 18,900 persons, whereas the non-Hispanic white population declined by 13,000 persons.

I believe that if we also incorporate an additional approach, one not usually followed in the literature I have just described, we will begin to find some more satisfactory answers to this question. We must begin to pay more attention to the role that politically defined places and socially defined spaces play in perpetuating the growth of concentrated

poverty and uneven economic development. This route involves exploring a theory of urban form (which I refer to as stratified place theory) that has been developed by urban planners, sociologists, and geographers including Logan, Molotch, Feagin, and others. Here I refer to *politically defined places* as cities and towns that have their own local governments, tax codes, public spending policies, zoning regulations, etc. *Socially defined places* include geographic areas that are characterized by high concentrations of certain racial, ethnic, or religious groups, or areas where custom and tradition binds people together in significant ways. Specific examples include Chinatown in San Francisco; Amish communities in Pennsylvania; and the growing Dominican and Puerto Rican communities in Lawrence. In many cases these two types of space will share common boundaries, in others, the boundaries may be more ambiguous.

An understanding of space, defined as such, helps us to understand changing social conditions in Lawrence for several reasons. First, dynamics in the regional housing market, influenced by municipal zoning regulations and tax codes, play an important role in determining where people live. For example, because most immigrants do not have the income or savings to purchase housing, they must rent. Because the majority of the region's rental units exist in Lawrence, in addition to important networks for helping welfare dependent households find housing, most poor immigrants to the region have no choice but to live in Lawrence. Also, between 1980 and 1990, regional housing values increased at a significantly higher rate than did per-capita incomes in Lawrence, indicating the declining ability of poorer residents to move out of the city. Furthermore, many immigrants choose to live in Lawrence because of kin-and-friend networks; a cultural environment that they know and understand; important social services in the city

that cater to their needs and do not exist in the surrounding municipalities; and language barriers in other cities and towns.

For these and other reasons, the poor, many of whom are immigrants, choose or are forced to live in Lawrence. Those higher income individuals who can leave, do so - - as the massive out-migration of non-Hispanic whites between 1980 and 1990 from the city suggests. As the city's financial resources decline, education and other important public services tied to its tax base cannot be provided adequately, consequently growing disinvestment within the city continues to take place. A cycle of poverty gets perpetuated, creating an environment that offers little hope.

These issues will be discussed in greater detail later in the thesis, however it is important to understand that only after performing a regional, spatial analysis of socioeconomic, demographic, and housing variables was I able to visualize and more clearly understand some of the important trends described here. GIS provides a powerful tool which allows us to visualize urban problems from a new perspective and to begin redefining some of the important policy questions. The thematic maps and figures shown in this thesis will speak for these statements.

1.4 An Outline of This Thesis

In the next chapter (*Chapter 2*), I present a brief background and history of Lawrence and the Merrimack Valley. This enables me to more easily identify points made in the literature review (*Chapter 3*) that are of particular importance to the case of Lawrence. The review covers the urban poverty literature, relevant economic restructuring literature, and introduces the literature that discusses stratified places. *Chapter 4* presents

my research methodology. Using primarily census data, I develop a geographic information system (GIS) of Lawrence and the Lower Merrimack Valley to show spatial changes in poverty rates, rates of female headship, demographic changes, and selected housing variables between 1980 and 1990. In *Chapters 5, 6, 7, and 8*, I present the results of my analysis including computer generated thematic maps illustrating the socioeconomic and demographic changes that took place in the region. As I present my analysis, I identify limitations in much of the urban poverty and economic restructuring literature for explaining these changes. I also show why politically and socially defined places are central to our understanding of growing poverty in Lawrence. *Chapter 9* concludes the thesis with directions for further research and the policy implications of this work.

CHAPTER 2

REGION OF STUDY AND HISTORICAL BACKGROUND

This chapter provides a brief introduction to the Lower Merrimack Valley, the region examined in this case study. It locates the Lower Merrimack Valley, places the region in historical perspective, and introduces the city of Lawrence.

2.1 The Lower Merrimack Valley Service Delivery Area and Lawrence, Massachusetts

The Lower Merrimack Valley Service Delivery Area is located in the northeastern corner of Massachusetts approximately thirty miles north of Boston. It consists of three cities including Haverhill, Lawrence, and Newburyport; and twelve towns including Amesbury, Andover, Boxford, Georgetown, Groveland, Merrimack, Methuen, Newbury, North Andover, Salisbury, West Newbury, and Rowley.[1] These specific cities and towns were chosen to define the region of study because they represent a geographic area with a large population nucleus in Lawrence, together with adjacent communities having a high degree of economic and social integration. This specific area was defined by the Massachusetts Department of Employment and Training which provides aggregate employment and industry data for the region. The Lower Merrimack Valley Service Delivery Area is illustrated in *Figure 2.1*.

[1] The Lower Merrimack Valley Service Delivery Area is referred to as the "Lower Merrimack Valley" or the "region" from this point on.

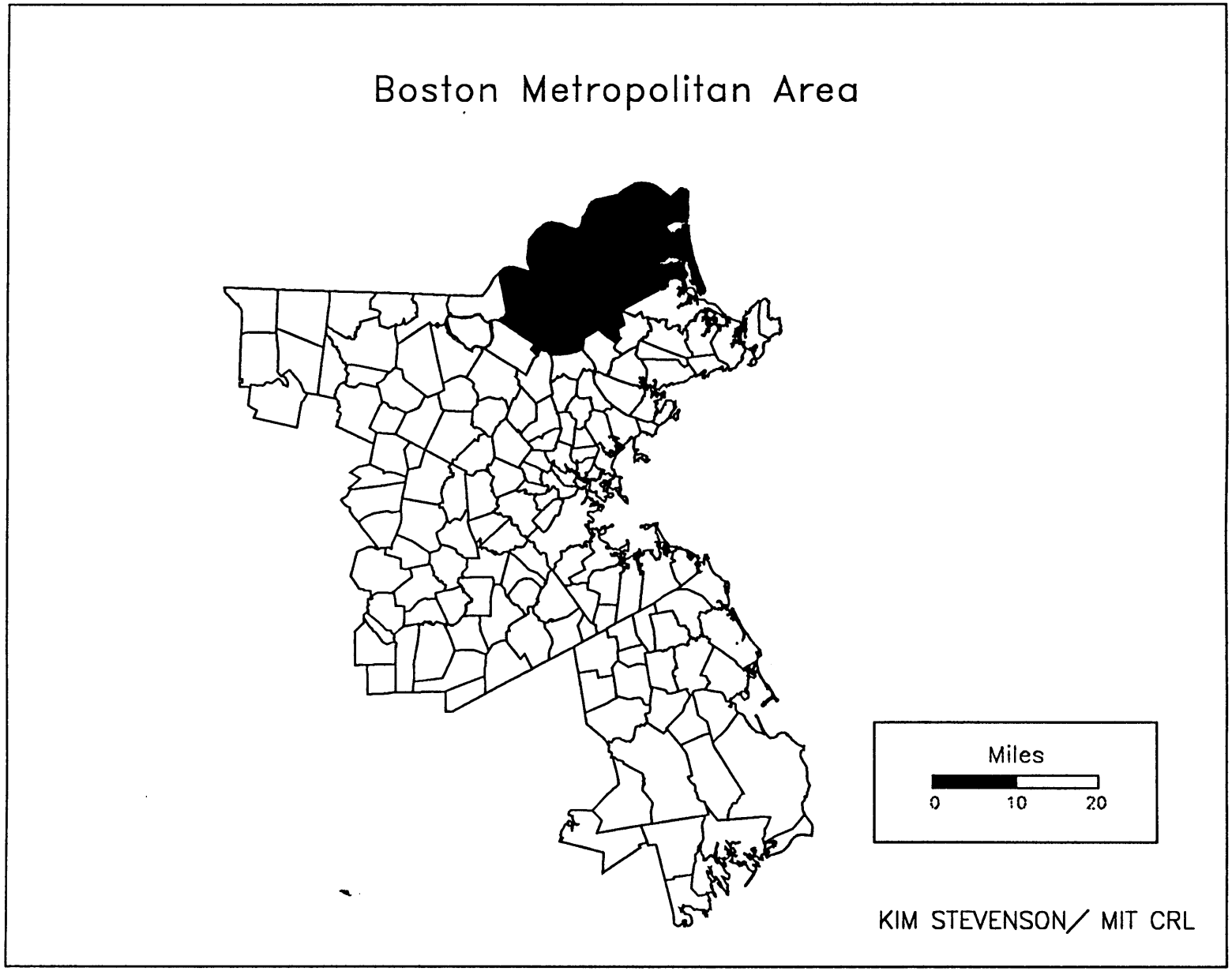
Boston Metropolitan Area
Miles
0
10
20
KIM STEVENSON/ MIT CRL

Figure 2.1

According to 1990 census data, the Lower Merrimack Valley has a total population of 288,280 persons. Lawrence is the largest and most densely populated municipality in the region with a 1990 population of 70,707, representing 24% of the region's total population. It had a 1990 population density of 10,325 persons per square mile. In contrast, Newbury and Rowley had the smallest densities, both with 24 persons per square mile in 1990. *Table 2.1* presents the total populations, land areas, and population densities in 1990 for each of the cities and towns in the region.

Table 2.1

Total Population, Land Area, and Population Density by City and Town
Lower Merrimack Valley Service Delivery Area: 1990

	Population (1990)	Land Area (Sq Mi)	Pop Density (Pop/Sq Mi)	Population as (% of SDA Pop)
Lawrence	70,207	6.8	10,325	24.4%
Newburyport	16,317	8.3	1,966	5.7%
Methuen	39,990	22.4	1,785	13.9%
Haverhill	51,418	33.1	1,553	17.8%
Amesbury	14,997	12.7	1,181	5.2%
Andover	29,151	31.1	937	10.1%
North Andover	22,792	26.6	857	7.9%
Merrimac	5,166	8.7	594	1.8%
Groveland	5,214	8.9	586	1.8%
Georgetown	6,384	13.1	487	2.2%
Salisbury	6,882	15.7	438	2.4%
Boxford	6,266	23.8	263	2.2%
West Newbury	3,421	13.9	246	1.2%
Rowley	4,452	19.0	234	1.5%
Newbury	5,623	24.0	234	2.0%
LMVSDA	288,280	268.1	1,075	100.0%

Source: 1990 Census of Population and Housing

2.2 Immigrant City: The Industrial Revolution and its Immigrant Work Force

The city of Lawrence and the Lower Merrimack Valley hold a unique place in American History. The U.S. Industrial Revolution began in the region, harnessing the hydro-power of the Merrimack River that flows through the region. Lawrence was a national center for shoe and textile manufacturing in the 1800's and early 1900's -- employing a large European immigrant workforce. The city was founded in 1847 and named after Abbott Lawrence, principal owner and president of the Essex Company.

> Between 1845 and 1850 and for a few years thereafter Lawrence was a model town. Conceived, built, and directed by Boston Brahmins, it was designed to produce cottons and woolens, but do it in an environment that was physically and morally sound. To Lawrence would come sturdy mechanics to do the city's work and be uplifted in the process. This was the way the founders looked on Lawrence. As more and more immigrants came, however, the model town soon changed to an immigrant city (Cole, 1963, p. 26).

The first immigrant workers to come to Lawrence were the Irish who fled the potato famine of 1846. Twenty years later, at the end of the U.S. Civil War, the Arlington Mill was built and large numbers of Canadians, Germans, Englishmen, and Scots came to work in Lawrence. By the early 1900's the city's immigrant population had expanded to include a significant number of Russians, Italians, French, Austrians, Turks, and other European groups. Immigrants came to Lawrence in search of work and hope of a better life. As each new group moved into the city, many endured long hours, difficult working conditions, poor health, and racial and ethnic strife in the Immigrant City.[2] More recently the city's Anglo-European population has been replaced by large numbers of immigrants from the Dominican Republic and Puerto Rico.

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[2] The history of Lawrence and its earlier immigrant work force is vividly told in *Immigrant City Lawrence, Massachusetts, 1845 - 1921* by Donald B. Cole.

2.3 Economic Cycles and the In- and Out-Migration of Industries in the Region

The first immigrant workers in Lawrence sustained a vital "mill-based" industrial economy that gradually declined and has now all but disappeared. The textile mills and shoe manufacturers moved out of Lawrence and the region -- to the South and out of the United States where labor costs were cheaper and unions were weak or non-existent. According to a report published by the Central Merrimack Valley Regional Planning District Commission (CMVRPDC, 1968), by the mid 1960's, the regional economy had made the transition from one based on textile and leather industries to a more diversified employment base, including both high-technology and service based industries.

It is unclear to me exactly how much Lawrence actually participated in the regional diversification that took place. Certainly during the 1960's, 1970's, and 1980's overall employment grew steadily the region. However, Lawrence continued to lose jobs throughout this period, particularly manufacturing jobs. As *Chapter 6* will show in greater detail, Lawrence lost 6,976 jobs between 1980 and 1990, from a total of 30,393 jobs in 1980. The city declined from holding 30% of the region's total employment in 1980 to 20% in 1990.

2.4 Automobiles, Malls, and Suburban Homes: The Move to the Suburbs

In addition to changes in the economic base of the region and shifts in the location of jobs, the two largest cities, Lawrence and Haverhill, have experienced outmigration and population decline since the 1920's. In Lawrence, for example, the population of the city peaked in 1920 at 94,270 persons (Cole, 1963, p. 209). It declined, by one third of its

1920 peak, to 63,175 persons in 1980. More recently, however, the population has increased. Between 1980 and 1990 it grew a moderate 11%, to 70,207 persons in 1990, reflecting the large numbers of Dominicans and Puerto Ricans who moved to the city.

Outmigration from the central city to the surrounding suburbs can explain much of the population migration within the region and can account for most of the population decline in the cities of Lawrence and Haverhill throughout the 1950's and 1960's (CMVRPDC, 1968, p. 29-32). *Table 2.2*, illustrates population change, natural increase, and net migration for the cities of Lawrence and Haverhill between the years of 1950 and 1965.

Table 2.2

Population Changes in Lawrence and Haverhill, MA

1950 - 1960

	Population Change	**Natural Increase**	**Net Migration**
Lawrence	-9,603	5,641	-15,244
Haverhill	-934	3,264	-4,198

1955 - 1965

	Population Change	**Natural Increase**	**Net Migration**
Lawrence	-7,024	5,107	-12,131
Haverhill	-2,187	3,802	-5,989

Source: Central Merrimack Valley Regional Planning District. 1968. *Population Report.*

Several factors probably explain why people moved to the suburbs throughout the 1950's and later. These factors include job losses and financial problems in Lawrence and Haverhill, particularly in Lawrence, and preferences for the lifestyle and amenities offered in suburban communities. Life in the suburbs was made possible by widespread use of the automobile, highway systems, and suburban shopping malls, among many other developments. For many people the suburbs offered a better option to crowded and declining city neighborhoods. These trends of outmigration continue today in Lawrence. Higher income non-Hispanic whites have left the city as poorer Hispanic immigrants have moved in.

This chapter has located and presented a brief history on the the Lower Merrimack Valley region. The literature review that follows in *Chapter 3* covers the current urban poverty debate and the economic restructuring literature. I will often refer back to this chapter in order to place points made in the literature review within the context of Lawrence and the Lower Merrimack Valley.

CHAPTER 3

EXPLANATIONS OF URBAN POVERTY FROM THE LITERATURE

In this review I present the prevailing theories proposed to explain the causes and characteristics of growing and concentrated urban poverty in U.S. cities. I begin first by discussing ghetto poverty. Next, I present Wilson's underclass model which has become central to the urban poverty debate. I also identify limitations in Wilson's model which leads me to a discussion of literature that has begun to identify links between global economic restructuring, immigration from lesser developed countries, and their subsequent impacts on poverty in ways not addressed by Wilson. In the final section of this chapter I address the importance of understanding concentrated urban poverty in terms of intra-regional spatial relationships between municipalities, a link not often made in the urban poverty literature.

3.1 Ghettos and the Urban Underclass

Ghettos are often referred to as isolated (usually urban areas) in which members are restricted because of economic pressure, social discrimination, or both. In literary circles, in the popular press, and in the media, ghettos are often presented as severely impoverished, unsavory, and dangerous places to be avoided.

The term *ghetto* often has been used interchangeably with the term *underclass*. Ken Auletta (1981, 1982) first popularized the term underclass in a series of *New Yorker* articles and then in a book entitled *The Underclass*. Auletta used the term to describe

hostile criminals, hustlers, people who have experienced long term welfare dependency, and mentally ill street people. It was later used in a series of *Atlantic Monthly* articles by Nicholas Lehmann (1986) to define inner city blacks who endure long term poverty and are dependent on welfare or illicit activities. More recently, the term has been further developed by the well known sociologist William Julius Wilson (1987) in his famous book *The Truly Disadvantaged: The Inner City, the Underclass, and Public Policy.* This book is particularly important because it has become central to the urban poverty debate. Wilson (1987, p. 8) defines the urban underclass as follows:

> . . . . that heterogeneous grouping of families and individuals who are outside the mainstream of the American occupational system. Included in this group are individuals who lack training and skills and either experience long-term unemployment or are not members of the labor force, individuals who are engaged in street crimes and other aberrant behavior, and families that experience long-term spells of poverty and/or welfare dependency.

3.2 Wilson's Model and the Urban Poverty Debate

In *The Truly Disadvantaged*, Wilson (1987, p.3) attempts to explain the conditions of the urban underclass which he considers to have reached catastrophic proportions by the mid 1970's. He explains that "[t]hese problems cannot be accounted for simply in terms of racial discrimination or in terms of culture of poverty. Rather, they must be seen as having complex sociological antecedents that range from demographic change to problems of economic organization (Wilson, 1987, p. 22)." Wilson's underclass model can be outlined in five topic areas:

Historic Discrimination

Wilson believes that historic discrimination has played an important role in creating the current conditions which inner city Blacks seem unable to escape. However, according to Wilson current social and economic conditions are more important for explaining the dislocation of the Black family today than is contemporary discrimination (Wilson, 1987, pp. 32-33).

Migration

Wilson suggests that the flow of poor migrants to cities is perhaps one of the most important factors for explaining different rates of racial and ethnic progress. High concentrations of poor migrants have a harmful effect on those already established - because they add to a labor pool competing for a limited number of jobs within labor market niches, consume community resources, and promote negative social values. Wilson acknowledges that net in-migration by Blacks into large cities ceased by 1970, however, Hispanics are migrating to urban areas in increasing numbers. He suggests that the plight of the inner-city Black family will become the plight of the inner-city Hispanic family in the future (Wilson, 1987, pp. 33-36).

Age Structure

Wilson claims that the large flows of migrants into urban areas tend to be younger than the population at large. "Much of what has gone awry in the inner city is due in part to sheer increase in the number of young people, especially young minorities (Wilson, 1987, p. 37)." Youth is associated not only with crime but also out-of-wedlock births, female-headed homes, and welfare dependency (Wilson, 1987, pp. 36-39).

Economic Changes

In order to explain the effects of economic changes taking place in American cities today, Wilson relies heavily on work by John Kasarda and Frank Levy. Citing Kasarda, he explains that urban minorities, because of their low-skill levels, have been adversely affected by structural changes in the U.S. economy including: (1) a shift from goods-producing to service-producing industries; (2) polarization of wages resulting from growth in low-wage and high-wage jobs; and (3) the movement of manufacturing jobs out of central cities.

According to Wilson, the jobs that have grown in central cities require high-skill levels, whereas those that left were low-skill jobs. In addition, the new low-skill service sector jobs that have replaced manufacturing jobs have grown predominantly in the suburbs. These changes have created both a skills and a spatial mismatch between the inner city labor force and the new jobs that are now growing within central cities (Wilson, 1987, pp. 39-42).

Wilson also blames increased black male joblessness on "general weaknesses of the national economy in recent years (Wilson, 1987, p. 44)." Citing research by Frank Levy, he explains that the loss of manufacturing jobs has had a particularly adverse impact on Blacks because the manufacturing sector, which has traditionally employed a high portion of Blacks, is "particularly sensitive to a slack economy (Wilson, 1987, p. 45)." Macro-structural economic forces, including rising OPEC oil prices, are to blame (Wilson, 1987, pp. 44-45).

Concentration Effects

Wilson also believes "that the exodus of middle- and working-class families from many ghetto neighborhoods removes an important 'social buffer' that could otherwise deflect the full impact of the kind of prolonged and increasing joblessness that has plagued inner-city neighborhoods in the 1970's and 1980's, joblessness created by uneven economic growth and periodic recessions (Wilson, 1987, p. 56). "

3.3 The Applicability of Wilson's Model to Hispanic Groups

Much of Wilson's work has focused on inner city Blacks in the Northeast, however he also recognizes that many Latin Americans and Asians are migrating to and concentrating in central cities. Wilson, therefore, uses his model to predict that the conditions of these groups will become the same as inner-city Blacks (Wilson, 1987, p. 33-36). In making this prediction, Wilson fails to acknowledge and incorporate important historical and cultural differences both between these heterogeneous groups and in comparison to Blacks.

A body of literature has recently emerged with significant evidence to suggest that Wilson's model does not apply to Latinos. As Franklin James (1988, p. 10) notes in his paper *Persistent Poverty and the Underclass: A Perspective Based on the Hispanic Experience*, "[f]our factors shape or limit the applicability of the Wilson model to Chicanos." These include: (1) different patterns of neighborhood segregation (from Blacks); (2) differences in family structure and functions; (3) immigration and migration patterns that take place within a much different context than those of Blacks; and, in

addition, (4) Hispanics, particularly Chicanos, tend to be concentrated in the Southwest where the economy is stronger and employment rates are higher (James, 1988, pp. 10-16). Although the focus of James' paper is on Chicanos, he states that these differences pertain, with varying levels of importance, to all Hispanic groups.

However, there is also substantial evidence to suggest that if the conditions of severe poverty described by Wilson are relevant to the Hispanic experience, they are most relevant to Hispanics living in Northeastern cities, particularly to Puerto Ricans. For example, frequently cited research by Massey and Eggers (1990, p. 1153) has shown that "[c]oncentrated urban poverty (in the U.S.) is confined principally to blacks outside the West and Hispanics in the Northeast." What explains these paradoxes? Furthermore, do other Hispanic groups in the Northeast, Dominicans for example, endure the same conditions as Puerto Ricans? Further research is needed to answer these questions, however the results of this study indicate that both Puerto Ricans and Dominicans live in severe poverty in Lawrence.

3.4 Limitations in Wilson's Economic Argument

Wilson believes that we must address important economic factors to fully understand ghetto poverty. However, elements of his economic argument are hotly contested. In addition, his arguments should be more fully developed within the context of a global economy. I begin this section with a discussion of the skills and spatial mismatch debate which evolved in response to transformations taking place in the U.S. economy, including changes in the location and skill requirements of jobs. Next, I introduce several models that go beyond Wilson's in explaining current structural economic changes

taking place in American cities. I briefly explain global economic restructuring, discuss the emergence of so called *global cities*, and identify the demographic and economic impacts of economic restructuring on the populations of these cities.

Skills Mismatch and Spatial Mismatch

There is general agreement among researchers that the United States has experienced a dramatic loss of manufacturing jobs and corresponding growth in service sector jobs throughout the past decade (Sassen, 1990; Kasarda, 1985; Glickman, 1983; Bluestone and Harrison, 1982). Researchers also agree that the wages and skill requirements of jobs have polarized, adversely affecting Blacks and Latinos, and squeezing out the middle class (Harrison and Bluestone, 1988; Sheets et al, 1987; Stanback and Noyelle, 1982). However, there is little agreement on the spatial mismatch and skills mismatch theories to explain high joblessness and unemployment among inner city residents, proposed by Wilson and others (Ortiz, 1991; Wilson, 1987; Kasarda, 1985).

After examining data (typically census data) that is often used to answer these questions, I realized that many studies which have tried to test these hypotheses have important methodological problems. First, highly aggregated data is used to make generalizations about large, central cities and their surrounding metropolitan areas, often disguising important intra-regional employment and residential patterns. Second, it is very difficult to accurately correlate place of work, place of residence, and job skill requirements at a level of detail that would allow us to answer the mismatch questions. Data are often suppressed at a high level of detail for purposes of confidentiality. Because of these difficulties, I found that I could only make generalizations about economic trends in this study of Lawrence and the Lower Merrimack Valley. This topic will be addressed again

in *Chapter 6*.

Furthermore, I believe that the mismatch debate draws attention away from more important questions. For example, it could even be the case that a large number of available low-skill jobs exist in the suburbs, but what kind of jobs are they? Do they pay living wages or provide incentives to encourage single parents to move off welfare? Take, for example, the case of a welfare mother with one child, receiving $486 per month in cash benefits plus health insurance.[1] If she were to work instead, making $4.00 per hour or $650 per month, this is certainly no incentive to move off welfare. Even though she is bringing home more cash now, she still has to cover transportation to work, childcare, and must, most likely, pay for costly health insurance. One could argue, however, that these low-paying, low-skill jobs provide important employment opportunities for those without children to support. But do they pull a person out of poverty or provide opportunity for advancement?

Economic Restructuring

The sectoral shift from a manufacturing to a service based economy in the United States, has taken place within a sphere of increased global competition and economic change, much more complex than that described by Wilson (1987). One of the most important explanations for the net loss of manufacturing jobs in the United States has been the development of off-shore production plants. Firms have moved their production facilities to Mexico, Puerto Rico, the Philippines, and other regions of the world where labor and other costs are significantly lower. On a global scale, there has been an expansion and

[1] This is the maximum monthly grant she can receive based upon the number of children she has. The average Massachusetts grant in January 1992 was $520 (Massachusetts Department of Welfare, 1992).

dispersion of mass production in manufacturing rather than a decline (Sassen, 1991).

Furthermore, Mollenkopf and Castells (1991) have identified additional broad and related structural changes in the international economy that have affected inner city populations. They include:

> (1) A technological revolution including the growth of global telecommunications networks;
>
> (2) The growing power of finance relative to production, and the spatial concentration of global financial markets;
>
> (3) Migration from "Third World" industrializing nations to the core cities of the "First World."

In addition, I note the fundamental changes in industrial organization and labor relations throughout the world. The following sections explain why these forces have had a direct impact on the inner city poor.

The Emergence of Global Cities

As production and manufacturing operations have decentralized and moved out of the United States, a corresponding centralization in the management of these production processes has taken place. This management often takes place in so called *global cities* including New York, London, and Tokyo; and to a lesser extent, within the United States, Los Angeles, San Francisco, Boston, Chicago, and, because it is the capital, Washington D.C. (Sassen, 1991).

Three books have recently been published with titles that attempt to encapsulate the broad transformations taking place in these large, international cities: The *Global City: New York, London, Tokyo* (1991); *The Informational City* (1989); and *The Dual City:*

Restructuring New York (1991). In their book *The Dual City: Restructuring New York,* Mollenkopf and Castells (1991, p. 415) describe the transformations taking place:

> The formation of a unified world economy organized around the ability to communicate and process information has generated both the global city and the informational city, expressed in its ability to centralize and control the information flows on which multinational corporations rely. We hypothesize that the dual city is the social expression of the emerging spatial form of post industrial society, while the global city is its economic manifestation, and the informational city is its technological expression.

Demographic Changes in Central Cities

In conjunction with these economic and technological changes, striking demographic changes are also taking place in large, central cities. Residential populations have changed from ones that were once predominantly Anglo-European to ones that now consist predominantly of Blacks, Hispanics, and Asians. Kasarda (1985, pp. 33-34) applies the following description to American cities in general:

> As predominantly white middle-income groups have dispersed from the cities (initially to the suburbs and now increasingly to the exurbs and nonmetropolitan areas), they have been only partially replaced by predominantly lower-income minority groups and a relative trickle of returning urban professionals. The outcome has been dramatic declines in both the total size and aggregate personal income levels of the cities' resident populations, while concentrations of their economically disadvantaged continue to expand.

However, in many of the largest cities, a growing number of high-income individuals are now choosing the rich cultural amenities and lifestyle offered by these cities, particularly professionals without children. The "relative trickle of returning urban professionals" referred to by Kasarda should perhaps, instead, be referred to as a "critical mass" in large, global cities like New York, San Francisco, and Chicago. Because some higher-income

individuals are actually moving back into cities, rather than migrating out, this presents a contradiction to the concentration effects Wilson describes in his model. Furthermore, one would expect the development of a growing number of lower-skilled service sector jobs (cleaning services, retail stores, restaurants, etc.) to meet the high consumption needs of these returning urban professionals. There must, therefore, be better explanations for the growth of ghetto poverty in these global cities.

The Dual City Phenomena

Mollenkopf and Castells (1991) refer to the dynamics that explain the social polarization taking place in global cities as the dual city phenomena. This dualism manifests itself in the form of residential segregation and gentrification. Within the labor market hierarchy it appears in the form of wage polarization and informalization of the labor force. Within the housing market, the growth in numbers of highly-paid urban professionals "has raised the profitability of the market for expensive housing, while growing unemployment among low-income workers has further depressed the lower end of the housing market (Sassen, 1990, p. 479)." Growing gentrification takes place next to rent increases, conversion of low to high income housing, and homelessness (Sassen, 1990, p. 480).

Within the labor market hierarchy, Sassen (1991, p. 326) explains that the core finance and producer services control a large portion of the wealth in global cities. These core industries include: advertising, accounting, legal services, business services, certain types of banking, engineering, and architectural services. Increased income polarization is caused by growing competition between firms that directly or indirectly serve these more powerful firms. In order to reduce costs and remain competitive, the dependent firms engage in subcontracting or they employ undocumented immigrants at low wages and

under poor working conditions (Sassen 1991, p. 329). Vicious competition between firms, compounded by a large pool of available labor and a growing informal economy, depresses wages and keeps unemployment high while those who control the increasingly powerful firms make high incomes.

This model is certainly a simplification of reality because relationships between people, institutions, and firms operating in any economy are much more complex than ones defined only by economic competition. In addition, this explanation assumes that firms which subcontract compete mainly on the basis of cost and not necessarily on quality or product differentiation, nor does it account for the fact that there are significant barriers to entering some business. However, this explanation does imply that low-skill jobs do, in fact, exist in large cities, but they are contingent and low-wage jobs. The growing number of rich are living next to the growing number of poor, with the latter serving the former. These dynamics serve to reinforce, rather than ameliorate, growing income and residential segregation.

Expansion of the Informal Economy

According to Sassen (1990, p. 484) and Portes et al (1989) the expansion of an informal economy[2] within growing immigrant communities is taking place in sharp contrast to the growth of an urban underclass, as described by Wilson, in Black neighborhoods. Sassen (1990) has attributed this phenomena to several factors:

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[2] Here the term *informal economy* refers the production of goods and services, outside the normal regulatory apparatus that would normally be considered legal within the mainstream economy. For example, a non-licensed, street vendor who pays no taxes on her profits.

> One key difference is the centrality of the immigrant community to the well-being of immigrants. The immigrant community can be thought of as a mechanism that transforms whatever its people have into resources: their labor power becomes entrepreneurship in a co-ethnic's enterprise, their cultural or language segregation becomes a captive market for ethnic entrepreneurs and a vehicle for the recirculation of earnings, extended households offer flexibility in the location of members in the labor market, and so on. This has meant many things, from job generation in the immigrant community to the possibility of surviving - through household income pooling - on extremely low-wage jobs in declining manufacturing industries.

This statement, therefore, suggests that there are two important factors which have led to increased inequality in these cities - extreme poverty and joblessness within Black ghettos that have virtually remained untouched by growing sectors of the economy and a second type of marginalization in the form of informal work (Sassen, 1990, p. 485). Together these explanations provide a much richer picture of the dynamics taking place within large, global cities, however, their relevance is not yet clear to smaller cities like Lawrence. Lawrence has a large and growing immigrant population, but without strong corresponding economic growth in any sector to create the linkages that exist in the global cities model. Finally, this discussion also leads us to question Wilson's argument that immigrants, even large numbers of immigrants, have a negative effect on the communities into which they come. The evidence offered here suggests that they bring with them vitality and entrepreneurship.

3.5 Immigration and Economic Restructuring

Any contemporary discussion of urban poverty would not be complete without a discussion of immigration from lesser developed countries, particularly a study of Lawrence, Massachusetts, where immigration is central to political, social, and economic

life in the city. Among the elements of economic restructuring outlined in the previous section, Mollenkopf and Castells (1991) include immigration from "Third ,World" industrializing nations to the core cities of the "First World." This is a seemingly contradictory phenomenon, particularly for cities that are creating less lucrative, and perhaps fewer, low-skill jobs. This question is particularly relevant to the city of Lawrence.

In a paper written for the Commission for the Study of International Migration and Cooperative Economic Development entitled *Unauthorized Immigration and Immigration Reform: Present Trends and Prospects* (1989), Alejandro Portes offers some insights into this question. He discusses the Latin American case specifically, and cites two important global events that have directly affected unauthorized labor migration. The first is the global economic downturn of the early 1980's that forced many of the Latin American countries into severe debt and recession causing wages and employment to decline or stagnate (Portes 1989, p.14-15). The second "is the process of industrial re-structuring which has seen thousands of jobs emigrate from plants in the advanced countries to a number of Third World production enclaves (Portes 1989, p.14). He argues that "[t]hese forces have not reduced immigration and labor outflows, particularly from the Latin American countries, instead, they have served to increase them (Portes, 1989, p.20).

According to Portes (1989, p. 15), the recession took place at a time when the Latin American countries had become more integrated into the global economy and Latin Americans had become more aware of the differences between their own living standards and those of the more developed countries. This prompted immigration to countries that

could meet their new consumption expectations. In addition, information provided by the media, kin-and-friend networks, and more accessible transportation have facilitated both legal and illegal immigration. "Thus, remote communities in the interior of Mexico or the Dominican Republic have become adept at monitoring labor market conditions in North American cities and at finding ways to actualize opportunities (Portes, 1989, p. 15)."

In addition, the globalization of manufacturing has not significantly deterred immigration to the United States for several reasons. Wages in the off-shore production plants are not high compared to U.S. standards. Second, these plants hire mainly young women between the ages of 18 and 30; therefore, men, in particular, remain in the labor pool and will tend to migrate to the United States in search of work (Portes, 1989, p. 17-20). Finally,

> "(the) . . . . demand for unauthorized workers in the United States is not likely to decline with the closure of large industrial plants since it stems primarily from agriculture and personal services. In addition, the demise of many large scale industries has created new opportunities for limited-run industrial production serving specialized local markets in cities like New York, Los Angeles and Maimi. These production activities are organized in small-scale shops, often operating as part of the informal economy. Studies of the latter have concluded that immigrants and, in particular, unauthorized workers represent an ideal labor force for this emergent sector of urban industry (Portes, 1989, p. 17-20)."

It is not clear how relevant each of these factors are for explaining the dramatic influx of Dominican and Puerto Rican immigrants to Lawrence. In particular, the argument that employment for immigrant workers exists primarily in agriculture and personal services is certainly not the case in Lawrence. In fact, according to 1980 census data, more than 80% of the Hispanic labor force in Lawrence was concentrated in manufacturing. Furthermore, despite dramatic decline, manufacturing is still an important economic base

for Lawrence and the Lower Merrimack Valley. As difficult as conditions are for many Lawrence immigrants, perhaps they are an improvement over those places where many people come from: the Dominican Republic, Puerto Rico, or the Washington Heights-Inwood section of New York City. Hope of a better life in the United States and the images created by the media may also lure people to come. In addition, the realization of these perceptions are probably made possible through the support of kin-and-friend networks and relatively cheap transportation costs from the Islands or from New York City. Another plausible explanation for the migration of Hispanic immigrants to Lawrence is the controversial assurance of welfare and and other social services to help accommodate newcomers to the city (Grollman, 1987). All are possible explanations, and provide opportunities for further research.

3.6 The Importance of Politically and Socially Defined Spaces and Intra-Regional Relationships

The discussion of urban poverty presented to this point has been based upon the urban underclass debate, centered around Wilson's model, and the global economic restructuring literature. According to Wilson's model, growing and concentrated urban poverty is primarily caused by important structural changes in the U.S. economy. It is also perpetuated by a series of individual, behavioral and personality traits that both result from and reinforce conditions of poverty. The global economic restructuring literature, on the other hand, often presents economic restructuring as a unified, global process over which the individual has little power or control. According to this view, individuals respond to, rather than play a proactive role in creating or controlling the environment in which they live. In each of these approaches it is usually assumed that

economic forces, driven by the natural laws of the market (supply and demand, profit and utility maximization, etc.) determine an individual's position in the social and economic hierarchy.

However, I believe there is no such thing as a "free-market" devoid of the influences of public policy and human and cultural relationships. In fact, "the-market" itself is a social construct created by people to organize, define, and value the exchange of goods and services within society. Markets are always embedded within social and political relations. Furthermore, although space and spatial relationships are also considered important for understanding urban hierarchies by those who have contributed to the urban underclass debate and to global economic restructuring literature,[3] the importance of socially and politically defined spaces and intra-regional relationships between municipalities are not included in their explanations of growing urban poverty. I believe space, defined as such, should be included as an important factor. What is missing in their explanations is the integration and importance of "stratified places" -- a theory of urban form that has been developed by Molotch (1967), Logan (1978), Logan and Molotch (1987), Gottdiener and Feagin (1988), Logan and Swanstrom (1990), and others.

According to this school of thought, complex social relationships between groups of people based on race, class, ethnicity, and culture play an important role in determining where people live as well as the social and economic dynamics of their communities. For

[3] For example, ghetto poverty is defined in terms of large numbers of poor people concentrated within a defined geographic area. These areas can also exist in close proximity to areas of concentrated wealth, including downtown commercial districts and gentrified residential areas. Furthermore, the skills and spatial mismatch debate is based on a spatial relationship between the inner-city labor force and low-skill jobs that supposedly exist only in the suburbs.

example, the previous discussion on immigration suggests that new immigrants will come to communities where they have kin and friends are who are already established. And as Sassen points out, the survival and well-being of immigrant communities, isolated from the mainstream because of cultural or language barriers, is based on cooperation and flexibility within these communities -- and not simply on the laws of "the market." In this example, culture both binds and separates different groups of people. Examples of geographic areas in the United States, characterized by high concentrations of certain racial, ethnic, or religious groups, or areas where custom and tradition binds people together in significant ways include: Black and Spanish Harlem in New York; Chinatown in San Francisco; Mormon communities in Utah; Amish communities in Pennsylvania; American Indian Reservations; and the growing Dominican and Puerto Rican communities in Lawrence.

The policies of local governments within a metropolis also play an important role in determining the overall socioeconomic status of a community, who can move in, and who cannot. These regulatory mechanisms include tax incentives or disincentives, zoning regulations, growth control policies, and environmental regulations. For example, an area with low density, single family zoning would restrict those with lower incomes who could only afford a small rental unit. Citing a paper written by Schneider and Logan in 1982, Logan and Molotch write in their book *Urban Fortunes* (1987, p. 195-196):

> The disparities among governments in a metropolis reinforce the advantages of fiscally stronger communities in their competition for high-income residential development and desirable forms of industrial-commercial growth. Privileged places, able to provide more advantages at lower costs, influence the decisions of industry and people of different social classes, generating different levels of benefit for the area and its residents. Rich places get richer as the well-off seek places that will make

> them still better off. Research on population changes in individual suburbs reveals that, apart from any other community characteristics, whites and wealthy families are significantly more likely to move into communities with a strong property tax base, whereas blacks and the poor tend to go elsewhere. . . . . Suburbanization thus operates as a stratifying process.

These ideas play a particularly important role in explaining the dynamics and socioeconomic changes taking place in the Lower Merrimack Valley. They are discussed in detail in *Chapter 7* and *Chapter 8*.

3.7 A Summary of the Urban Poverty Literature

This chapter has presented some of the theories and explanations for severe and growing poverty in American cities. It began by outlining Wilson's underclass model and then critiqued and questioned the applicability of this model within the broader context of the Hispanic experience; structural changes in the global and national economies; and Latin American immigration. It also addressed the importance of understanding urban poverty in terms of intra-regional, social and political relationships between municipalities. The focus of this chapter has been placed on changes taking place in large, central cities mainly because the literature focuses on these cities.

Unfortunately, there is little literature available that focuses on the links between socioeconomic changes and growing poverty in smaller cities like Lawrence. These gaps leave us with some important unanswered questions. Do the conditions of severe and persistent poverty as described by Wilson in his underclass model apply to the case of Lawrence? In what ways are the demographic and economic changes described in the literature on global cities similar to those taking place in Lawrence? What important

insights and lessons can we learn from this body of literature? Finally, are the social and political relationships between Lawrence and the surrounding municipalities significant for our understanding growing poverty in this city?

The analysis that follows in this thesis will answer some of these questions. But first, I describe my data sources and present my research methodology. I then return to these questions after establishing the patterns of ghettoization taking place in Lawrence vis a vis the surrounding municipalities.

CHAPTER 4

RESEARCH METHODOLOGY - A REGIONAL AND SPATIAL ANALYSIS

In this case study of the Lower Merrimack Valley, I examine growing urban poverty in Lawrence from a regional and a spatial perspective. This approach reveals several important regional and structural factors that contribute to the growth and concentration of poverty in Lawrence. In order to carry out such a study, I utilize the thematic mapping capabilities of a geographic information system (GIS) to visualize socioeconomic and demographic data. This approach provides a powerful tool to help us better understand and clarify patterns of urban poverty.

I begin this chapter by providing operational definitions of poverty areas, ghetto poverty areas, and ghettoization, so that I have standards by which to measure and visualize changes in poverty. Next, I describe why my methodology is unique. Then I explain what a geographic information system is and how I created the GIS developed for this study. Finally, I briefly present my data sources and explain some of the important limitations of census data, the primary data source for this study.

4.1 Defining Ghetto Poverty

In *Chapter 3*, I provided a brief discussion of ghetto poverty and explained that the term is often used synonymously with the term underclass. Because these terms have been used interchangeably in the literature to describe several different types of poverty, meanings and concepts have often been confused. In order to eliminate this confusion,

Bane and Jargowsky (1990, p. 16-17) have developed definitions to clarify the various concepts being discussed. These include persistent poverty, neighborhood poverty, and underclass poverty:

> *Persistent poverty* - individuals and families that remain poor for long periods of time and, perhaps, pass poverty on to their descendants.
>
> *Neighborhood poverty* - spatially defined areas of high poverty, usually characterized by dilapidated housing stock or public housing and high levels of unemployment.
>
> *Underclass poverty* - defined in terms of attitudes and behavior, especially behavior that indicates deviance from social norms, such as low attachment to the labor force, drug use and habitual criminal behavior, bearing children out of wedlock, and receiving public assistance.

Furthermore, to develop standards by which to measure the social and economic phenomena these terms refer to, very precise definitions of underclass and ghetto have been developed. Two efforts, frequently referenced in the literature, include one study by Ricketts and Sawhill (1988) and the other, referenced above, by Bane and Jargowsky (1990). Ricketts and Sawhill (1988, p. 321) define an underclass area as:

> a census tract with a high proportion of (1) high school dropouts; (2) prime-age males not regularly attached to the labor force; (3) welfare recipients; and (4) female heads of households. "A "high proportion" for each indicator is defined as a proportion which is one standard deviation above the mean for the country as a whole. To qualify as an underclass area, a tract must score one standard deviation above the mean for all four indicators. A member of the underclass would be someone in an underclass area who engages in various socially costly behaviors."

Bane and Jargowsky (1990, p.19), on the other hand, adopt a more simple definition of ghetto areas. They define "ghetto neighborhoods" as those census tracts in which 40% or more of the population lives in poverty. The ghetto poor are defined as those people who

live in the ghetto-poverty census tracts.

The term poverty, as it is used by Bane and Jargowsky and in this thesis, refers to the census definition of poverty based on household income and the number of household members. For example, in 1990, a single person living alone would be considered below the poverty level if he or she made $6,310 per year or less; three persons $9,999 or less; five persons $14,572. In addition, each of these definitions incorporate census tracts as their geographic unit of analysis. Census tracts are statistical areas averaging about 4,000 people. Counties are subdivided into census tracts. In the New England states census tract boundaries are also usually contained within municipal boundaries. These geographic areas tend to remain fairly constant between decennial census enumerations, unless an area gains or loses significant population between the ten years. For example, the city of Lawrence had a total of 19 census tracts in 1990, each averaging 3,700 persons per tract.

In addition to defining ghetto poverty, Bane and Jargowsky (1990, pp. 25-31) show that ghetto neighborhoods exhibit many of the characteristics described by Ricketts and Sawhill (1988) and Wilson (1987). These include: (1) a high portion of residents who are minority group members; (2) large numbers of female headed households that rely on welfare for support; (3) high portion of males between the ages of 25 and 44 are out of the labor force or unemployed; and (4) very low rates of education attainment.

4.2 Defining Patterns of Ghettoization

In this thesis, I adopt Bane and Jargowsky's (1990) definition of ghetto poverty areas because of its simplicity. In addition, I adopt the U.S. Bureau of the Census' definition of "poverty areas"-- areas in which the number of persons living in poverty is 20% or

more. I refer to ghettoization as a relative process in which poor areas expand in number and grow increasingly poorer. Ghettoization also refers to the process in which poor and ghetto areas increasingly develop the characteristics associated with concentrated urban and ghetto poverty, while those areas that surround them do not.

In order to show that Lawrence is becoming an urban ghetto relative to the surrounding municipalities in the Lower Merrimack Valley, I must therefore show the following changes taking place:

1. High and growing rates of concentrated poverty in Lawrence and higher relative to the surrounding municipalities.

2. Growth in the number and concentration of female headed households in Lawrence and higher relative to the surrounding municipalities.

3. High rates of welfare dependency in Lawrence and relative to the surrounding municipalities.

4. High rates of joblessness and unemployment in Lawrence and higher relative to the surrounding municipalities.

5. Low rates of educational attainment in Lawrence and lower relative to the surrounding municipalities.

Because of time constraints, I do not present education statistics in my analysis.

4.3 A Spatial Analysis of Lawrence and the Lower Merrimack Valley

In order to carry this task out, I develop and use spatial analysis techniques, including the thematic mapping capabilities of a geographic information system. I analyze the patterns of ghettoization in Lawrence from a regional perspective, using cities and towns as the geographic unit of analysis.

Because socioeconomic changes in Lawrence have been more severe than those in any of the surrounding towns, I examine patterns of poverty, rates of female headship, etc, at a micro level within Lawrence, using both census tracts and census block groups as the units of analysis. Block groups are smaller subdivisions within census tracts -- where each tract contains between 2 and 6 block groups. In Lawrence each block group contains, on average, 1,100 persons. There were 62 census designated block groups in Lawrence in 1990.

This methodology represents a divergence from most traditional poverty studies that have primarily used census tracts as the unit of analysis to identify correlations between high concentrations of poverty, demographic and socioeconomic variables, and behavioral characteristics. Very detailed studies, using census block groups as the unit of analysis, have not generally been used in the past, simply because the data has not been readily available, nor the technology to easily analyze it and because census tracts have become the standard unit of analysis.

Regional studies that examine spatial and socioeconomic relationships among cities and towns are not common because politically defined boundaries have generally not been considered important to our understanding of growing urban poverty. By incorporating these two new approaches, my work shows that an analysis of census block groups allows us to visualize, in greater detail, socioeconomic changes taking place within a city. Furthermore, it also illustrates the importance of understanding the patterns of ghettoization taking place in Lawrence from a regional perspective.

4.4 A Geographic Information System (GIS)

A geographic information system is a computerized information system that is designed to store, update, manipulate, analyze, and display, geographically referenced information. GIS is a new and rapidly growing technology. Its potential is still being tested in many areas from environmental research to market studies. The model I use in this thesis provides an innovative way of using GIS to better visualize and understand concentrated poverty and related socioeconomic and demographic variables within a region and within a small city.[1] It also creates the framework to incorporate additional census data in future studies.

Creating the GIS: Building the Boundary Files and Extracting the Demographic Data

The GIS developed for this study was created by building two sets of boundary files. The first included the block groups in Lawrence, Massachusetts.; the second included a base map of the cities and towns in the Lower Merrimack Valley Service Delivery Area. These were built from the 1990 Massachusetts Census TIGER/Line™ File.[2] Attribute files, containing 1980 and 1990 census demographic, household composition, and housing data, stored in digital format, were extracted from CD-ROM's[3] and then linked to the boundary files using a unique identifier common to both the geographic and attribute files. Those data sets that were not available in digital format were included manually. Once the attribute and geographic data were linked, descriptive thematic maps

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[1] The GIS for this study was developed on a IBM PC/AT 486 using ATLAS*GIS software. dBase 4.1 was used to link and manipulate the attribute data.

[2] TIGER™ stands for Topologically Integrated Geographic Encoding and Referencing System. It is the automated geographic data base used by the Census Bureau for their 1990 census taking.

[3] Compact Disk - Read Only Memory

were created using the thematic mapping utilities provided with the GIS software.

The Analytical Power of GIS and Technological Developments at the Bureau of the Census

Technological developments, including CD-ROM's and the development of the TIGER/Line™ Files, have greatly increased our ability to analyze and map census data. Census data is now available on compact disks at a capacity and level of detail previously not possible without considerable difficulty. A single CD-ROM, designed for use on personal computers, can hold up to 500 megabytes of information (the contents of approximately 1,500 floppy disks).

The fact that census data is now available in CD-ROM format makes it much more accessible to the computer literate general public. Special orders from state data centers or the trouble of dealing with cumbersome magnetic tapes can now be avoided. Because the data has been formatted and stored in dBase III+ format, it is compatible with or can be converted to become compatible with many other database and spreadsheet software products. For example, the ease with which 1990 census block group data, in digital format, were extracted for this study would have been possible only with advanced capabilities and specialized knowledge in 1980.

However, Census data is prolific and its complexity cannot be underestimated. The successful extraction and use of digital census data requires some important skills including an understanding of: (1) hierarchical database structures; (2) the format and structure of computerized census data; (3) how to extract data from a CD-ROM in order to obtain only that information which is required for a specific study;[4] and (4) the

[4] Because of its sheer volume, census data stored on a CD-ROM must be selectively ex-

conversion of data organized in dBASE III+ to other formats so that it can be read by different software utilities if necessary.

Census data is certainly now more accessible at a very detailed level to the general public, but it would be naive to think that one could access it at the "push of a button." Its use requires a fairly steep learning curve for the beginner. Technology that allows ease of use to the non-computer literate general public is yet to be made readily available.

Databases, Spreadsheets, and Graphics

As mentioned earlier, dBase 4.1 was the database management software used to manipulate the attribute data, create calculated fields, and link it to the geographic boundary files. In addition, EXCEL was used as the spreadsheet platform to perform additional calculations and display data in tabular format. EXCEL provides a utility that allows the user to import and export data between it and dBase format, therefore, fields calculated within EXCEL are easily converted into dBase format and linked to the geographic files. EXCEL also provides graphic capabilities to present data as charts, histograms, or line graphs.

4.5 Data Sources and Data Limitations

Census data is the primary source of data used in this thesis, however several other data sets were also used. These include: (1) poverty and income, demographic, and housing data from the U.S. Bureau of the Census; (2) welfare data provided by the Massachusetts

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tracted using specialized software. Public domain software entitled EXTRACT, distributed by the Bureau of the Census and available to the general public, does this job. For the purposes of this study, a program entitled CRLDBF, developed in the Computer Resource Lab (CRL) at MIT was used to extract 1990 census data in .DBF format.

Department of Welfare; and (3) employment and industry data from the Massachusetts Department of Employment and Training (DET) and the U.S. Bureau of the census. Each of these data sets are outlined in detail in *Appendix 1*. *Appendix 2* provides a description of the racial and ethnic classifications developed by the U.S. Bureau of the Census and presented in this data.

On a final note, because census data is central to this thesis, it is important to acknowledge its limitations. It is often the case that Blacks, Hispanics, and immigrant populations are undercounted or miscounted in decennial census enumerations. The margin of error in the census undercount is very difficult to estimate, particularly among immigrant populations. There are several possible reasons for miscount or undercount. Individuals may fear or may be unwilling to comply with government officials because they are tax evaders or undocumented immigrants. Others may have no permanent residence. In addition, the definition of family has taken on a new meaning and has become more ambiguous with growing numbers of divorces, single-parent households, and married couples without children (Mitroff, Mason, and Barbabba, 1983, pp. 1-13).

Lawrence has a large number of immigrants and, consequently, it is highly likely their numbers exceed those recorded in any of the decennial census enumerations. Therefore, it is important to remember that any census totals provided in this thesis and used to count the Hispanic population in Lawrence, are probably significant underestimations. Furthermore, income, poverty, and other data may or may not be biased depending on the quality of the information returned.

The Chelsea Commission on Hispanic Affairs of Chelsea, Massachusetts recently published a demographic report describing the Hispanic groups living in Chelsea. This study helps indicate the potential magnitude of the undercount in Lawrence. Lawrence's population is approximately 2.4 times greater that that of Chelsea's, but the two cities are similar in many respects. Chelsea, like Lawrence, has historically been a city of immigrants and a working class city. According to the report, it is estimated that close to half of Chelsea's population is Hispanic.[5] However, according to 1990 Census statistics, Hispanics constitute 31.4% of Chelsea's population. This number is 18.6% less than the estimate indicated by the Chelsea Commission. If Lawrence experienced a census undercount similar in proportion to that of Chelsea's and if the Chelsea estimate is correct, this implies that Hispanics might constitute as large a proportion as 60% of Lawrence's population. This number is significantly larger than the 42% figure recorded by Census officials in Lawrence.

Although census data is often the best, and sometimes the only source of socioeconomic and demographic data available, unfortunately, there is no easy way to determine its reliability for cities like Lawrence. We can only be aware that problems exist and must, therefore, interpret the statistics presented in the analysis that follows in *Chapters 5, 6, 7,* and *8* with an element of skepticism. Chapter 5 begins by showing patterns of poverty, female headship, and welfare dependency in the region.

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[5] This estimate was made with the help of rosters from various community organizations including churches in the city. The largest Hispanic group in Chelsea is from Puerto Rico; the second largest is from El Salvador (Chelsea Commission on Hispanic Affairs, 1990).

CHAPTER 5

POVERTY, FEMALE HEADSHIP, AND WELFARE DEPENDENCY

According to the urban poverty research presented in *Chapter 3*, growing and concentrated urban poverty is associated with high rates of female headship and welfare dependency among other characteristics. In this chapter I examine the relationships between high poverty rates, per-capita income, and high rates of female headship for each of the cities and towns in the Lower Merrimack Valley between 1980 and 1990. High rates of welfare dependency in Lawrence relative to the surrounding region in 1990 are also shown. Once I establish the relationships between each of these variables at the regional level, I illustrate, in detail, exactly how changes in poverty and female headship manifested themselves spatially within Lawrence between 1980 and 1990.

As a result of this analysis, striking patterns of spatial polarization and marginalization are shown to be taking place in Lawrence relative to the surrounding region. Between 1980 and 1990, for example, the number of persons living in poverty in the city of Lawrence grew from 19.3% to 27.5%. This trend lies in sharp contrast to changes in the surrounding cities and towns which either maintained their 1980 poverty levels or experienced declines. The increase and growing spatial polarization of high rates of poverty in Lawrence relative to the surrounding municipalities is similar to spatial trends in the growth and concentration of female headed households in the region.

5.1 Municipal Poverty Rates and Changes in Per-Capita Income

Poverty rates in Lawrence were much higher than those in any of the surrounding cities and towns in both 1980 and 1990 as *Figure 5.1* illustrates. Regional poverty rates in 1990 ranged from a high of 27.5% in Lawrence to a low of 1.5% in Boxford. These statistics are shown in *Table 5.1*. Even more striking is a regional comparison of percentage point changes in municipal poverty rates between 1980 and 1990. Lawrence is the only municipality in the region that experienced an increase in its poverty rate between 1980 and 1990. As shown in *Figure 5.2*, the number of persons living in poverty in Lawrence increased by 8.2 percentage points. All other municipalities, except Boxford, the wealthiest town in the region and the one with the lowest poverty rates, showed a decline in their poverty rates. Boxford showed no change between 1980 and 1990.

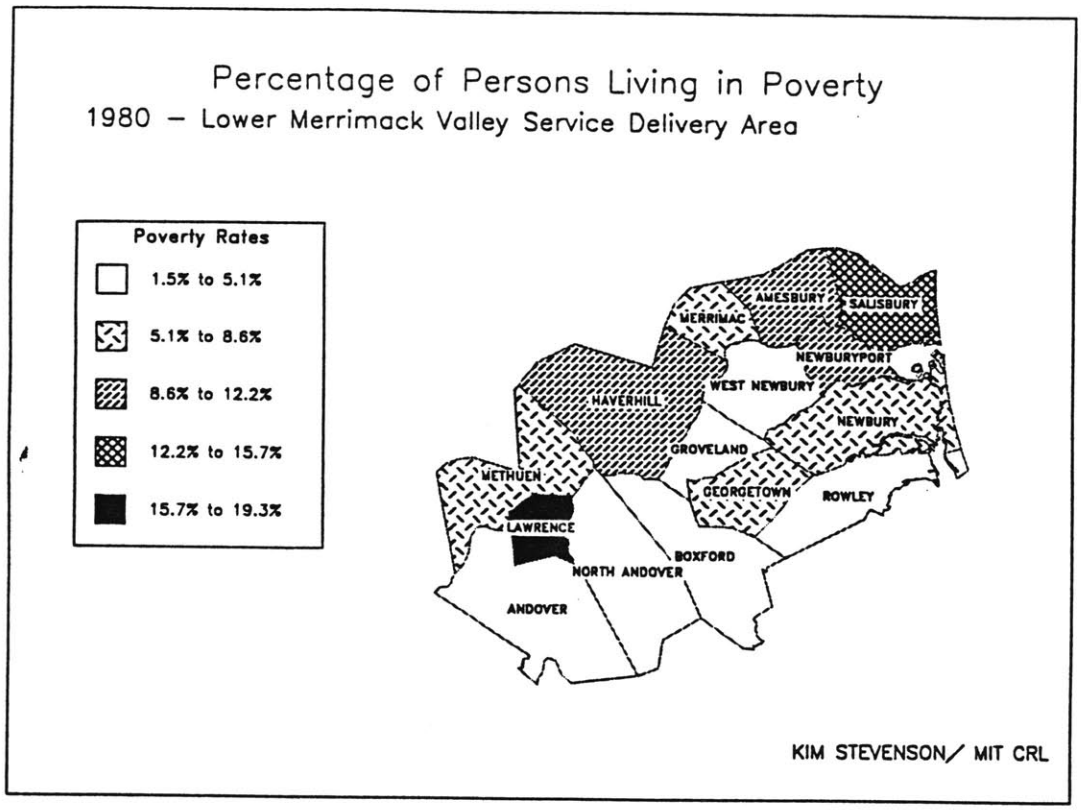
Table 5.1

Poverty Rates
Lower Merrimack Valley Service Delivery Area
1980-1990

	Pcntg Pt Chng Poverty Rate 1980-1990	Poverty Rate 1990	Poverty Rate 1980
Lawrence	8.2	27.5%	19.3%
Boxford	0.0	1.5%	1.5%
North Andover	-0.3	2.8%	3.1%
Methuen	-0.5	7.2%	7.7%
Andover	-0.9	2.9%	3.8%
Groveland	-1.6	2.3%	3.9%
Haverhill	-1.7	8.8%	10.5%
West Newbury	-2.0	2.1%	4.1%
Rowley	-2.1	1.5%	3.6%
Georgetown	-2.5	5.3%	7.8%
Merrimac	-2.9	5.0%	7.9%
Newburyport	-3.8	5.7%	9.5%
Amesbury	-3.8	6.3%	10.1%
Salisbury	-4.3	8.6%	12.9%
Newbury	-5.0	3.2%	8.2%

Source: 1980 and 1990 Census of Population and Housing

Figure 5.1


Percentage of Persons Living in Poverty
1980 – Lower Merrimack Valley Service Delivery Area
Poverty Rates
1.5% to 5.1%
5.1% to 8.6%
8.6% to 12.2%
12.2% to 15.7%
15.7% to 19.3%
AMESBURY
SALISBURY
MERRIMAC
NEWBURYPORT
WEST NEWBURY
HAVERHILL
NEWBURY
GROVELAND
METHUEN
GEORGETOWN
ROWLEY
LAWRENCE
BOXFORD
NORTH ANDOVER
ANDOVER
KIM STEVENSON/ MIT CRL

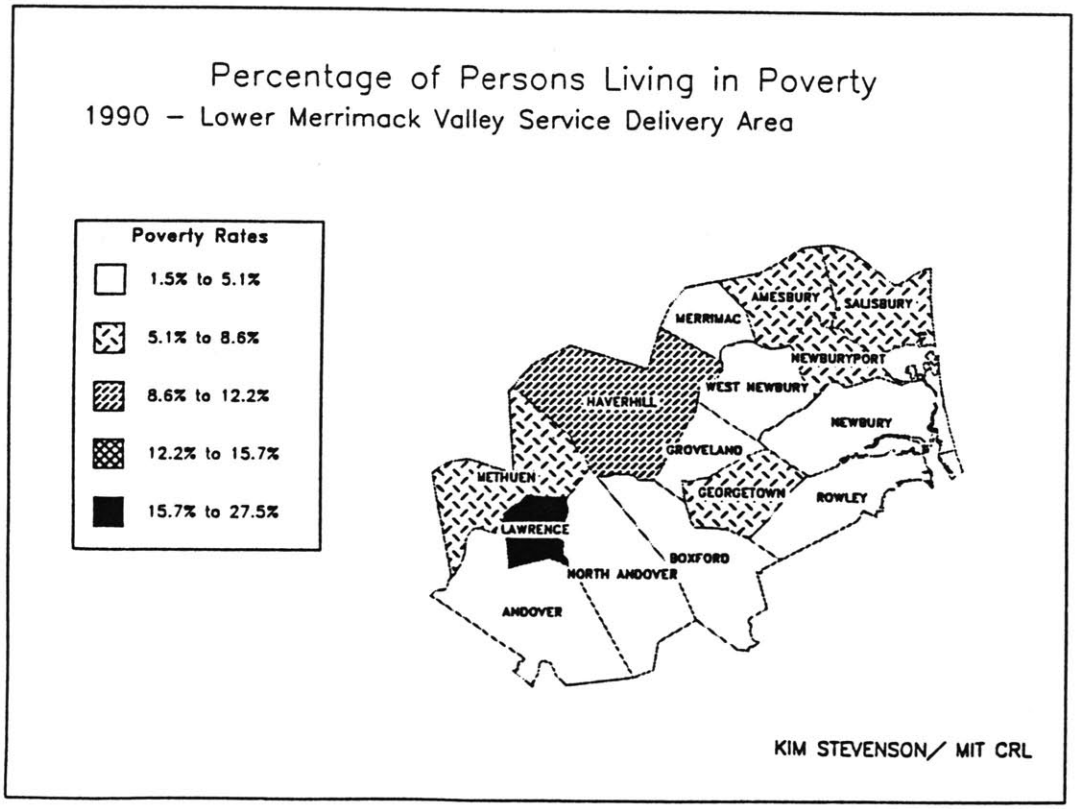
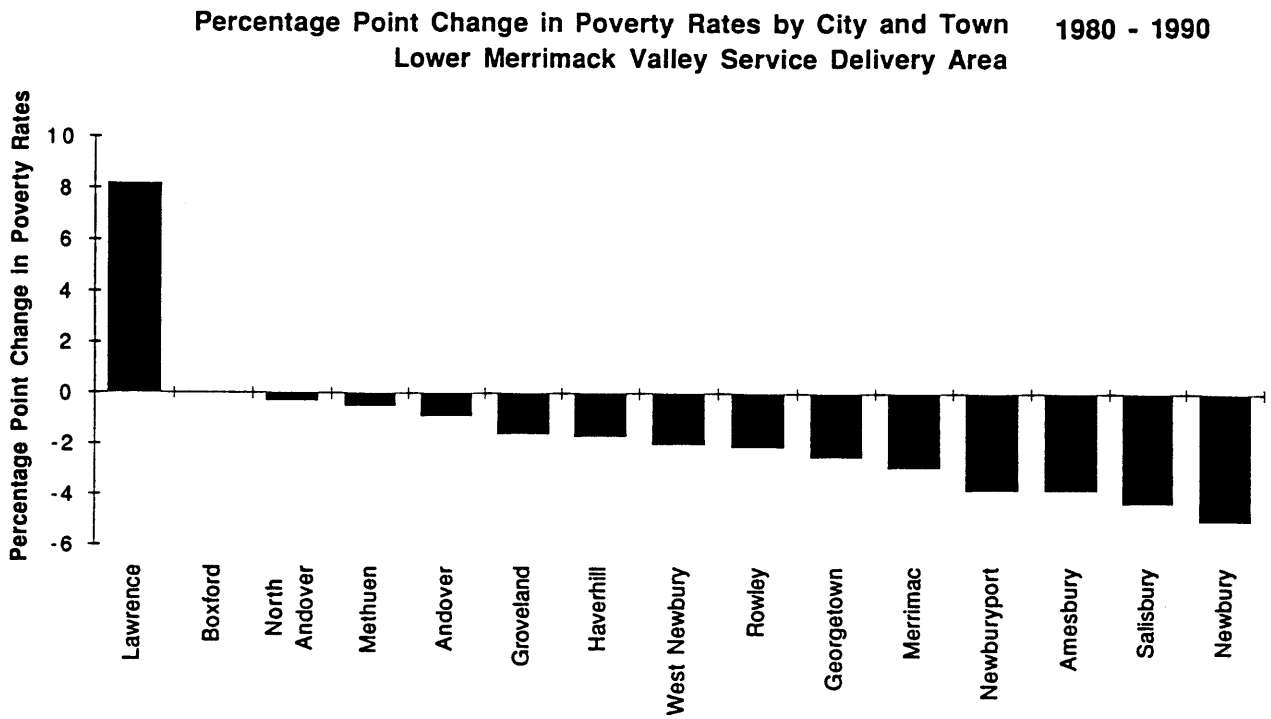

Percentage of Persons Living in Poverty
1990 – Lower Merrimack Valley Service Delivery Area
Poverty Rates
1.5% to 5.1%
5.1% to 8.6%
8.6% to 12.2%
12.2% to 15.7%
15.7% to 27.5%
AMESBURY
SALISBURY
MERRIMAC
NEWBURYPORT
WEST NEWBURY
HAVERHILL
NEWBURY
GROVELAND
METHUEN
GEORGETOWN
ROWLEY
LAWRENCE
BOXFORD
NORTH ANDOVER
ANDOVER
KIM STEVENSON/ MIT CRL

Figure 5.2



Source: 1980 and 1990 Census of Population and Housing

Percentage changes in per-capita incomes among the municipalities also showed similar trends. Lawrence experienced a meager 5% increase in per-capita income (adjusted for inflation) between 1980 and 1990, while all other municipalities experienced increases greater than 30%. These changes are illustrated in *Figure 5.3*. It is also significant that the wealthiest towns generally showed the highest percentage increases in per-capita income (e.g. Boxford, Andover, and North Andover), whereas, the poorer municipalities showed smaller increases (e.g. Lawrence, Salisbury, and Amesbury). These statistics are shown in *Table 5.2*.

Table 5.2

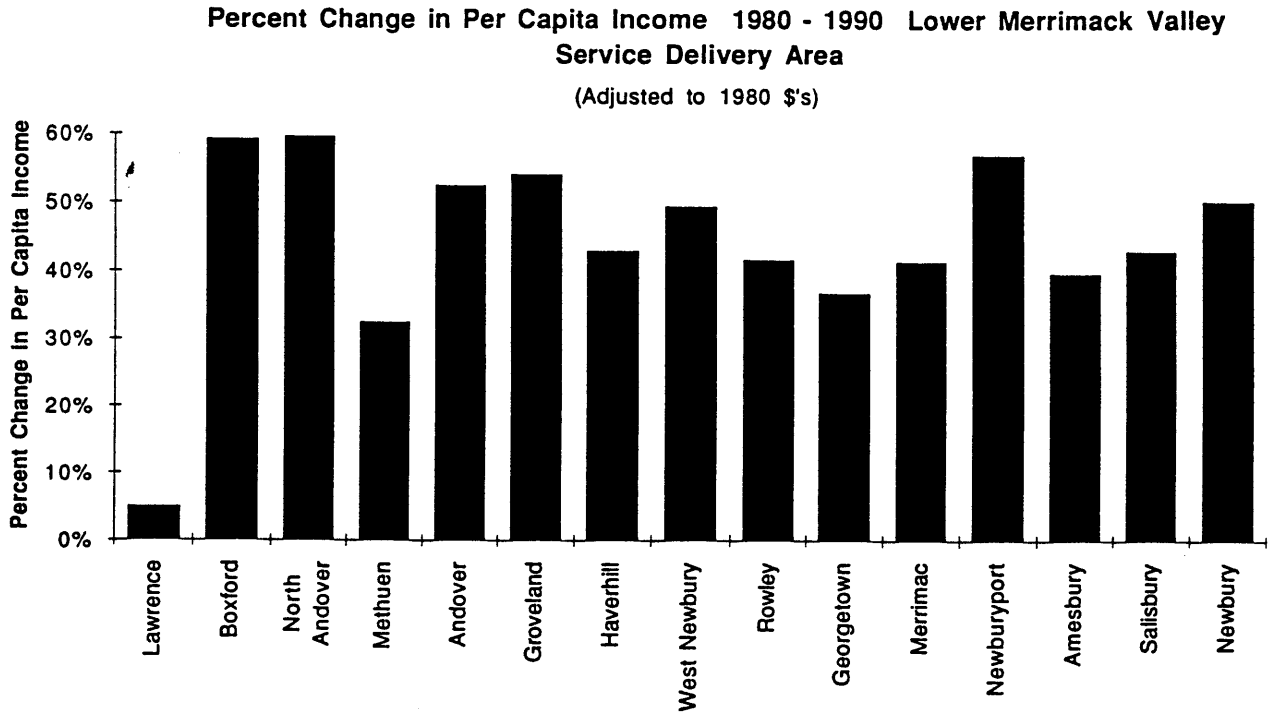
Per Capita Incomes
Lower Merrimack Valley Service Delivery Area
1980 - 1990

	Per Capita Income 1990	Per Capita Income 1990 (Adj)*	Per Capita Income 1980	Per Capita Change 1980-1990*	Per Capita % Change 1980-1990*
Boxford	$30,634	$18,217	$11,442	$6,775	59.2%
Andover	$26,327	$15,656	$10,267	$5,389	52.5%
North Andover	$22,957	$13,652	$8,554	$5,098	59.6%
West Newbury	$20,450	$12,161	$8,140	$4,021	49.4%
Groveland	$20,038	$11,916	$7,731	$4,185	54.1%
Newbury	$19,917	$11,844	$7,888	$3,956	50.2%
Newburyport	$19,008	$11,304	$7,206	$4,098	56.9%
Rowley	$18,130	$10,781	$7,611	$3,170	41.7%
Georgetown	$17,571	$10,449	$7,639	$2,810	36.8%
Merrimac	$16,327	$9,709	$6,866	$2,843	41.4%
Methuen	$15,598	$9,276	$7,002	$2,274	32.5%
Haverhill	$15,464	$9,196	$6,433	$2,763	43.0%
Amesbury	$15,423	$9,172	$6,571	$2,601	39.6%
Salisbury	$14,455	$8,596	$6,015	$2,581	42.9%
Lawrence	$9,686	$5,760	$5,485	$275	5.0%

Sources: 1980 and 1990 Census of Population and Housing
U.S. Department of Labor - Bureau of Labor Statistics

*** 1990 values were adjusted for inflation using the Boston Area Consumer Price Index of all Urban Consumers (CPI-U), 1982 - 1984 = 100**

Figure 5.3



Source: 1980 and 1990 Census of Population and Housing

These data indicate that the poorest municipality, Lawrence, is becoming increasingly more marginalized, particularly from three of its closest neighbors: Andover, North Andover, and Boxford. Furthermore, income data show that per-capita incomes increased in all cities and towns, however increases were substantially higher in the wealthiest municipalities. As the following section shows, growth in the number and concentration of female headed households showed similar patterns of spatial polarization throughout the region.

5.2 Rates of Female Headship in the Region

The Lower Merrimack Valley experienced a sharp increase in the number of female headed households between 1980 and 1990 (an increase of 2,142 households or 30%). Even more striking was the large increase in female headed households in Lawrence (1,883 households) accounting for 88% of the net increase in the region. Furthermore, Lawrence had the highest rates of female headship in the region in both 1980 and 1990 - 31.4% in 1980 and 43.9% in 1990[1] These statistics are illustrated in *Figure 5.4* and shown in *Table 5.3*.

Unlike changes in the regional poverty rates, the percentage of female headed households increased in half the cities and towns and declined in the other half. However, the 12.5 percentage point increase in Lawrence was significantly higher than that in any of the surrounding cities and towns. Methuen showed the second highest increase of 3.3 percentage points, in contrast to Amesbury which showed the largest decline of 2.9

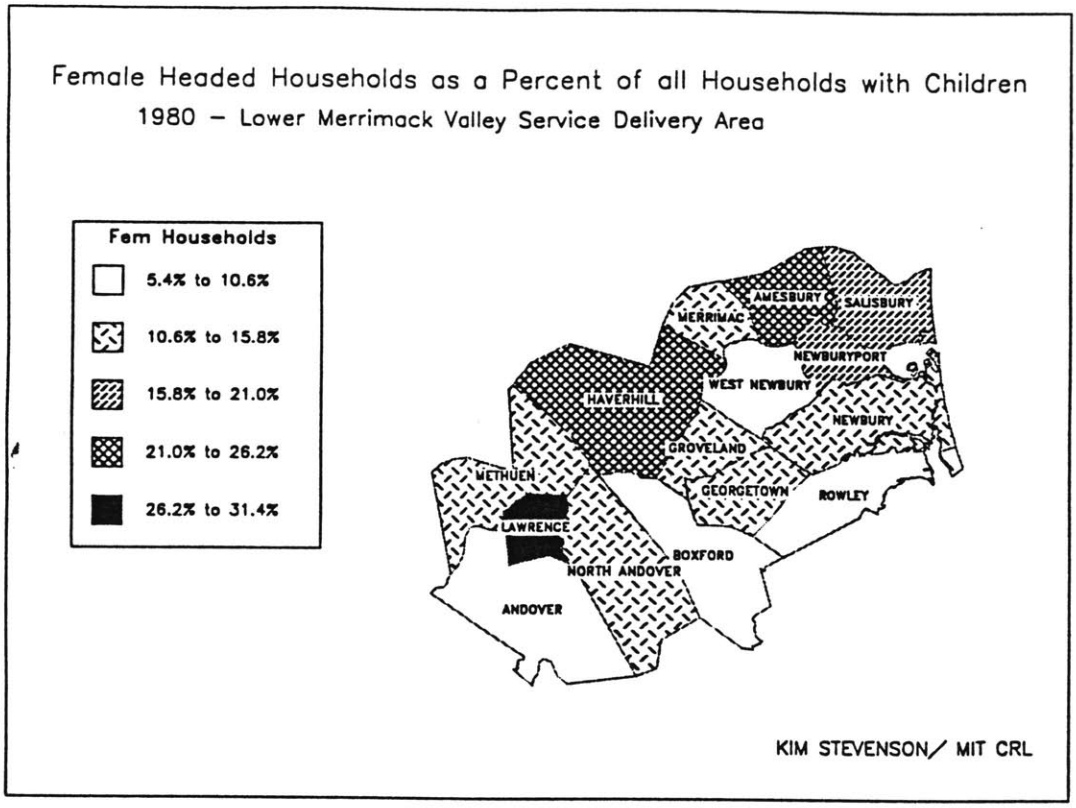
[1] The term female headed households refers only to those female headed households with children under age 18. The rate of female headship was calculated by dividing the number of female headed households with children under age 18 by the number of all households with children.

percentage points. These changes are illustrated in *Figure 5.5*. Note that those cities and towns, closest in proximity to Lawrence, showed the highest percentage point increases in female headship. Further research would be necessary to explain why this is the case.

Dramatic growth in the number of female headed households in Lawrence is important for our understanding of growing and concentrated poverty in Lawrence relative to the surrounding region. High rates of poverty are strongly correlated with high rates of female headship. For example, in 1980, 17% of all persons living in families in Lawrence lived in poverty, whereas, 68% of all persons in female headed households lived in poverty. It is also important to note that poverty rates among Hispanic female headed families are particularly severe. Ninety eight percent of all persons living in a household headed by a Hispanic mother in Lawrence lived in poverty in 1980. This fact is particularly relevant to the case of Lawrence because of the high and growing concentration of Hispanic persons living in the city.

According to 1990 census statistics, 42% of Lawrence's population or 29,200 persons are of Hispanic origin. These 1990 figures represented an almost three fold increase in the number of Hispanic persons living in the city between 1980 and 1990. They are also significant for our understanding of growing poverty in Lawrence and will be discussed in much greater detail in *Chapter 7*.

Figure 5.4


Female Headed Households as a Percent of all Households with Children
1980 – Lower Merrimack Valley Service Delivery Area
Fem Households
5.4% to 10.6%
10.6% to 15.8%
15.8% to 21.0%
21.0% to 26.2%
26.2% to 31.4%
AMESBURY
SALISBURY
MERRIMAC
NEWBURYPORT
WEST NEWBURY
HAVERHILL
NEWBURY
GROVELAND
METHUEN
GEORGETOWN
ROWLEY
LAWRENCE
BOXFORD
NORTH ANDOVER
ANDOVER
KIM STEVENSON/ MIT CRL

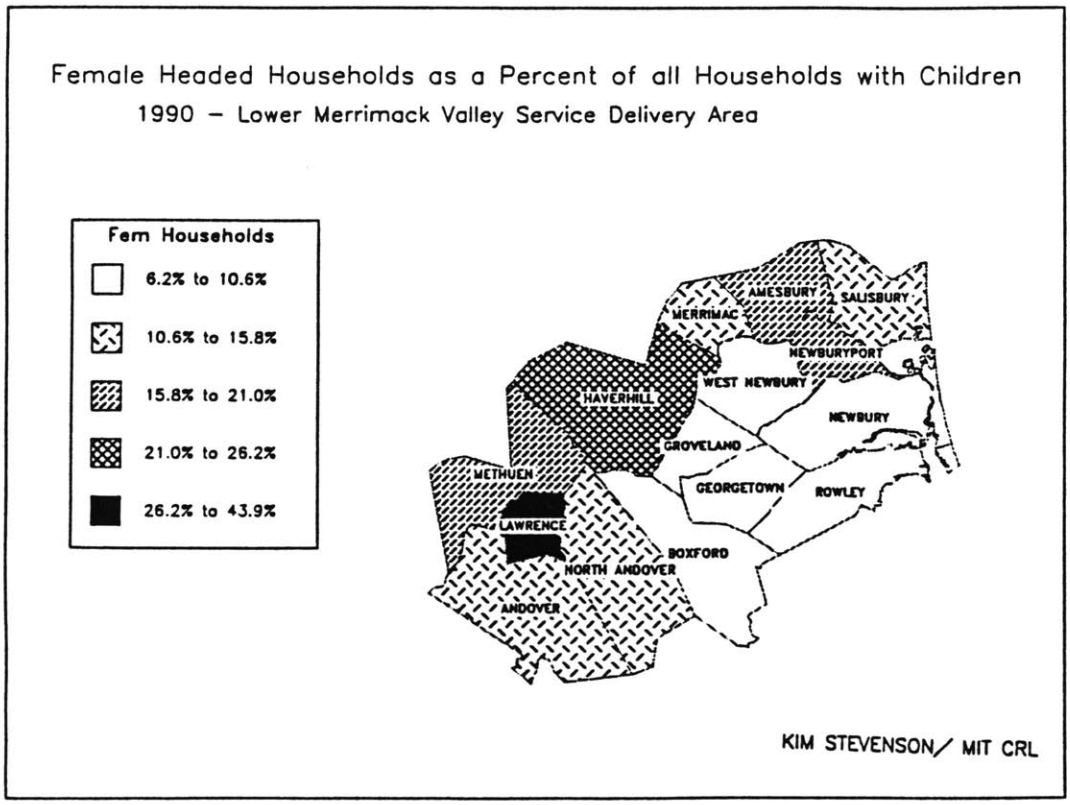

Female Headed Households as a Percent of all Households with Children
1990 – Lower Merrimack Valley Service Delivery Area
Fem Households
6.2% to 10.6%
10.6% to 15.8%
15.8% to 21.0%
21.0% to 26.2%
26.2% to 43.9%
AMESBURY
SALISBURY
MERRIMAC
NEWBURYPORT
WEST NEWBURY
HAVERHILL
NEWBURY
GROVELAND
METHUEN
GEORGETOWN
ROWLEY
LAWRENCE
BOXFORD
NORTH ANDOVER
ANDOVER
KIM STEVENSON/ MIT CRL

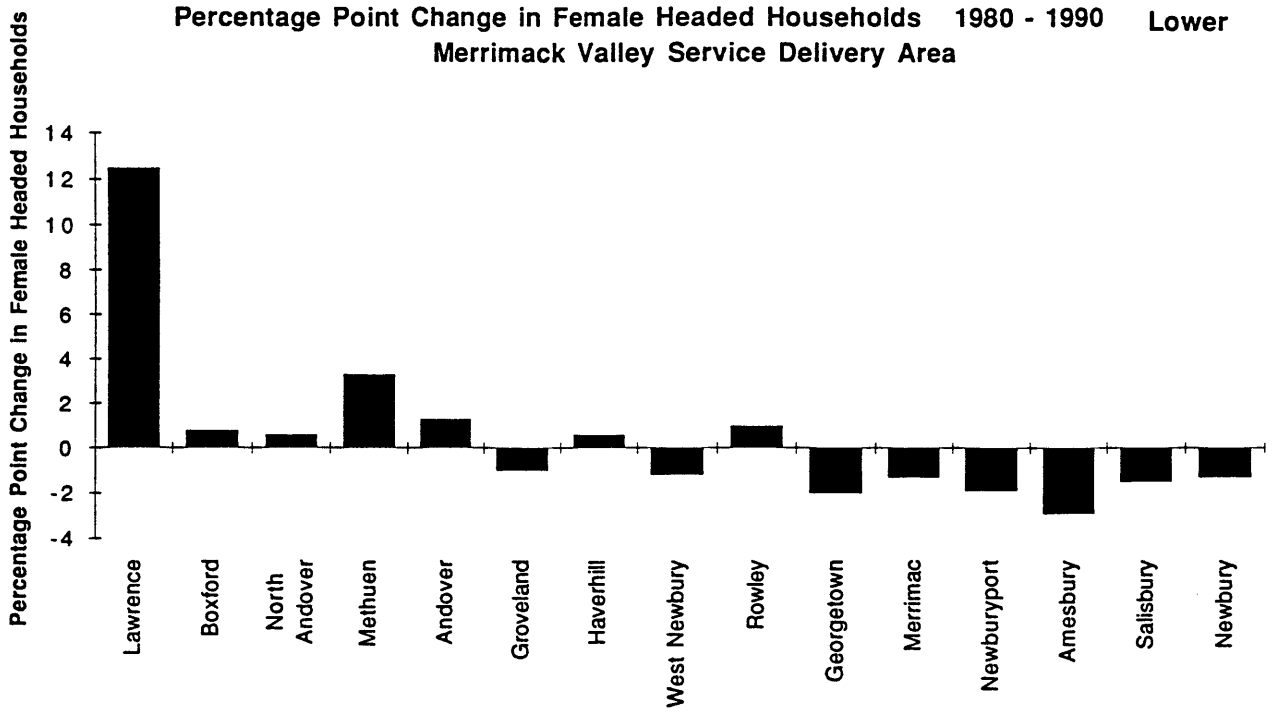
Table 5.3

Female Headed Households
Lower Merrimack Valley Service Delivery Area
1980-1990

	Pcntg Point Change in Female Headed Households 1980-90	Change in Female Headed Households 1980-90	Female Headed Households 1990	Percent Female Headed Households 1990*	Female Headed Households 1980*	Percent Female Headed Households 1980
Lawrence	12.5	1,883	4,595	43.9%	2,712	31.4%
Methuen	3.3	184	956	18.9%	772	15.6%
Andover	1.3	59	447	10.9%	388	9.6%
Rowley	1.0	15	66	9.7%	51	8.7%
Boxford	0.8	8	56	6.2%	48	5.3%
Haverhill	0.6	134	1,577	23.3%	1,443	22.7%
North Andover	0.6	49	388	13.3%	339	12.7%
Groveland	-1.0	(16)	76	10.2%	92	11.2%
West Newbury	-1.2	0	34	6.6%	34	7.7%
Newbury	-1.3	3	77	10.0%	74	11.3%
Merrimac	-1.3	(1)	97	12.9%	98	14.2%
Salisbury	-1.5	(7)	143	15.4%	150	16.9%
Newburyport	-1.9	(83)	353	18.0%	436	20.0%
Georgetown	-2.0	(15)	83	9.1%	98	11.0%
Amesbury	-2.9	(37)	419	18.9%	456	21.9%
LMVSDA Totals	4.3	2,142	9,333	23.8%	7,191	19.6%

Source: 1980 and 1990 Census of Population and Housing

*** The percentage of female headed households was calculated by dividing the number of female headed households with children under 18 by the number of all households with children under 18.**



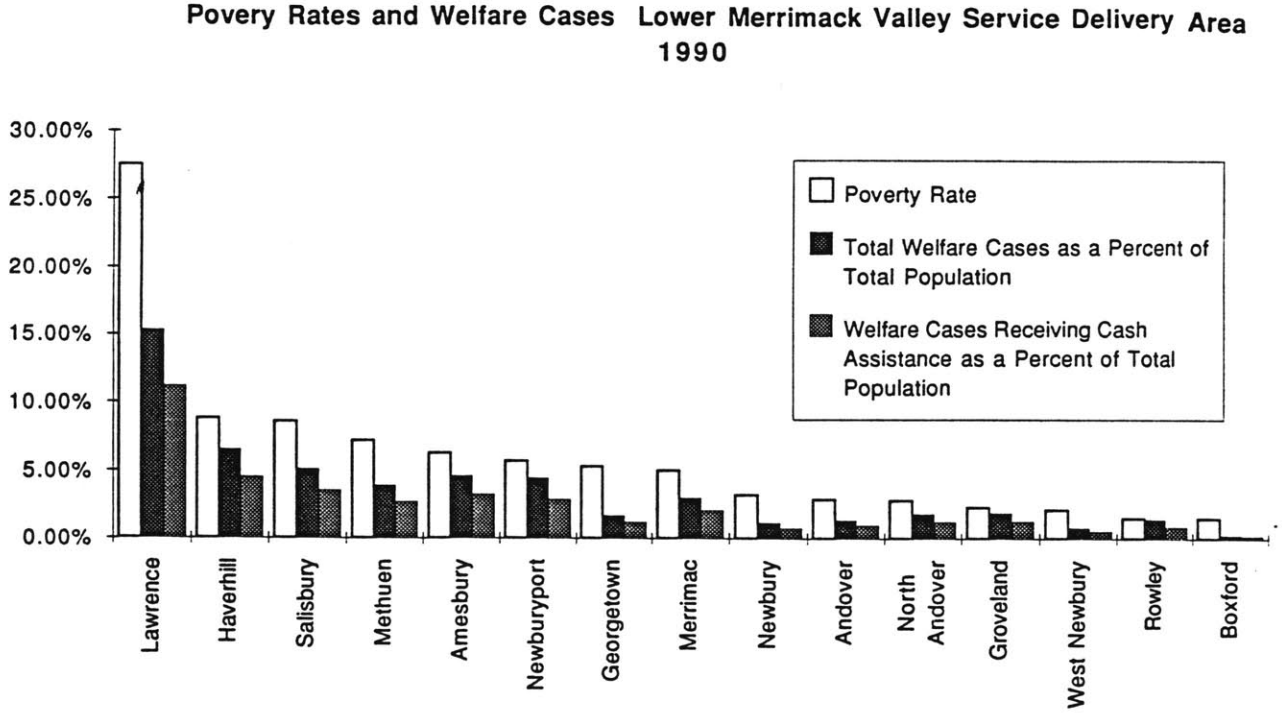
Source: 1980 and 1990 Census of Population and Housing

5.3 Welfare Dependency in the Region

Like high rates of poverty and female headship, the region's welfare cases are also concentrated in Lawrence.[2] In January of 1990, 57% of all welfare cases in the Lower Merrimack Valley were located in Lawrence. This fact becomes particularly striking because a much smaller proportion (24%) of the region's total population lives in Lawrence. In addition, 66% of all AFDC cases in the Lower Merrimack Valley were concentrated in Lawrence. This statistic is not surprising, given the high concentration of poverty and the number of female headed households in the city. *Figure 5.6* shows that in 1990, Lawrence had the highest number of welfare cases as a percentage of its total population (15%) followed by Haverhill with 7%. Boxford had the lowest rate of less than 1%. A preliminary analysis of the January 1992, data indicates that there was significant increase in welfare cases for all towns between January 1990 and January 1992.

[2] Welfare programs fall into several categories. Those providing cash assistance include Refugee Assistance, Supplemental Security Income (SSI), Aid to Families with Dependent Children (AFDC), and General Relief. Non-cash assistance programs include Medicaid and Food Stamps.

Figure 5.6



Sources: 1980 and 1990 Census of Populationa and Housing; Massachusetts Department of Welfare

As a result of the analysis that has been presented to this point, I have shown that poverty in the Lower Merrimack Valley remains highly concentrated in Lawrence. In fact, not only did poverty rates in Lawrence show an alarming increase of 8.2 percentage points between 1980 and 1990, Lawrence was the only municipality in which poverty rates grew at all. Increases in high rates of poverty in Lawrence have also been accompanied by a very small increase in per-capita income relative to the surrounding municipalities in the region; growth in the number and concentration of female headed households; and concentrated welfare dependency. These data clearly show that Lawrence is growing increasingly poorer and becoming increasingly more marginalized from its surrounding region.

5.4 Poverty Within Lawrence

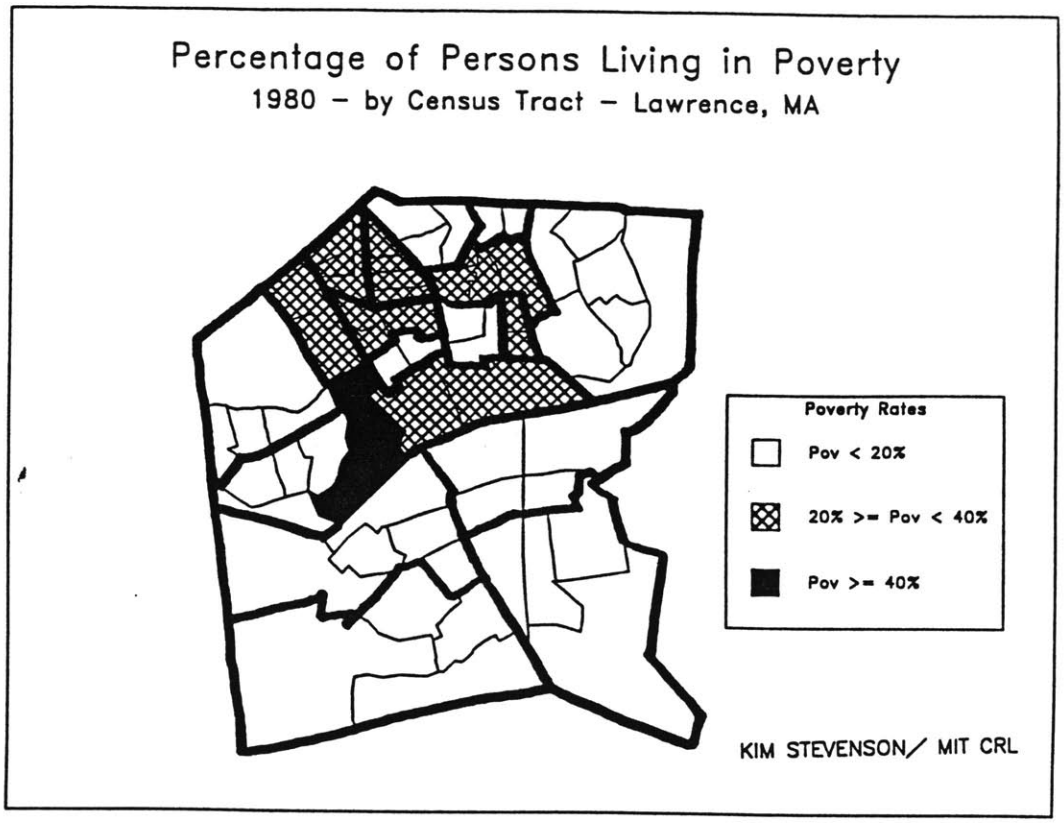
Now that we have a clearer picture of the trends in poverty, per-capita income, female headship, and welfare dependency in the region, we next examine, in detail, how changes in poverty and female headship manifested themselves spatially within the city of Lawrence between 1980 and 1990. In this section, census tracts are used as the unit of analysis to shown changes in poverty rates. Census block groups are used in the following sections to illustrate spatial changes in female headship and the relationships between poverty in 1990, female headship, and high concentrations of Hispanic persons.[3]

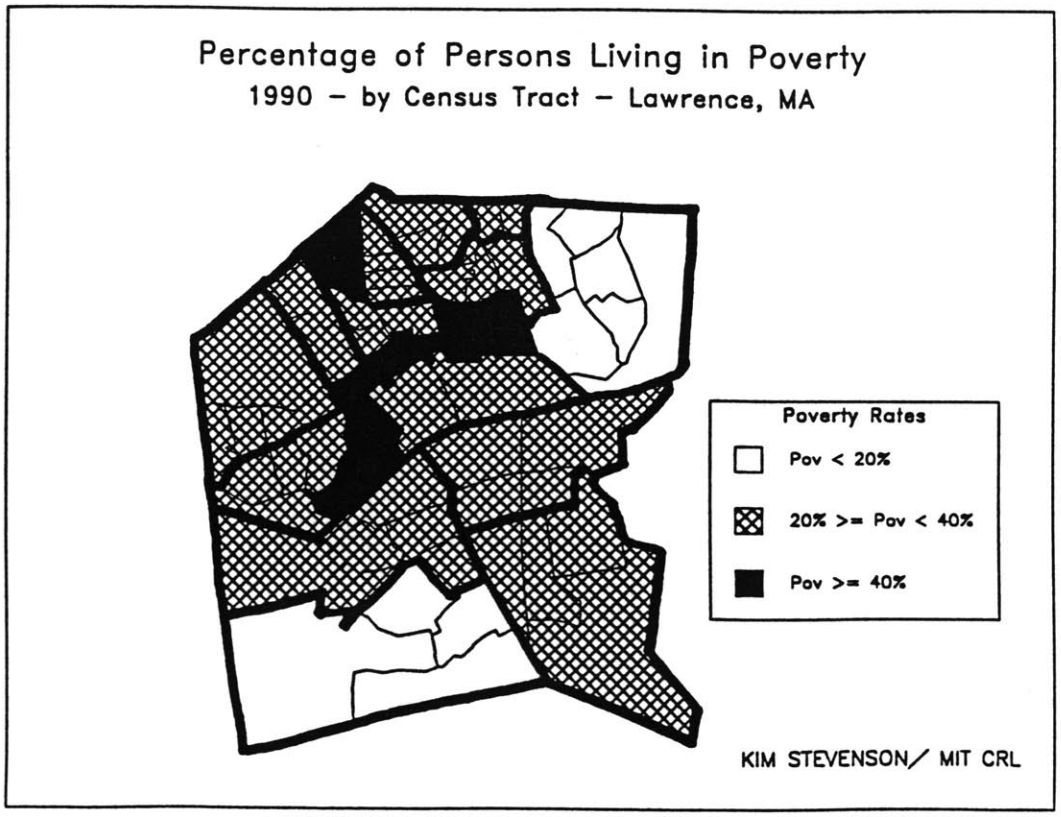
In 1980, poverty areas were located in North Lawrence with eight census tracts having poverty rates greater than or equal to 20%. Of these tracts, one was a ghetto poverty tract,

[3] Because 1980 poverty statistics were not available at the block group level, a block group comparison was not possible between 1980 and 1990. However, all other census data used in this study were available and are analyzed and illustrated at the block group level. Remember that 1990 census tracts in Lawrence average 3,700 persons; block groups average 1,100 persons.

with a poverty rate above 40%. By 1990, the number of poverty tracts had spread southward and outward from North Lawrence. Only the far north-eastern and south-western sections of the city remained with poverty areas below 20%. In addition, the number of ghetto poverty tracts had increased to a total of five by 1990. These patterns, illustrated in *Figure 5.7*, indicate that Lawrence is experiencing a dramatic process of ghettoization in which the number of poor areas are growing in number and becoming increasingly poorer.

Figure 5.7

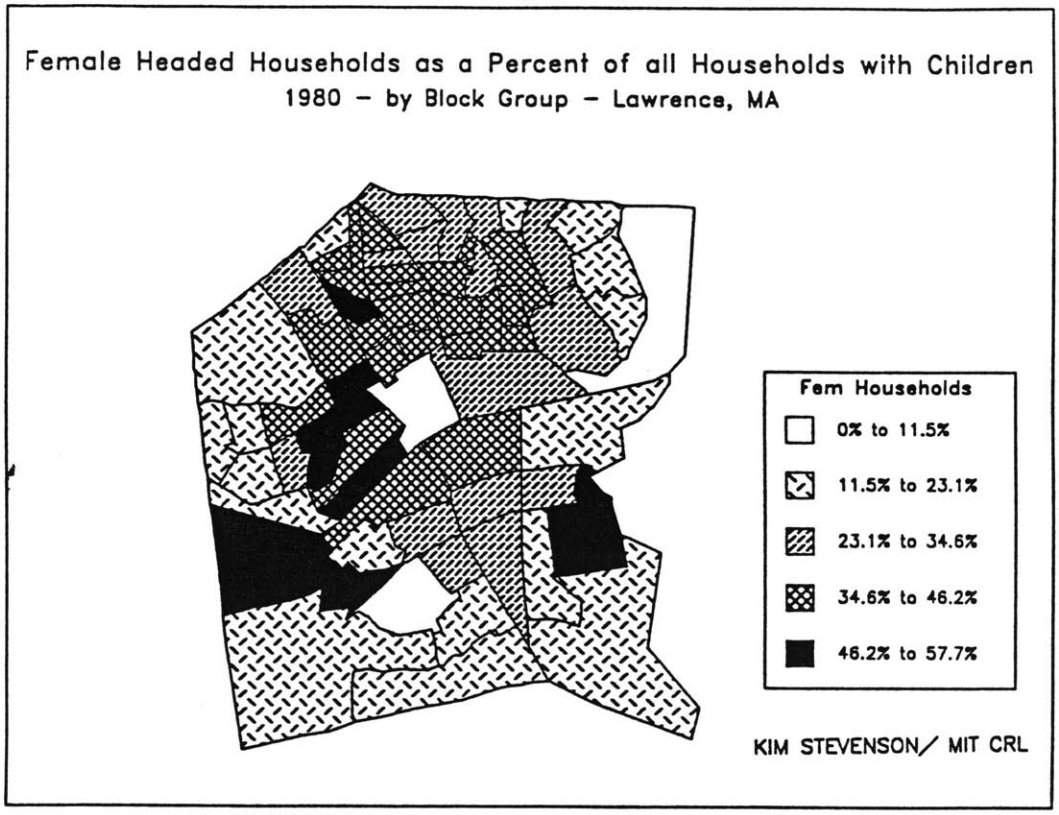

Percentage of Persons Living in Poverty
1980 – by Census Tract – Lawrence, MA
Poverty Rates
Pov < 20%
20% >= Pov < 40%
Pov >= 40%
KIM STEVENSON/ MIT CRL

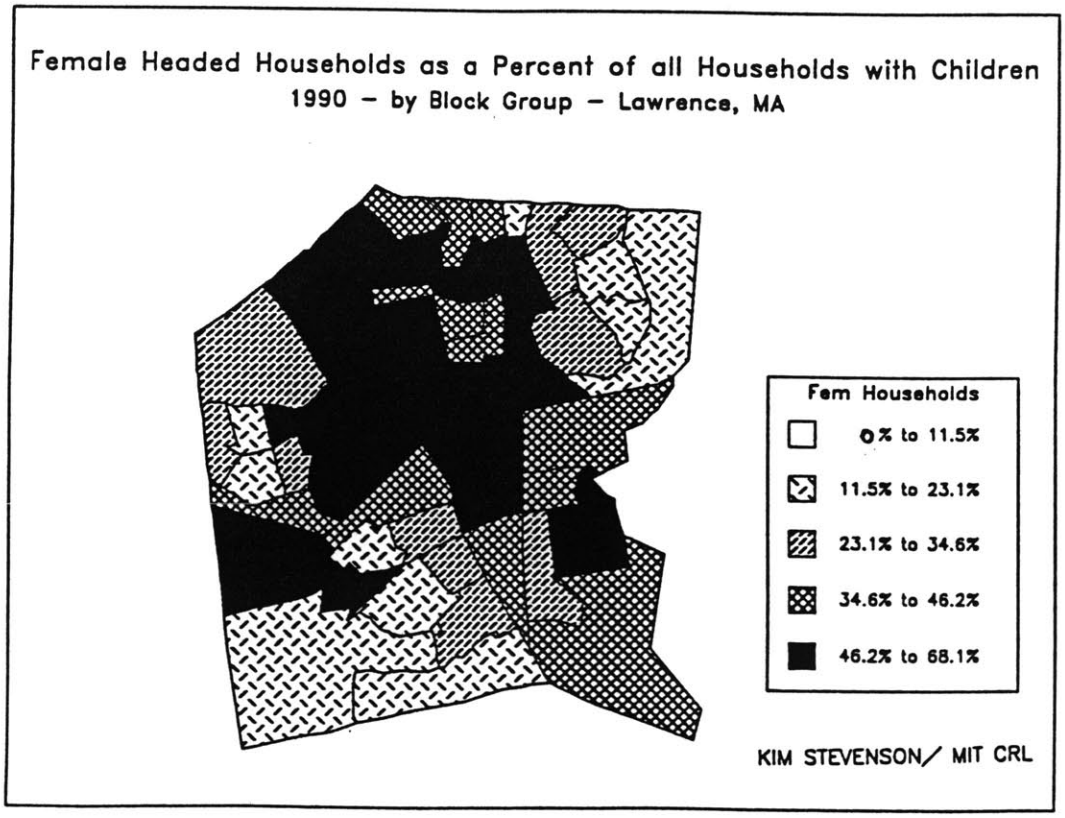

Percentage of Persons Living in Poverty
1990 – by Census Tract – Lawrence, MA
Poverty Rates
Pov < 20%
20% >= Pov < 40%
Pov >= 40%
KIM STEVENSON/ MIT CRL

5.5 Female Headship in Lawrence

Increases in the growth and concentration of female headed households showed similar spatial patterns to those of high and growing poverty rates. These patterns are illustrated in *Figure 5.8*. Note that areas with high rates of female headship in 1980 were primarily located in the northern and central sections of the city with two block groups in South Lawrence having rates of female headship above 46%. By 1990, these areas had expanded dramatically with the most highly concentrated areas located in the northern and central sections of the city.

Figure 5.8

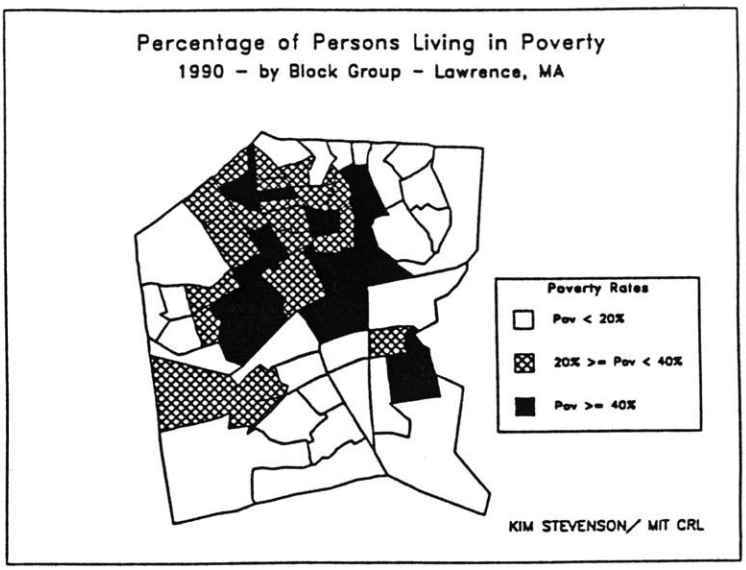

Female Headed Households as a Percent of all Households with Children
1980 – by Block Group – Lawrence, MA
Fem Households
0% to 11.5%
11.5% to 23.1%
23.1% to 34.6%
34.6% to 46.2%
46.2% to 57.7%
KIM STEVENSON/ MIT CRL

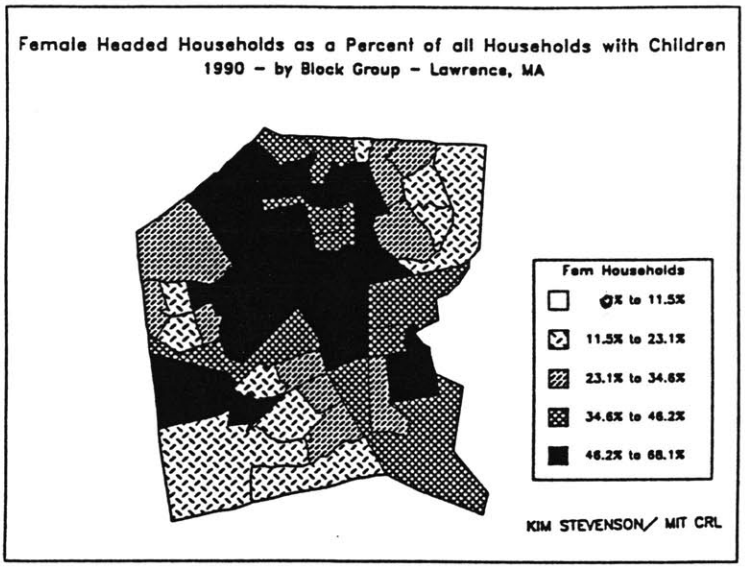

Female Headed Households as a Percent of all Households with Children
1990 – by Block Group – Lawrence, MA
Fem Households
0% to 11.5%
11.5% to 23.1%
23.1% to 34.6%
34.6% to 46.2%
46.2% to 68.1%
KIM STEVENSON/ MIT CRL

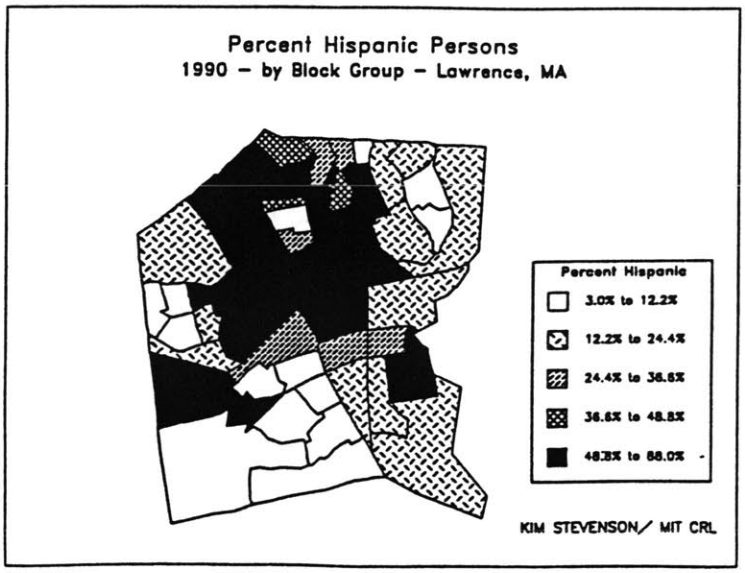
5.6 Spatial Correlation Between Poverty, Female Headship, and Persons of Hispanic Origin in Lawrence

Figure 5.9 provides a spatial comparison of poverty rates, rates of female headship, and percent Hispanic persons by block group in 1990. Note the very high spatial correlation between each of these variables. In fact, the the two maps illustrating the spatial distribution of female headed households and percent Hispanic persons are almost identical. In addition, 1990 census statistics indicate that Hispanic female headed households with children under age 18 constituted almost 70% of all households with children in Lawrence. The data also indicate that more than 57% of all Hispanic children in Lawrence lived with a single mother in 1990. These are alarming statistics, particularly in light of the fact that almost all Hispanic female headed households live in poverty.

Figure 5.9


Percentage of Persons Living in Poverty
1990 – by Block Group – Lawrence, MA
Poverty Rates
Pov < 20%
20% >= Pov < 40%
Pov >= 40%
KIM STEVENSON/ MIT CRL


Female Headed Households as a Percent of all Households with Children
1990 – by Block Group – Lawrence, MA
Fem Households
0% to 11.5%
11.5% to 23.1%
23.1% to 34.6%
34.6% to 46.2%
46.2% to 68.1%
KIM STEVENSON/ MIT CRL


Percent Hispanic Persons
1990 – by Block Group – Lawrence, MA
Percent Hispanic
3.0% to 12.2%
12.2% to 24.4%
24.4% to 36.6%
36.6% to 48.8%
48.8% to 88.0%
KIM STEVENSON/ MIT CRL

As a result of the analysis presented in this chapter it is clear that Lawrence is experiencing a dramatic process of ghettoization and marginalization relative to its surrounding region. The next step is to ask why this is happening. According to Wilson's model, growing and concentrated urban poverty is primarily explained by economic changes including the loss of low-skill manufacturing jobs in central cities. These jobs have been replaced by high-skill service sector jobs in central cities, whereas growing numbers of low-skill service jobs have moved mainly to the suburbs. These dynamics have created both a skills and a spatial mismatch between the low-skilled, inner-city labor force and the job supply. They have resulted in high rates of joblessness, unemployment and concentrated poverty. Because high proportions of inner-city Blacks and Latinos were traditionally employed in manufacturing jobs, these have been the groups hardest hit by the economic changes.

In the next chapter I attempt to determine if these assumptions apply to the case of Lawrence. In many respects they do; however, I also find there are significant limitations in the data that do not allow me to present conclusive evidence in support of Wilson's Model. Furthermore, the two chapters that follow suggest that economic restructuring is only one of many complex forces behind the changes taking place in Lawrence. *Chapter 7* discusses important demographic changes taking place in the region and their relationship to growing poverty in Lawrence. *Chapter 8* discusses the importance of politically defined spaces, the regional housing market, and their links to growing poverty in Lawrence.

CHAPTER 6

INDUSTRIAL CHANGE, UNEMPLOYMENT, AND JOBLESSNESS

The purpose of this chapter is to provide a preliminary account of job losses, gains, and changes in the industrial composition of the Lower Merrimack Valley between 1980 and 1990. After identifying important limitations in the data, the chapter suggests how economic changes may be linked to high rates of poverty in Lawrence, particularly high rates of Latino poverty.

6.1 Important Data Limitations

It is necessary to stress that because of important data limitations, only suggestive conclusions concerning the relationships between industrial change and poverty rates in the region can be drawn. The main explanations, proposed by academics including Wilson and Kasarda, to explain growing income inequality and high poverty rates for blacks and Hispanics were reviewed in the previous chapter. These include: (1) the loss of moderately paid, low-skill manufacturing jobs that traditionally employed a large portion of these groups; and (2) spatial and skills mismatches between the location and skill requirements of growing numbers of service sector jobs and the residential location of inner city Blacks and Hispanics. Marginalization resulting from the growth of informal economies in central cities, particularly within immigrant communities, has also been offered as an additional explanation by researchers including Sassen and Portes. Unfortunately, in order to test the applicability of the first two explanations for the case

of Lawrence and the Lower Merrimack Valley, we would need data broken down by industry and job-skill requirements at a level of detail that is simply not available. Primary data collection would be required. Documentation of the growth and impact of the informal economy on poverty in Lawrence would also require further research including the gathering of data and information from interviews and other primary sources beyond the scope of this research.

Annual employment and wage data, provided by the Massachusetts Department of Employment and Training (DET), are available only by two digit standard industrial (SIC) codes for Massachusetts cities and towns.[1] Because these data are so highly aggregated at the municipal level, they provide no information regarding industrial composition within each two digit industrial sector in each of the cities and towns. For example, the two digit manufacturing category includes the total number of both high- and low-technology manufacturing jobs added together. Therefore, if a municipality's computer industry grew while its textile industry declined, we would know nothing about relative changes in each of these industries - only the net change in total manufacturing jobs. Similarly, the service sector category includes highly skilled doctors and corporate lawyers along with dishwashers.

Detailed data at the city and town level is suppressed primarily because of confidentiality restrictions.[2] More disaggregated data are available for larger geographic areas, but these areas are too large to test the mismatch hypotheses. Furthermore, the DET data are not

[1] These industrial categories include Agriculture; Mining; Construction; Manufacturing; Transportation, Communication & Utilities; Trade (including Wholesale & Retail); Finance, Insurance, & Real Estate; and Services.

[2] Summary level data from the DET is considered confidential if there are less than three reporting units in the total or if, with three or more units, one unit accounts for 80 percent or more of the total.

broken down by race and Hispanic origin. Data provided by the Bureau of Labor Statistics (BLS) also presents similar limitations. Unfortunately, 1990 census data from Summary Tape File 3, which does provide more detailed data and is broken down by race and Hispanic origin, were not available prior to the completion of this study. In addition, employment and industry data from the 1980 census were of little use because census data and DET data are not comparable. Census totals are derived from a sample population survey, whereas DET data provides a complete count of firms covered by state unemployment insurance. Despite these limitations, the economic data that were available for the region did reveal trends that lead to significant conclusions concerning the relationships between economic change and poverty in Lawrence.

6.2 Employment and Industrial Change in the Lower Merrimack Valley

Employment Share by City and Town

Employment in the Lower Merrimack Valley grew from a total of 103,008 jobs in 1980 to a peak of 126,354 jobs in 1988. It declined to 117,138 jobs in 1990, representing a net increase of 13.7% between 1980 and 1990. Total employment grew in every city and town in the region except for Lawrence. In fact, not only did Lawrence loose a shocking 6,976 jobs between 1980 and 1990, the city also lost a significant portion of its regional employment share.

The data shown in *Table 6.1* provide us with important intra-regional information regarding the change in share of total employment from 1980 to 1990. Lawrence experienced the largest decline in job share, falling from holding 29.5% of the region's

total employment in 1980 to 20.0% in 1990. Andover grew to become the largest supplier of jobs in the region in 1990, increasing its share by 4.5 percentage points followed by Methuen which grew in share by 2.8 percentage points. All the other cities and towns maintained a fairly constant share from 1980 to 1990. These statistics are also illustrated in *Figure 6.1*.

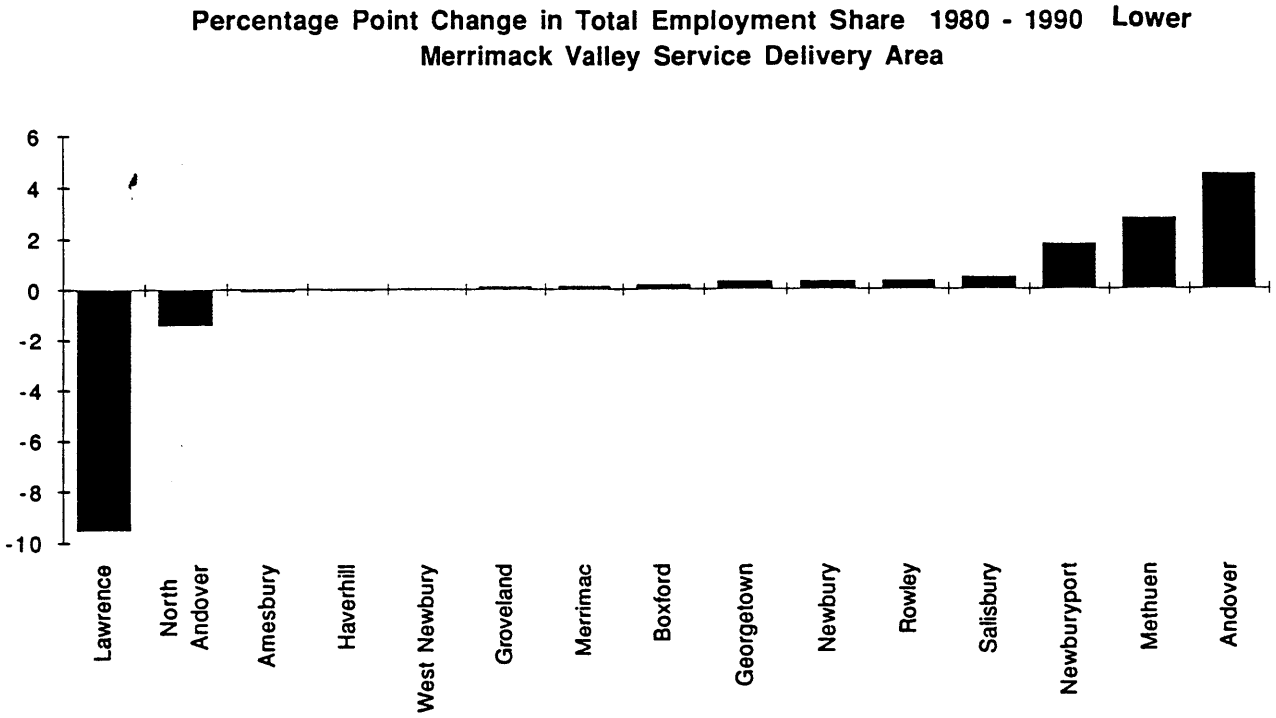
Table 6.1

Total Employment
as a Percent of Total LMVSDA Employment
by City and Town 1980 and 1990

	Job Share in 1980	Job Share in 1990	% Pt. Chng. 1980-1990
Lawrence	29.5%	20.0%	-9.5
Andover	16.7%	21.2%	4.5
North Andover	5.7%	14.3%	-1.4
Haverhill	14.9%	14.8%	0.0
Methuen	8.7%	11.5%	2.8
Newburyport	5.3%	7.1%	1.8
Amesbury	3.8%	3.8%	-0.1
Salisbury	1.2%	1.7%	0.5
Georgetown	0.9%	1.3%	0.3
Rowley	0.9%	1.2%	0.4
Groveland	0.6%	0.7%	0.1
Merrimac	0.5%	0.6%	0.1
Newbury	0.5%	0.8%	0.1
West Newbury	0.4%	0.4%	0.0
Boxford	0.4%	0.6%	0.2

Source: Massachusetts Department of Employment and Training

Figure 6.1



Source: Massachusetts Department of Employment and Training

Employment by Industrial Sector

A closer look at the data, disaggregated by the largest industrial sectors and by the municipalities with the highest employment shares, helps to account for the increase in share of jobs in Andover, Methuen, and Newburyport and the decline in share of jobs in Lawrence.[3] These data are shown in *Table 6.2*.

Table 6.2

Change in Total Employment by Sector
Selected Cities and Towns 1980 to 1990

	Lawrence		Andover	
	Number	% Change	Number	% Change
Construction	-170	-28%	203	53%
Manufacturing	-5,733	-45%	2,799	36%
Trans Com & Util	-1,013	-62%	211	86%
W & R Trade	-311	-6%	1,103	52%
F.I.R.E.	-187	-14%	216	26%
Services	1,281	24%	3,053	152%

	Methuen		Newburyport	
	Number	%Change	Number	%Change
Construction	435	106%	45	57%
Manufacturing	223	17%	906	63%
Trans Com & Util	296	144%	123	62%
W & R Trade	1,265	41%	981	73%
F.I.R.E.	43	9%	59	27%
Services	1,512	63%	836	60%

Andover, Methuen, and Newburyport increased in all sectors, with significant increases in manufacturing, wholesale and retail trade, and services. The fact that there were

[3] Conclusions could not be made for North Andover because of data suppression.

substantial increases within the manufacturing sector in each of these cities and towns is significant. In fact, Lawrence and Haverhill were the only two cities that experienced a decline in manufacturing. Haverhill lost 494 manufacturing jobs between 1980 and 1990. These facts indicate that the manufacturing story is much more complicated than a simple, overall regional decline. Surprisingly, these data appear to indicate that the total number of manufacturing jobs in the Lower Merrimack Valley actually remained fairly stable between 1980 and 1990.

It impossible to discern from these data the migratory patterns of firms or what types of firms they are. For example, did manufacturing firms move from Lawrence to the surrounding cities and towns or did they move out of the region? What are the characteristics of the firms in each municipality? Do specific types of firms locate in certain cities and towns? Do firms that require mainly low-skill labor tend to locate in Lawrence or Haverhill, for example? Do those requiring a higher-skilled labor force tend to locate in Andover and North Andover? These questions should be the subject of further research.

The most striking observation that can be made from these data is the significant decline of jobs in Lawrence in all sectors but services. *Figure 6.2* illustrates annual overall decline of total jobs in Lawrence between 1980 and 1990. Although there was an increase of 1,281 service sector jobs in the city, this growth hardly compensated for the loss of 5,733 manufacturing jobs throughout the decade. Unfortunately, these data provide no information regarding the number of Lawrence residents who fill these jobs. However, the city's high unemployment and poverty rates relative to the surrounding cities and towns certainly indicate that Lawrence residents have been seriously affected

by the dramatic loss of jobs in Lawrence.

Furthermore, it is also important to note that the steep decline of manufacturing jobs in Lawrence began back in 1969, as shown in *Figure 6.3*. Many of these jobs were the "mill-based," low-skill manufacturing jobs referred to by Wilson and Kasarda. This fact becomes particularly important when we begin to ask why it is that large numbers of immigrants have continued to move into Lawrence, particularly when the jobs that traditionally employed them have been leaving at a rapid rate. According to Wilson's model, the loss of low skill manufacturing jobs has led to increased poverty rates among already established inner city populations, particularly among Blacks and Hispanics. Lawrence, however, has historically been a city of European immigrants. The dramatic in-migration of Hispanics to Lawrence is a very recent phenomena. Hispanics were not a large proportion of the population in the early 1970's when manufacturing jobs began to leave the city in large numbers. Further research would, therefore, be required to understand who was migrating into the city during the 1970's, who was leaving, and why.

Figure 6.2

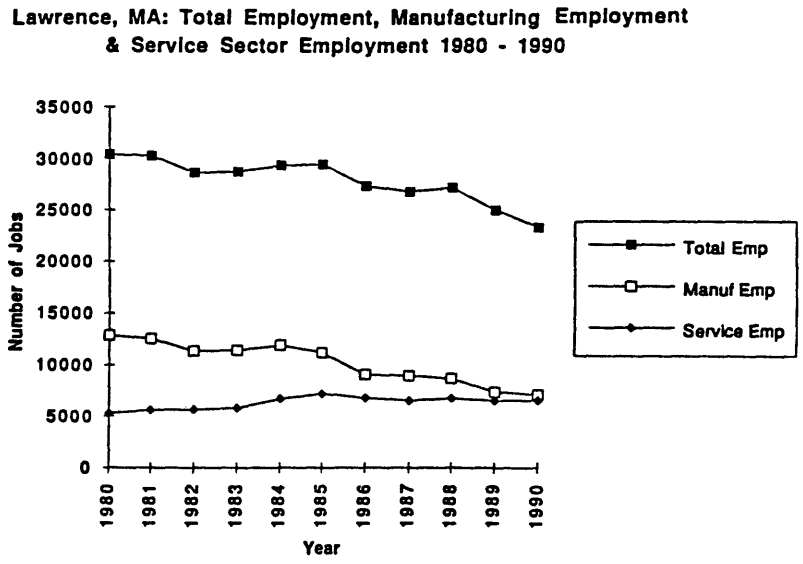
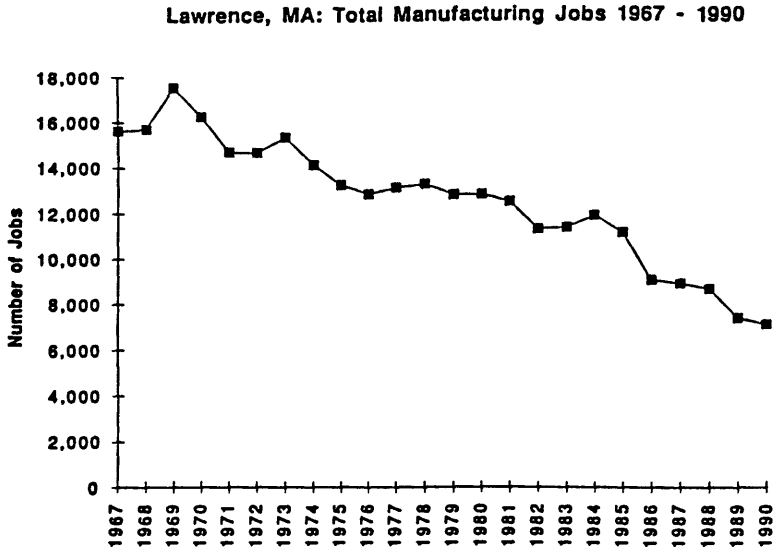


Figure 6.3



Source: Commonwealth of Massachusetts, Department of Employment and Training

Finally, 1980 census data show that by 1980, 76% of the Hispanic labor force living in Lawrence were employed in manufacturing jobs. Although Hispanic employment patterns could have shifted dramatically between 1980 and 1990, we can be sure that the loss of these jobs had a significant impact on the Hispanic community. Further research would be required to understand exactly what the impact was and how employment patterns shifted. Data from the 1980 census also indicated that 10% of Lawrence's Hispanic labor force were employed in service sector jobs (the remaining 14% were divided among the other sectors). Although service sector jobs increased between 1980 and 1990, more research would also be required to determine the skill and wage levels of these jobs and the characteristics of the labor force filling the positions.

Summary of Employment Changes

The total number of jobs in the Lower Merrimack increased between 1980 and 1990. Services experienced the largest gain while the total number of manufacturing jobs appeared to remain fairly stable. The city of Lawrence lost a total of 6,976 jobs, and of these 5,733 were manufacturing jobs. This loss was partially compensated by a gain of 1,281 service sector jobs. In addition, Lawrence experienced the largest decline in share of jobs, falling from holding 29.5% of the region's total employment in 1980 to 20.0% in 1990. The high concentration of Hispanics living in Lawrence, and the fact that 76% of the Hispanic labor force residing in Lawrence were concentrated in manufacturing in 1980, suggests that the loss of these jobs had a severe impact on the Hispanic community, particularly in terms of high unemployment, joblessness, and poverty.

6.3 Unemployment in the Lower Merrimack Valley

Throughout 1990 unemployment averaged 11.5% in Lawrence. This was by far the highest unemployment rate in the region. It was 4 percentage points higher than the overall rate for the Lower Merrimack Valley and 6.9 percentage points higher than the city and town average. Unemployment rates in 1990 for the Lower Merrimack Valley are shown in *Table 6.3*.

The two most striking observations that can be made from *Table 6.3* are Lawrence's high employment rate and the low portion of Lawrence's total population that were in the labor force and employed in 1990. Furthermore, unemployment continued to rise in Lawrence throughout the early 1990's, as it did in the Lower Merrimack Valley and in the state of Massachusetts. As of June 1992, unemployment in Lawrence was above 12%. These trends indicate that Lawrence residents continue to bear more than their fair share of region's unemployment and hardship. They also help to explain high poverty rates in Lawrence relative to the surrounding municipalities.

Table 6.3

Labor Force and Unemployment Rates for Cities and Towns
Lower Merrimack Valley Service Delivery Area: 1990 Annual Averages

	Total Population 1990	*Labor Force*	*Employed Labor Force*	*Unemployed Labor Force*	*Unemployment Rate*	*Employed Labor Force as % of Tot Pop*	*Unemployed Labor Force as % of Tot Pop*
Lawrence	70,207	28,093	24,866	3,228	11.5%	40.0%	35.4%
Amesbury	14,997	7,147	6,592	555	7.8%	47.7%	44.0%
Haverhill	51,418	23,928	22,070	1,858	7.8%	46.5%	42.9%
Merrimac	5,166	2,495	2,309	186	7.5%	48.3%	44.7%
Salisbury	6,882	3,759	3,482	277	7.4%	54.6%	50.6%
Groveland	5,214	2,708	2,513	195	7.2%	51.9%	48.2%
Methuen	39,990	21,374	19,909	1,465	6.9%	53.4%	49.8%
Newburyport	16,317	8,494	7,923	571	6.7%	52.1%	48.6%
Rowley	4,452	3,018	2,839	178	5.9%	67.8%	63.8%
Georgetown	6,384	3,093	2,915	178	5.8%	48.4%	45.7%
Newbury	5,623	2,660	2,511	149	5.6%	47.3%	44.7%
West Newbury	3,421	1,648	1,566	82	5.0%	48.2%	45.8%
North Andover	22,792	11,197	10,646	551	4.9%	49.1%	46.7%
Andover	29,151	13,632	12,970	662	4.9%	46.8%	44.5%
Boxford	6,266	3,052	2,936	116	3.8%	48.7%	46.9%
City and Town Averages					6.6%	50.1%	46.8%
LMVSDA Totals	288,280	136,298	126,047	10,251	7.5%	47.3%	43.7%
State Totals	6,016,425	3,166,000	2,977,000	189,000	6.0%	52.6%	49.5%

Source: Massachusetts Department of Employment and Training

6.4 Conclusions Regarding Economic Changes and Poverty in Lawrence

This chapter and the one that proceeded it confirm many relationships that have been established in the urban poverty literature. These include high and growing rates of poverty in the city of Lawrence that are associated with high rates of female headship; high rates of welfare dependency; and high rates of joblessness and unemployment. In addition, these characteristics are concentrated in a city with a high proportion of Hispanics. It is also clear that the dramatic loss of jobs in Lawrence has had a significant impact on poverty rates in the city. In many other respects, however, the urban poverty literature and the Wilson Model do not satisfactorily explain the patterns of ghettoization taking place in Lawrence.

The literature describes conditions of growing concentrated poverty in large, central cities where the ghetto poor live segregated from, but in close proximity to, thriving commercial districts (like Wall Street and Boston's Financial district) and old established or newly gentrified residential neighborhoods (like the Upper East and now West Side of New York or Boston's Back Bay). Although large segments of these cities suffer from severe and growing poverty and economic decline, many also have segments of their economies that are strong, specifically their financial and producer services industries. In the case of Lawrence, no segment of the economy is particularly vital. In addition, Lawrence has no opulent commercial districts or gentrified residential areas. Instead, the pattern of ghettoization taking place is best described as one in which the entire city is rapidly becoming an urban ghetto relative to the surrounding municipalities.

It is also questionable whether or not Hispanics were an established group that constituted a large portion of the city's work force in the 1970's, the time when large numbers of low-skill manufacturing jobs began to leave the city. In addition, there is no good data available to either support or refute the skills and the spatial mismatch hypotheses. Furthermore, dramatic demographic changes, not addressed by the Wilson Model, took place during a period when jobs in the city continued to decline at a rapid rate. These changes include the in-migration and natural increase of 18,900 Hispanic persons in Lawrence and are discussed in detail in the next chapter.

CHAPTER 7

DEMOGRAPHIC CHANGES

Significant demographic changes took place in the Lower Merrimack Valley between 1980 and 1990. These included, above all, the in-migration and natural increase of 22,800 Hispanic persons, representing 83% of the region's total population increase of 27,400 persons. Furthermore, the largest demographic shifts in the region took place in the city of Lawrence - where the city's Hispanic population grew by 18,900 persons and its non-Hispanic white population declined by 13,000 persons. This chapter explores these changes in detail, including the relationship between the growing numbers of Hispanics concentrated in Lawrence and high and growing rates of poverty in the city.

7.1 Population Growth in the Lower Merrimack Valley

Total Population

The total population of the Lower Merrimack Valley grew from 260,900 persons in 1980 to 288,300 persons in 1990, representing a net increase of 27,400 persons or 11%. The city of Lawrence experienced the largest net growth of all municipalities in the region, growing by 7,000 persons and representing 26% of the region's total population increase. Groveland, on the other hand, experienced the smallest net increase, growing by only 170 persons or 4%. *Table 7.1* provides details for each of the cities and towns in the region.

Table 7.1
Total Population and Population Share by City and Town
Lower Merrimack Valley Service Delivery Area: 1980 - 1990

	Population 1990	Population Share 1990*	Population 1980	Population Share 1980*	Population Change 1980 - 1990	Population % Change 1980 - 1990	Change in Population Share 1980 - 1990
Lawrence	70,207	24.4%	63,175	24.2%	7,032	11.1%	0.1
Haverhill	51,418	17.8%	46,865	18.0%	4,553	9.7%	-0.1
Methuen	39,990	13.9%	36,701	14.1%	3,289	9.0%	-0.2
Andover	29,151	10.1%	26,370	10.1%	2,781	10.5%	0.0
North Andover	22,792	7.9%	20,129	7.7%	2,663	13.2%	0.2
Newburyport	16,317	5.7%	15,900	6.1%	417	2.6%	-0.4
Amesbury	14,997	5.2%	13,971	5.4%	1,026	7.3%	-0.2
Salisbury	6,882	2.4%	5,973	2.3%	909	15.2%	0.1
Georgetown	6,384	2.2%	5,687	2.2%	697	12.3%	0.0
Boxford	6,266	2.2%	5,374	2.1%	892	16.6%	0.1
Newbury	5,623	2.0%	4,529	1.7%	1,094	24.2%	0.2
Groveland	5,214	1.8%	5,040	1.9%	174	3.5%	-0.1
Merrimac	5,166	1.8%	4,451	1.7%	715	16.1%	0.1
Rowley	4,452	1.5%	3,867	1.5%	585	15.1%	0.1
West Newbury	3,421	1.2%	2,861	1.1%	560	19.6%	0.1
LMVSDA	288,280	100.0%	260,893		27,387	10.5%	

Source: 1980 and 1990 Census of Population and Housing

*** Population Share is defined as (municipal population/ LMVSDA population)**

Hispanic Population

The Hispanic population showed the largest and most dramatic increase of all groups in the Lower Merrimack Valley growing from 12,400 persons in 1980 to 35,200 persons in 1990, an increase of 22,800 persons or 185%. Hispanic population growth in Lawrence accounted for almost half the total increase of Hispanic persons in the region. The Hispanic population in Lawrence grew from a total of 10,300 persons in 1980 to 29,200 persons in 1990.[1] In contrast to Lawrence, the towns of Georgetown, Groveland, and West Newbury experienced no increase or a net decline in their already negligibly small Hispanic populations. *Table 7.2* shows these changes. *Figure 7.1* also illustrates the percentage of Hispanic persons living in each of the cities and towns in the Lower Merrimack Valley in 1980 and 1990. Note that significant increases took place only in Haverhill and Methuen.

Although the Lower Merrimack Valley's Hispanic population increased significantly between 1980 and 1990, its regional distribution did not. In 1980, 83% of all Hispanic persons lived in Lawrence; 13% lived in Haverhill and Methuen; the final 4% were scattered throughout the remaining municipalities. Similarly, in 1990, 83% of all Hispanic persons continued to live in Lawrence, 14% in Haverhill and Methuen, and 3% in the remaining municipalities. The region's growing Hispanic population remains highly concentrated in Lawrence. These statistics are also shown in *Table 7.2*

[1] This population includes mainly Dominicans and Puerto Ricans.

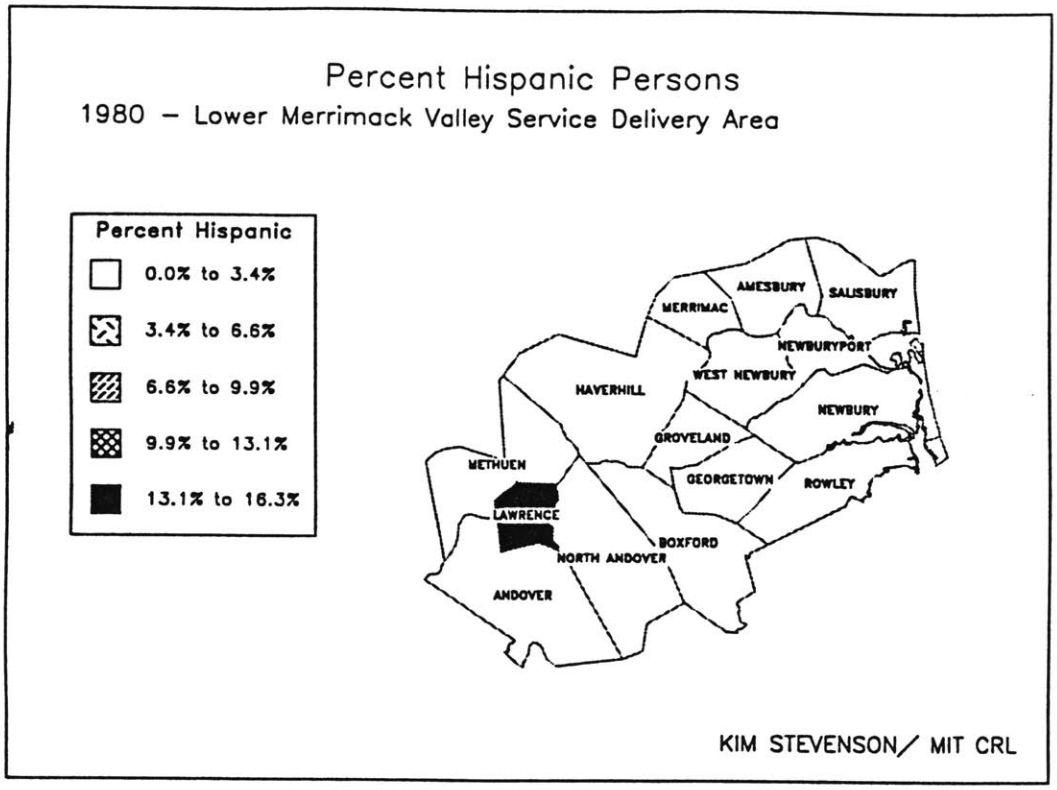
Table 7.2

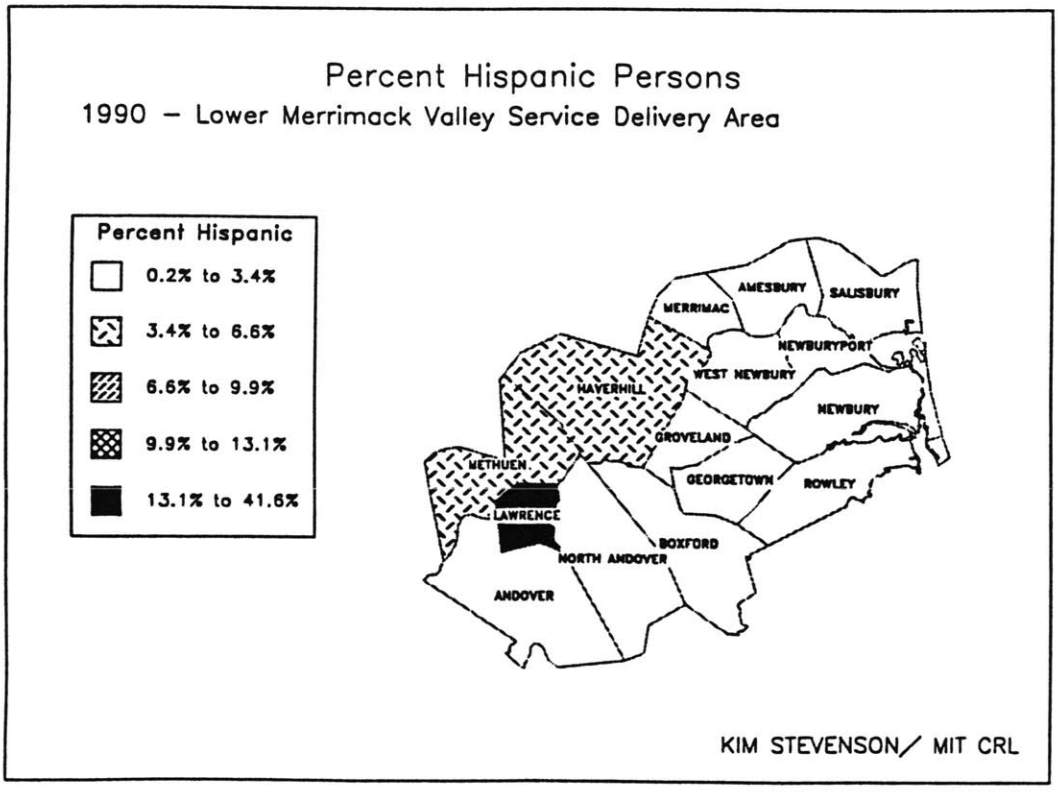
Total Hispanic Population and Percent Hispanic by City and Town
Lower Merrimack Valley Service Delivery Area: 1980 - 1990

	Hispanic Population 1990	Percent Hispanic 1990	Hisp Pop Share 1990*	Hispanic Population 1980	Percent Hispanic 1980	Hisp Pop Share 1980*	Hisp Pop Change 1980 - 1990	Percent Chng in Hisp Pop 1980 - 1990	Change in Hisp Share 1980 - 1990
Lawrence	29,237	41.6%	83.1%	10,296	16.3%	83.3%	18,941	184.0%	-0.2
Haverhill	2,714	5.3%	7.7%	931	2.0%	7.5%	1,783	191.5%	0.2
Methuen	2,070	5.2%	5.9%	637	1.7%	5.2%	1,433	225.0%	0.7
Andover	433	1.5%	1.2%	154	0.6%	1.2%	279	181.2%	-0.0
North Andover	307	1.3%	0.9%	124	0.6%	1.0%	183	147.6%	-0.1
Newbury	43	0.8%	0.1%	9	0.2%	0.1%	34	377.8%	0.0
Salisbury	50	0.7%	0.1%	21	0.4%	0.2%	29	138.1%	-0.0
Amesbury	96	0.6%	0.3%	37	0.3%	0.3%	59	159.5%	-0.0
Newburyport	91	0.6%	0.3%	55	0.3%	0.4%	36	65.5%	-0.2
Boxford	34	0.5%	0.1%	19	0.4%	0.2%	15	78.9%	-0.1
Merrimac	28	0.5%	0.1%	12	0.3%	0.1%	16	133.3%	-0.0
Groveland	27	0.5%	0.1%	19	0.4%	0.2%	8	42.1%	-0.1
West Newbury	17	0.5%	0.0%	17	0.6%	0.1%	0	0.0%	-0.1
Rowley	12	0.3%	0.0%	15	0.4%	0.1%	(3)	-20.0%	-0.1
Georgetown	13	0.2%	0.0%	13	0.2%	0.1%	0	0.0%	-0.1
LMVSDA	35,172	12.2%	100.0%	12,359	4.7%	100.0%	22,813	184.6%	

SOURCE: 1980 and 1990 Census of Population and Housing
*** Hisp Pop Share is defined as (municipal Hispanic population/ LMVSDA Hispanic population)**

Figure 7.1


Percent Hispanic Persons
1980 – Lower Merrimack Valley Service Delivery Area
Percent Hispanic
0.0% to 3.4%
3.4% to 6.6%
6.6% to 9.9%
9.9% to 13.1%
13.1% to 16.3%
AMESBURY
SALISBURY
MERRIMAC
NEWBURYPORT
WEST NEWBURY
HAVERHILL
NEWBURY
GROVELAND
METHUEN
GEORGETOWN
ROWLEY
LAWRENCE
BOXFORD
NORTH ANDOVER
ANDOVER
KIM STEVENSON/ MIT CRL


Percent Hispanic Persons
1990 – Lower Merrimack Valley Service Delivery Area
Percent Hispanic
0.2% to 3.4%
3.4% to 6.6%
6.6% to 9.9%
9.9% to 13.1%
13.1% to 41.6%
AMESBURY
SALISBURY
MERRIMAC
NEWBURYPORT
WEST NEWBURY
HAVERHILL
NEWBURY
GROVELAND
METHUEN
GEORGETOWN
ROWLEY
LAWRENCE
BOXFORD
NORTH ANDOVER
ANDOVER
KIM STEVENSON/ MIT CRL

Non-Hispanic White Population

In contrast to the region's Hispanic population, the non-Hispanic white population remained stable between 1980 and 1990. The region experienced a net increase of only 849 non-Hispanic white persons. However, this figure disguises important intra-regional changes which took place. A dramatic decline of 13,000 non-Hispanic white persons in Lawrence almost offset increases in the surrounding cities and towns. Haverhill experienced the largest absolute increase of 2,300 non-Hispanic white persons. These changes are shown in T*able 7.3*.

The region's non-Hispanic white population is also much less concentrated than its Hispanic population. In 1990, 61% percent of all non-Hispanic whites lived in the four largest cities. Haverhill had the largest share of 19%, followed by Lawrence and Methuen with 16% and 15% respectively. It is also significant that changes in the regional share of non-Hispanic white persons was positive but less than 1% in all cities and towns except Lawrence. The regional share of non-Hispanic whites living in Lawrence dropped by 5 percentage points from 1980 to 1990. This reflects the large decline in the number of non-Hispanic whites living in the city. These changes are also shown *Table 7.3*.

Table 7.3

Non-Hispanic White Population by City and Town
Lower Merrimack Valley Service Delivery Area: 1980 - 1990

	Non-Hisp White Population 1990	Percent Non-Hisp White 1990	Non-Hisp White Share 1990*	Non-Hisp White Population 1980	Percent Non-Hisp White 1980	Non-Hisp White Share 1980*	Non-Hisp W Pop Change 1980 - 1990	Change in NHW Share 1980 - 1990
Haverhill	47,405	92.2%	19.3%	45,155	96.4%	18.4%	2,250	0.9
Lawrence	38,401	54.7%	15.6%	51,371	81.3%	21.0%	(12,970)	-5.4
Methuen	37,070	92.7%	15.1%	35,813	97.6%	14.6%	1,257	0.5
Andover	27,348	93.8%	11.1%	25,758	97.7%	10.5%	1,590	0.6
North Andover	21,850	95.9%	8.9%	19,776	98.2%	8.1%	2,074	0.8
Newburyport	16,083	98.6%	6.5%	15,691	98.7%	6.4%	392	0.1
Amesbury	14,700	98.0%	6.0%	13,832	99.0%	5.7%	868	0.3
Salisbury	6,789	98.6%	2.8%	5,923	99.2%	2.4%	866	0.3
Georgetown	6,333	99.2%	2.6%	5,637	99.1%	2.3%	696	0.3
Boxford	6,115	97.6%	2.5%	5,312	98.8%	2.2%	803	0.3
Newbury	5,549	98.7%	2.3%	4,497	99.3%	1.8%	1,052	0.4
Groveland	5,156	98.9%	2.1%	5,004	99.3%	2.0%	152	0.1
Merrimac	5,097	98.7%	2.1%	4,402	98.9%	1.8%	695	0.3
Rowley	4,395	98.7%	1.8%	3,825	98.9%	1.6%	570	0.2
West Newbury	3,370	98.5%	1.4%	2,816	98.4%	1.2%	554	0.2
LMVSDA	245,661	85.2%		244,812	93.8%		849	

SOURCE: 1980 and 1990 Census of Population and Housing
* Non-Hisp White Share is defined as (municipal NHW population/ LMVSDA NHW population)

Other Groups

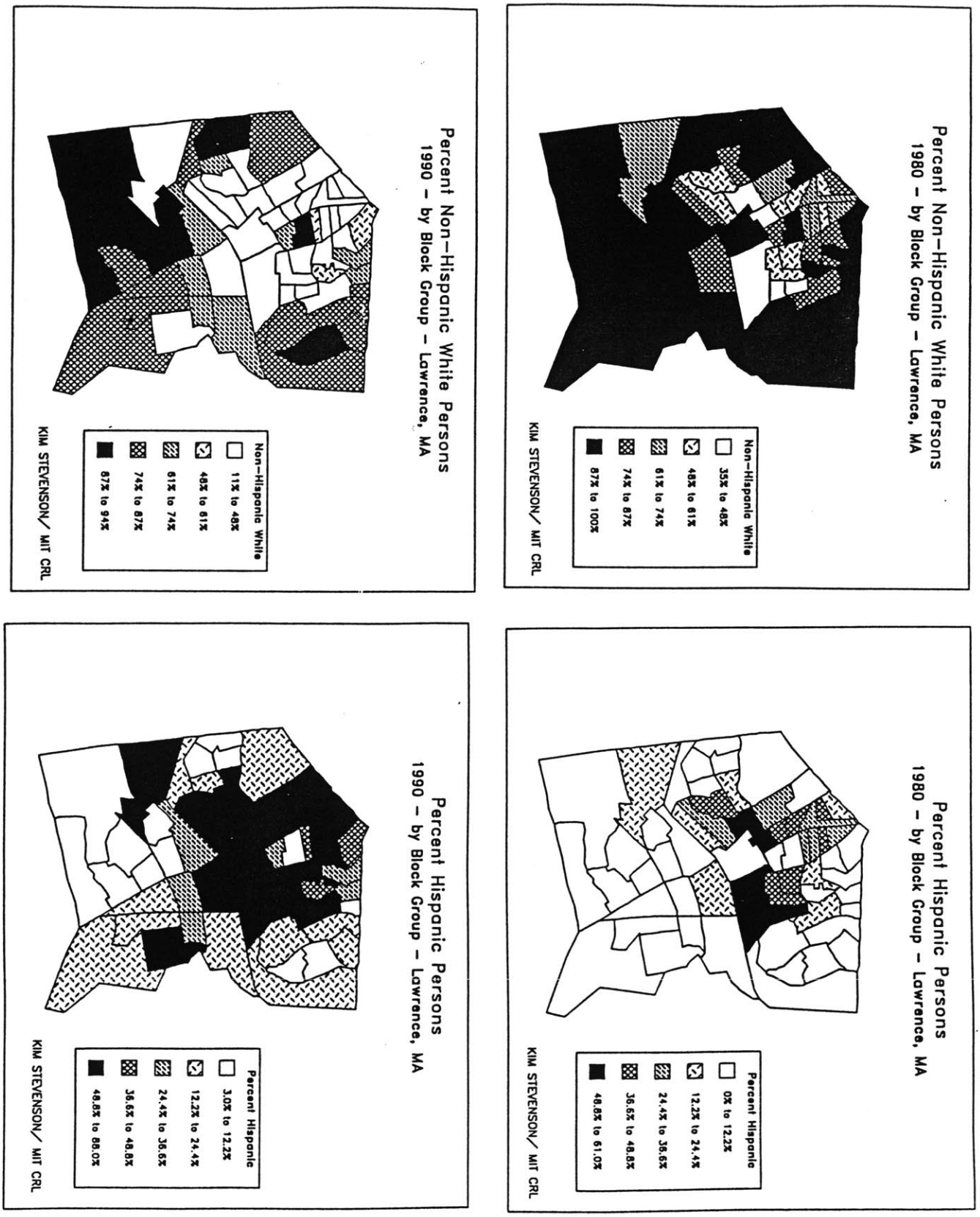
Other groups represented a small but positive increase in the region between 1980 and 1990. These groups included non-Hispanic Blacks; non-Hispanic American Indians, Eskimos, and Aleuts; and non-Hispanic Asians and Pacific Islanders. Persons who identified themselves as being of "other" races declined slightly. Because these groups represent a very small portion of the region's total population, I do not focus on them in my analysis.

7.2 Demographic Changes Within Lawrence

The demographic statistics I have just presented show that the city of Lawrence is a rapidly growing ethnic enclave within the Lower Merrimack Valley. If we examine these changes at the block group level in Lawrence, we can see exactly how they have taken place. The thematic maps illustrated in *Figure 7.2* show that areas, predominantly occupied by non-Hispanic whites in 1980, are now home to high concentrations of Hispanic persons.

This figure shows that in 1980 the Hispanic population was clustered in north Lawrence with five block groups having a concentration of Hispanics greater than 48.8%. By 1990, the Hispanic population had grown southward and outward from its original clusters in North Lawrence. Twenty eight block groups had a concentration of Hispanics greater than 48.8% by 1990. However, the Hispanic population still remained largely concentrated in North Lawrence.

Figure 7.2


Percent Non-Hispanic White Persons
1980 - by Block Group - Lawrence, MA
Non-Hispanic White
35% to 48%
48% to 61%
61% to 74%
74% to 87%
87% to 100%
KIM STEVENSON/ MIT CRL
Percent Non-Hispanic White Persons
1990 - by Block Group - Lawrence, MA
Non-Hispanic White
11% to 48%
48% to 61%
61% to 74%
74% to 87%
87% to 94%
KIM STEVENSON/ MIT CRL
Percent Hispanic Persons
1980 - by Block Group - Lawrence, MA
Percent Hispanic
0% to 12.2%
12.2% to 24.4%
24.4% to 36.6%
36.6% to 48.8%
48.8% to 61.0%
KIM STEVENSON/ MIT CRL
Percent Hispanic Persons
1990 - by Block Group - Lawrence, MA
Percent Hispanic
3.0% to 12.2%
12.2% to 24.4%
24.4% to 36.6%
36.6% to 48.8%
48.8% to 88.0%
KIM STEVENSON/ MIT CRL

The non-Hispanic white population, on the other hand, showed almost opposite spatial patterns between 1980 and 1990. Note that the top two 1980 maps in *Figure 7.2* are practically mirror images of each other as are the two bottom 1990 maps. This observation illustrates patterns of clear spatial segregation between Hispanics and non-Hispanic whites living in Lawrence in both 1980 and 1990. As the Hispanic population moved in and concentrated itself in the northern and central parts of the city, the remaining non-Hispanic white population moved out of the city or remained in a few clusters located in the extreme northern and southern sections of Lawrence.

7.3 Demographic Changes and Poverty

This chapter has illustrated several important demographic changes that have taken place in the Lower Merrimack Valley between 1980 and 1990. They include a dramatic increase in the number of Hispanic persons, particularly in the city of Lawrence. This large increase has taken place simultaneously with a massive outmigration of non-Hispanic whites from the city. Furthermore, Hispanics living in the Lower Merrimack Valley remain highly concentrated in Lawrence. A detailed spatial analysis of block groups within this city also illustrated clear patterns of spatial segregation between Hispanics and non-Hispanic whites in both 1980 and 1990.

Given the dramatic demographic shifts and the socioeconomic changes described in the previous two chapters, including the loss of 7,000 jobs in Lawrence and high and rapidly growing poverty rates, an important question remains unsatisfactorily explained either by Wilson's Model or the urban poverty literature:

In the case of Lawrence, why did immigrants continue to move into a city where economic conditions were bad and continue to decline? Why didn't they move, instead, to the surrounding municipalities where socioeconomic conditions were significantly better and improved between 1980 and 1990?

As I alluded to in the introductory chapter of this thesis, I believe we must begin to pay more attention to the importance of politically defined places and socially defined spaces.[2] *Politically defined places* are cities and towns that have their own local governments, tax codes, public spending policies, zoning regulations, etc and will be discussed in the next chapter. *Socially defined spaces* include geographic areas that are characterized by high concentrations of certain racial, ethnic, or religious groups, or areas where custom and tradition binds people together in significant ways. One such space would include the growing Dominican and Puerto Rican communities in Lawrence.

Because many of the Dominican and Puerto Rican immigrants who come to Lawrence have very little money and do not speak English, kin-and-friend networks and many other important support structures help these new arrivals settle in the city. As bad as conditions may be in Lawrence, friends, family, and social services with Spanish speaking staff are able to provide survival support that does not exist in the other municipalities. Furthermore, friends, family, and a familiar culture can help ease the difficult transition of moving to a foreign place. Discrimination between Hispanics and non-Hispanic whites probably also plays a role in keeping the two groups apart. As a result, Dominican and Puerto Rican immigrants, many of whom are poor and lack the

[2] In this thesis I do not address the reasons why large numbers of Dominicans and Puerto Ricans come to the United States or the region in the first place. These could include many factors including severe economic conditions in the sending countries; hope of a better life in the United States; and the lure of friends and family in the United States, among other factors. Who comes; from what parts of their respective countries do they come from; and why are all important question that would help to answer the question I have posed. However, they are beyond the scope of this thesis and provide important questions for further research.

language and skills to survive or to find employment outside of Lawrence when they first arrive, add to the growing number of poor living in city.

However, because socioeconomic conditions are so bad in Lawrence, it may also the case that many Dominicans and Puerto Ricans who immigrate to the area prefer not to move to Lawrence in the first place. Others may want to leave eventually or they may, instead, want to try and rebuild and invest within the city themselves. Why is it that residents of Lawrence have so much difficulty achieving these goals? The next chapter will address these questions from the perspective of the regional housing market and local municipal policies.

CHAPTER 8

DYNAMICS IN THE REGIONAL HOUSING MARKET

This chapter will suggest how dynamics in the regional housing market have steered the poor, many of whom are immigrants, into the city of Lawrence. It will also explain how these same dynamics have made it difficult for the poor to eventually move out or to build up equity themselves and invest within the city. However, before moving on to examine the data that explains these statements, it is necessary to understand the important assumptions I am making about the regional housing market.

8.1 The Influence of Zoning and Other Local Policies

First, local zoning regulations and growth policies play an important role in allowing or discouraging housing development; the type of housing that gets built (e.g. low density, high density, mixed-income, low-income, etc.); and price. These regulations have a direct impact on who can live in a certain city or town. A community like Boxford, for example, with low density zoning, 1990 median housing values of $320,700, and very little rental housing excludes most potential residents simply because housing prices in the town are prohibitive. Lawrence, on the other hand, has mainly high density, rental housing that is accessible to many more people. Local taxes can also have an impact on the cost of housing in a city or town, again serving to include or exclude on the basis of cost. Because of these regulatory tools and others, cities and towns (or politically defined places) can have a powerful influence on who lives within their borders. The poor will tend to live in cities like Lawrence while the higher-income individuals will tend to live

in the wealthier suburban communities.

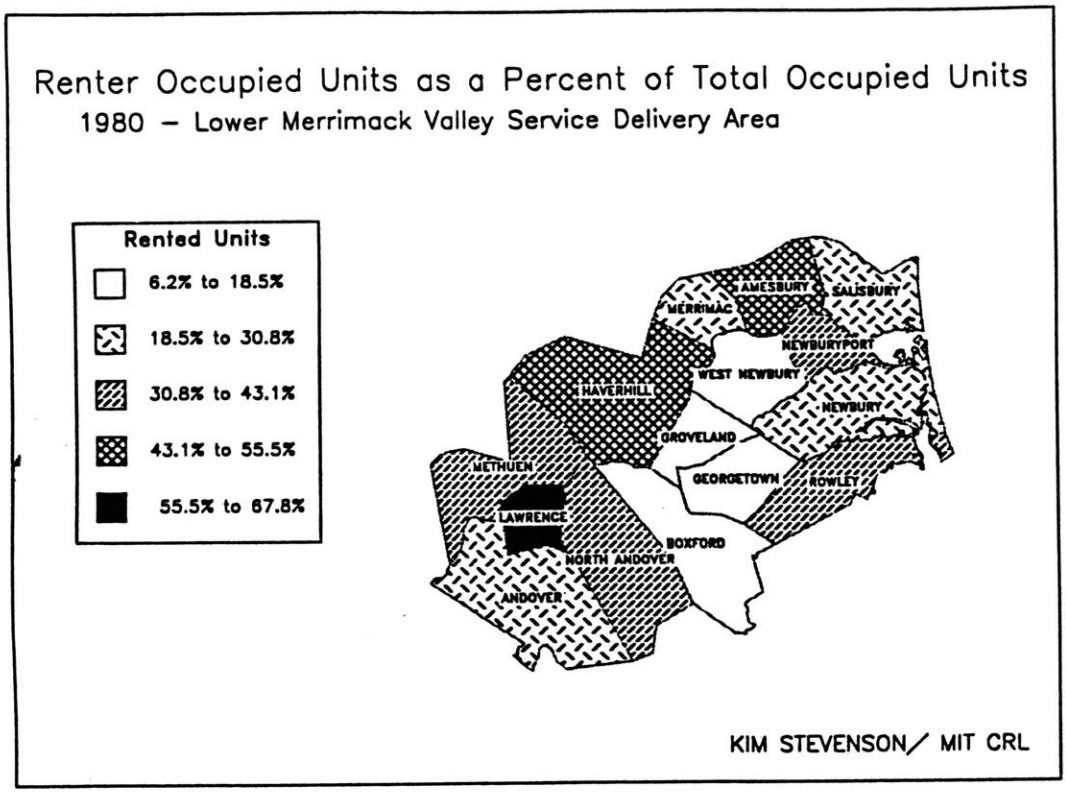
It was beyond the scope of this thesis to examine zoning regulations, growth policies, and tax structures in each of the municipalities within the Lower Merrimack Valley and to correlate these with the cost and availability of both renter and owner occupied housing. However, the clear patterns of residential segregation that exist in the region, specifically the high concentration of Hispanics in Lawrence, and the analysis that follows, suggest that there are important intra-regional differences between the cities and towns that serve to exclude the poor and keep poverty concentrated in Lawrence.

8.2 Rental Housing

First, because many Lawrence residents are poor, they do not have the income or savings to purchase housing, therefore they must rent. As *Figure 8.1* illustrates, close to 70% of all households in Lawrence lived in rented units in both 1980 and 1990. This number stands in sharp comparison to Boxford and West Newbury, for example, which had 1990 rental rates of 4.5% and 8.3% respectively. Rental statistics for the region are also presented in *Table 8.1*. Because a high proportion of the region's rental units exist in Lawrence, in addition to important networks for helping welfare dependent households and immigrants find housing (Grollman, 1987), most poor immigrants have no choice but to rent housing and live in Lawrence. [1]

[1] It is important to note here that when I refer to immigrants, I am specifically referring to Hispanic or Spanish speaking immigrants. Lawrence also has a small community of Asian immigrants, however, most Asian immigrants who come to the area move to Lowell where they have their own support structures and kin-and-friend networks.

Figure 8.1


Renter Occupied Units as a Percent of Total Occupied Units
1980 – Lower Merrimack Valley Service Delivery Area
Rented Units
6.2% to 18.5%
18.5% to 30.8%
30.8% to 43.1%
43.1% to 55.5%
55.5% to 67.8%
AMESBURY
SALISBURY
MERRIMAC
NEWBURYPORT
WEST NEWBURY
HAVERHILL
NEWBURY
GROVELAND
METHUEN
GEORGETOWN
ROWLEY
LAWRENCE
BOXFORD
NORTH ANDOVER
ANDOVER
KIM STEVENSON/ MIT CRL

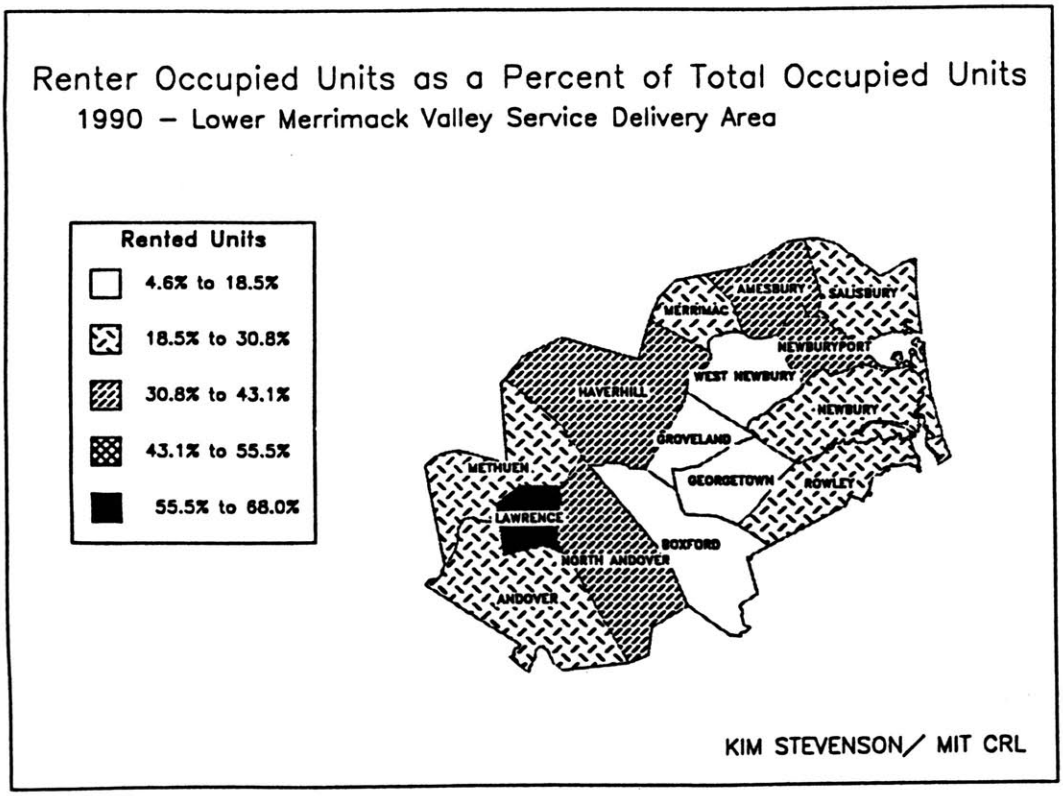

Renter Occupied Units as a Percent of Total Occupied Units
1990 – Lower Merrimack Valley Service Delivery Area
Rented Units
4.6% to 18.5%
18.5% to 30.8%
30.8% to 43.1%
43.1% to 55.5%
55.5% to 68.0%
AMESBURY
SALISBURY
MERRIMAC
NEWBURYPORT
WEST NEWBURY
HAVERHILL
NEWBURY
GROVELAND
METHUEN
GEORGETOWN
ROWLEY
LAWRENCE
BOXFORD
NORTH ANDOVER
ANDOVER
KIM STEVENSON/ MIT CRL

Table 8.1

Renter Occupied Units
Lower Merrimack Valley Service Delivery Area: 1980 - 1990

	Occupied Units 1990	Renter Occ Units 1990	% Renter Occ Units 1990	Occupied Units 1980	Renter Occ Units 1980	% Renter Occ Units 1980	Pcntg Pt Chng % Renter Occ Units 1980-1990
Haverhill	19,575	8,097	41.4%	17,261	8,522	49.4%	-8.0
North Andover	7,891	2,499	31.7%	6,756	2,667	39.5%	-7.8
Rowley	1,507	378	25.1%	1,318	411	31.2%	-6.1
Newburyport	6,754	2,555	37.8%	5,892	2,464	41.8%	-4.0
Amesbury	5,522	2,342	42.4%	5,026	2,322	46.2%	-3.8
Merrimac	1,903	425	22.3%	1,525	369	24.2%	-1.9
Boxford	2,016	90	4.5%	1,539	95	6.2%	-1.7
Methuen	14,647	4,511	30.8%	12,776	4,094	32.0%	-1.2
Georgetown	2,178	377	17.3%	1,859	340	18.3%	-1.0
Salisbury	2,522	673	26.7%	2,097	563	26.8%	-0.2
Newbury	2,060	399	19.4%	1,588	310	19.5%	-0.2
Groveland	1,770	253	14.3%	1,537	222	14.4%	-0.1
Lawrence	24,270	16,494	68.0%	23,798	16,130	67.8%	0.2
Andover	10,415	2,648	25.4%	8,688	2,169	25.0%	0.5
West Newbury	1,126	94	8.3%	864	67	7.8%	0.6
LMVSDA	104,156	41,835	40.2%	92,524	40,745	44.0%	-3.9

Source: 1980 and 1990 Census of Population and Housing

8.3 Home Ownership

Furthermore, increases in the cost of purchasing housing (adjusted for inflation) throughout the region increased substantially between 1980 and 1990. In fact, the values of homes increased by more that 80% in all of the region's fifteen municipalities. These increases are shown in *Table 8.2* and are illustrated in *Figure 8.2*. Because per-capita incomes in Lawrence increased by only 5% between 1980 and 1990, most Lawrence residents were limited in their ability to purchase housing either within or outside the city. Limited housing options outside of Lawrence also made it difficult to move out of the city during this time period. Note from the last column in Table 8.1 that the share of rental units declined in all cities and towns in the region except Lawrence, Andover, and West Newbury. Finally, because rents in Lawrence increased at a significantly higher rate than did rents in the surrounding municipalities, any gains in income that might have been saved to purchase a home within or outside the city, were lost to housing cost increases. These statistics are shown in *Table 8.3*.

Table 8.2

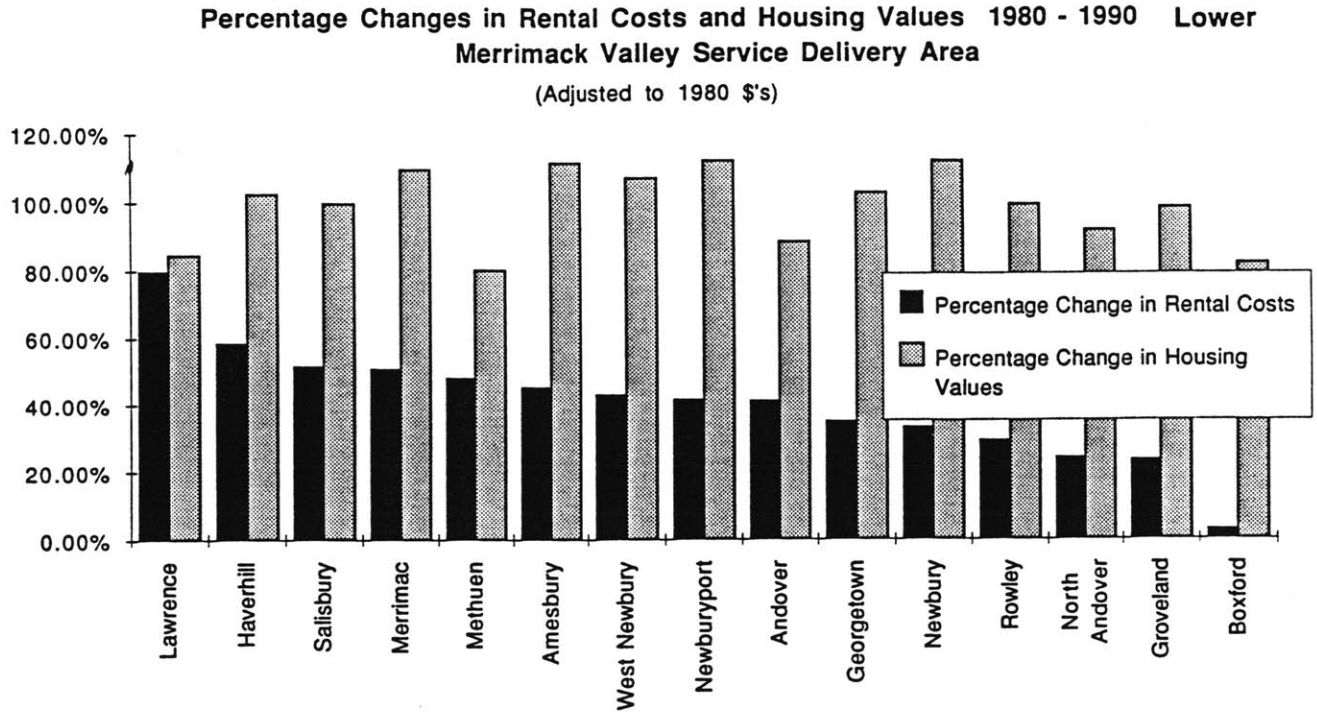
Value of Owner Occupied Units
Lower Merrimack Valley Service Delivery Area: 1980 - 1990

	Median Value 1990	Median Value 1990 (Adj)*	Median Value 1980	Change 1980-1990*	% Change 1980-1990*
Newburyport	$170,600	$101,451	$47,900	$53,551	111.8%
Newbury	$197,500	$117,448	$55,500	$61,948	111.6%
Amesbury	$150,900	$89,736	$42,500	$47,236	111.1%
Merrimac	$153,900	$91,520	$43,700	$47,820	109.4%
West Newbury	$288,500	$135,883	$65,700	$70,183	106.8%
Georgetown	$187,400	$111,442	$55,100	$56,342	102.3%
Haverhill	$140,100	$83,314	$41,200	$42,114	102.2%
Salisbury	$151,300	$89,974	$45,100	$44,874	99.5%
Rowley	$184,500	$109,717	$55,200	$54,517	98.8%
Groveland	$166,100	$98,775	$49,900	$48,875	97.9%
North Andover	$231,300	$137,548	$71,900	$65,648	91.3%
Andover	$254,800	$151,523	$80,600	$70,923	88.0%
Lawrence	$129,600	$77,070	$41,800	$35,270	84.4%
Boxford	$320,700	$190,711	$105,100	$85,611	81.5%
Methuen	$151,300	$89,974	$50,000	$39,974	79.9%

Source: 1980 and 1990 Census of Population and Housing
U.S. Department of Labor - Bureau of Labor Statistics

*** 1990 values were adjusted for inflation using the Boston Area Consumer Price Index of all Urban Consumers (CPI-U), 1982 - 1984 = 100**

Figure 8.2



Source: 1980 and 1990 Census of Population and Housing

Table 8.3
Cost of Renter Occupied Units
Lower Merrimack Valley Service Delivery Area and Lowell, MA: 1980 - 1990

	Median Rent 1990	Median Rent 1990 (Adj)*	Median Rent 1980	Change 1980-1990*	% Change 1980-1990*
Lawrence	$470	$279	$155	$124	80.0%
Haverhill	$504	$300	$189	$111	58.7%
Salisbury	$518	$308	$203	$105	51.7%
Merrimac	$492	$293	$194	$99	51.0%
Methuen	$517	$307	$207	$100	48.3%
Amesbury	$543	$323	$222	$101	45.5%
West Newbury	$552	$328	$229	$99	43.2%
Newburyport	$549	$326	$230	$96	41.7%
Andover	$594	$353	$250	$103	41.2%
Georgetown	$395	$235	$174	$61	35.1%
Newbury	$498	$296	$222	$74	33.3%
Rowley	$644	$383	$296	$87	29.4%
North Andover	$647	$385	$310	$75	24.2%
Groveland	$519	$309	$250	$59	23.6%
Boxford	$696	$414	$402	$12	3.0%

Source: 1980 and 1990 Census of Population and Housing
U.S. Department of Labor - Bureau of Labor Statistics

*** 1990 values were adjusted for inflation using the Boston Area Consumer Price Index of all Urban Consumers (CPI-U), 1982 - 1984 = 100**

For these reasons, based on housing constraints and because of the social networks described in the previous chapter, immigrants to the region, many of whom are poor, often have little choice but to live in Lawrence. Those higher income individuals who can leave, do so - - as the massive out-migration of non-Hispanic whites from the city suggests. These dynamics, and the large loss of industry in the city, significantly reduce its property tax base. For example, both residential and commercial properties are not maintained as they should be or they have been left abandoned. Consequently, education and other important public services tied to the city's tax base cannot be provided adequately. Growing disinvestment within the city continues and a cycle of poverty gets perpetuated. Wealthier communities, on the other hand, are able to exclude the poor, benefit from growing jobs, and maintain their positions of strength as the statistics presented in this thesis have suggested.

CHAPTER 9

DIRECTIONS FOR FURTHER RESEARCH AND IMPLICATIONS FOR PUBLIC POLICY

Certainly the analysis that has been presented in this thesis does not solve the problems of economic change and concentrated urban poverty in the city of Lawrence. However, it does help to clarify and redefine the problems. I have presented acute patterns of socioeconomic and spatial polarization taking place in Lawrence relative to the cities and towns in the surrounding Lower Merrimack Valley region. I also extended my analysis to show how, at the block group level, growing patterns of ghettoization are taking place within the city of Lawrence.

As this case study suggests, Wilson's model is limited in its ability to explain the socioeconomic changes taking place in the Merrimack Valley. In the case of Lawrence, an entire city is rapidly becoming a ghetto relative to its surrounding region, rather than isolated sections of the city. In addition, economic restructuring is probably only one of many complex forces behind alarming socioeconomic changes taking place in Lawrence. For example, this work has suggested the importance of understanding concentrated urban poverty in terms of politically and socially defined spaces and within a regional context.

9.1 Directions for Further Research

As I have suggested in the analysis that has just been presented, the following areas represent directions for further research.

In *Chapter 6*, I stressed important limitations in the available data that do not allow us to clearly define relationships between industrial change in the region and high rates of poverty in Lawrence. Do lack of skills, distance from the jobs, or lack of transportation options prevent the workforce in Lawrence, particularly the Hispanic workforce, from securing employment -- either in the surrounding suburbs or in the city itself? Or are there other explanations? Is it the case that jobs are simply not available and must be created instead. Are the jobs available to Lawrence's unemployed workforce primarily part-time, contingent, low-paying, or part of a large informal sector. Does discrimination plays an important role in keeping Hispanics out of the labor force or out of the higher-paying jobs. It is clear that Lawrence lost 23% (6,976 jobs) of its total employment base between 1980 and 1990 and that this loss dramatically impacted the city's population. But exactly how many of these jobs were held by city residents and how many were held by employees living outside the city? Clearer answers to these question would tell us if the focus of public policies should be directed towards job creation; training or re-training the workforce; affirmative action policies; upgrading jobs and pay scales; or developing policies that encourage the formalization of informal sector employment.

The region's economy is also linked to the state's economy and to the larger national and global economies. The loss of "mill-based" manufacturing jobs, particularly in Lawrence, and the recent recession both in Massachusetts and in the United States have made these facts painfully clear. Furthermore, the immigration of large numbers of Dominicans and Puerto Ricans to Lawrence is motivated in part by economic conditions in the sending countries and the hope of finding better economic opportunities in the United States. How do we better understand and respond to the effects of these larger economic forces

at the regional and local level? These are very complex and poorly understood questions, however, an understanding of and effective response to such economic forces are vital to the survival of cities like Lawrence. Have other cities or communities like Lawrence been able to respond and adapt successfully to similar economic and demographic changes? What explains their successes and what important lessons can be gleamed from their experiences?

The second important area of research that I do not address in this thesis is the question of why large numbers of Dominicans and Puerto Ricans come to the region in the first place. Possible factors that explain their immigration patterns were suggested in *Chapter 3*. They include severe economic conditions in the sending countries; hope of a better life in the United States; and the lure of friends and family in the United States, among other factors. Who comes; from what parts of their respective countries do they come; and why do they come are all important question that would help us better understand the current needs and expectations of these people. Answers to these questions would also help us predict if current immigration patterns will continue in the future.

Third, I have suggested that municipally defined zoning regulations and local tax policies play an important role in influencing the dynamics of the regional housing market which, in turn, restrict the poor from living in wealthier communities. These constraints have played an important role in maintaining the high concentration Dominicans and Puerto Ricans in Lawrence. In order to confirm if this is, indeed, the case, further research would be required to examine zoning regulations, growth policies, and tax structures in each of the municipalities within the Lower Merrimack Valley and to correlate these with the cost and availability of both renter and owner occupied housing in the region.

Fourth, and as suggested in *Chapter 4*, the accuracy of census data, which provided most of the data for this thesis, is questionable. Because of census undercounts, it is probably the case that Hispanics constitute a much larger share of Lawrence's population than the 42% figure published by the Census Bureau. In addition, other statistics including poverty rates, per-capita incomes, and unemployment rates could be off because of inaccuracies in census data or because financial transactions and employment within a large informal economy are not recorded. Although census data often provides the best, and sometimes only source of data, its limitations must be acknowledged. Further and substantial research would be required to determine the exact extent of census undercount in Lawrence as well as the size of the informal economy.

Finally, the model and the analytical tools used in this case study of Lawrence and the Lower Merrimack Valley can be applied to other smaller cities and their surrounding regions. For example, smaller cities in Massachusetts that have experienced similar demographic shifts include Lowell, Chelsea, Brockton, and Springfield, among others. Of particular interest would be a comparison between Lawrence and Lowell. Both cities have experienced large increases in their immigrant populations and out-migration of non-Hispanic whites. However, the immigrant population in Lowell consists primarily of Asians. A preliminary analysis of socioeconomic changes in Lowell indicate that poverty rates, rates of female headship, unemployment, etc. have increased in Lowell, but at lower rates than Lawrence. Furthermore, in addition to developing a general framework for similar studies, this model can also be used to incorporate yet to be released census data in future studies. These data include more detailed demographic data; poverty and income data broken down by race and Hispanic origin; education data; employment data;

data on migration patterns; and many other variables.

9.2 The Policy Implications of This Work

Despite the gaps and the limitations just reviewed, directions for public policy can be drawn from this work. I think the most obvious implication of this work is the importance of approaching poverty in Lawrence, and other cities like Lawrence, from a regional perspective. As a result of the important structural forces I have identified, particularly constraints in the regional housing market and the social forces that keep the Dominican and Puerto Rican community segregated from the rest of the region, poverty will tend to remain concentrated in Lawrence. If these forces are left to their own devices, the natural outcome of socioeconomic conditions in the region is one of spatial polarization rather than a more equal distribution of wealth, resources, and social responsibility among the surrounding cities and towns.

These dynamics of spatial polarization clearly imply that mechanisms which transfer resources to cities like Lawrence should become the focus of public policy, rather than "trickle down" policies which support municipalities with higher per-capita tax bases and more resources. Furthermore, because most local governments have almost no control over the regional consequences of policy decisions made in other cities and towns, such redistributive policies must become the responsibility of the state and federal government, or perhaps even regional governing bodies with legal and regulatory powers over the municipalities within their jurisdiction. The only example of a regional planning agency in Massachusetts with such powers is the Cape Cod Commission. Among other goals, this agency has organized a comprehensive plan to promote economic

development within the Cape; protect its fragile ecosystem; control how growth takes place; and ensure that low-income housing and other programs are in place to support and redistribute resources to the Cape's disadvantaged residents. However, this governing body is still relatively new and its success is yet to be tested.

Furthermore, the focus of any comprehensive plan designed to tackle the problems of urban poverty in cities like Lawrence must: (1) ensure that the basic needs of the population are met including food, shelter, and health care; (2) rebuild a safe and hospitable environment for residents, business people, and visitors to the city; (3) provide education and training linked to jobs that offer hope and genuine opportunities for advancement; (4) move families off welfare and into the mainstream economy; and (5) create wealth and build up equity within the city (and particularly within the Hispanic community in Lawrence).

Reaching these goals is a difficult task and I do not pretend to have comprehensive answers to the problems that face the Lawrence community or other cities like Lawrence. However, the following recommendations offer examples of the direction public policies must begin to take.

Jobs Creation

It is not enough to simply create jobs and bring business and industry to Lawrence. There is no guarantee that many of the new jobs would go to Lawrence residents. Already, a large portion of the city's workforce lives outside the city. Instead, jobs must be created both in the city and within the region that provide opportunities for the city's unemployed workforce. One example of such a program, perhaps difficult to carry out,

would be a linkage program that assures a certain portion of new jobs in the region go to Lawrence residents. As the results of this study show, most of the new job growth in the region is taking place outside of Lawrence. There must also be some assurance that a portion of the new, higher paying jobs go to Lawrence residents. This may mean the development of education and technical training programs to provide the workforce with the skills they need for these higher paying jobs.

A second type of program could be one that creates jobs to improve the city's infrastructure with grant money from the state or federal government. Jobs within the school department, public works projects, or projects to clean and renovate crowded and growing areas (for example Broadway St.) could improve the city and make it a safer and more inviting place to live, work, or shop. These jobs should also go to Lawrence residents.

Job creation programs must also be targeted to meet the needs of the groups they are designed to serve. A program that targets welfare mothers should be different from one that targets individuals without children. For example, one that meets the needs of welfare mothers would have to provide childcare while the mother is working or going to school. Furthermore, welfare policies must be changed so that a mother is not penalized by the system if she begins to work. For example, if her new job does not provide health insurance, the state should continue to provide this important benefit.

Housing Policies

Housing policies in Lawrence must target at the city's low income population who are using the majority of their incomes to rent substandard, crowded, and dilapidated

housing. It is not enough to simply create more low-income housing in Lawrence. Instead, low income residents must begin to own the housing they live in. This will create a sense of pride and ownership in the community and a sense that those who live within it have a stake in its future. It is clear from the recent wave of arson fires in Lawrence that many current owners no longer want financial responsibility for the properties they own. Then why not turn financial responsibility of these properties over to those who live in them? Welfare payments or housing vouchers used to pay rents could be turned into mortgages instead. Furthermore, once residents begin to own the housing they live in, they become responsible for its care and maintenance. This provides another opportunity for job creation. Why not train residents to become carpenters, electricians, and plumbers and then provide home improvement loans or grants to put these new skills to work? This way wealth gets generated within the community; those who live in the community are now responsible for it; and new jobs begin to stimulate a local economy.

Another approach to the housing issues in Lawrence would be to provide more housing options in the surrounding communities. Those who would like to move elsewhere would then have the option to do so. There are laws in Massachusetts stating that every municipality must dedicate a certain portion of its housing stock to low-income housing. Compliance with these regulations should be enforced in the region. A second approach could be the development of mixed income housing projects in Lawrence that try to lure higher income individuals back into the city. However, this would be a great challenge because of deteriorating socioeconomic conditions in the city and Lawrence's image as a dangerous place to live.

Community Economic Development

Even though many people in Lawrence are poor, the community does have money to spend. According to census statistics, the 1990 per-capita income in Lawrence was $9,686. This means that the 70,200 people living in Lawrence have at least $679,957,200 per year to spend on food, clothing, shelter, entertainment, and the other necessities of life. Economic development programs should be targeted at keeping this income cycling within the city in order to build up the city's wealth. Currently much of this spending power goes out of the city to malls and shopping centers in other areas (Stevenson, 1991). This means that more Lawrence residents should own the businesses in the city, they should work in them, and they should be encouraged to shop in them.

In fact, businesses that are owned by the Hispanic community and cater to the needs of the Hispanic market have grown in Lawrence. Many of these businesses are profitable and some are thriving. Their growth should be supported and promoted by the city. Furthermore, advertising and promotion campaigns can educate the city's residents about the importance of shopping in Lawrence. Advertising should also reach out to a growing regional Hispanic market that includes parts of New Hampshire and the Boston Metropolitan area.

Furthermore, much of the empty mill space and vacant properties in Lawrence offer opportunities for ambitious projects that could help pull the community together and offer creative and constructive activities. State and federal grants or loans could be used to turn some of this space into a community arts center and a sports facility that are affordable and available to the entire community. However, other important, and already established organizations, should also be provided with the resources they need to

continue providing services to the community: the school system, the community college, the public library, programs at the YMCA, and many other programs.

These suggestions offer some directions for public policy. There are also many others. However, it must also be stressed that no good ideas will bring genuine change unless institutions and people at all levels (national, state, and local) acknowledge and respond realistically to the extent and severity of growing urban poverty in Lawrence and cities like Lawrence. In addition, rapidly changing and complex regional, national, and global forces must also be confronted. Real solutions will require full-fledged and long term efforts by public officials, private citizens, and public and private institutions. They will not come quickly and easily.

APPENDIX 1

DATA SOURCES

The following is a description of the data sources used in this study.

Demographic Data

Census data, provided in digital format, was the source of demographic data for this research. These data, including population counts by race and Hispanic origin and household composition data, were extracted from both the 1980 and 1990 Summary Tape Files 1A (STF-1A), available on CD-ROM. STF-1A contains a complete count of population characteristics including race and Hispanic origin, age, household type and relationship. These data are available (in digital format only) at the census block group level and above. The 1990 data, stored in dBase III+ format, were read directly off a CD-ROM provided by the Bureau of the Census. The 1980 data were extracted using a proprietary software package entitled *Supermap™*.

Poverty Data

Data on income and poverty status in 1979 were taken from published Massachusetts census data at the tract level for Lawrence and at the municipal level for the cities and towns in the Lower Merrimack Valley Service Delivery Area and Lowell. These statistics were not available below the tract level in 1979. Similar 1989 statistics were not available on CD-ROM format at the time of this study. They were obtained, instead, through the MISER State Data Center and were available at the block group level and

above.

Welfare Data

Welfare data was provided by the Massachusetts Department of Welfare. Annual data for January of 1990, 1991, and 1992 were provided on hardcopy at the ZIP code level for each of the cities and towns in the region of study. The categories of assistance in the ZIP code reports included the following programs: Refugee Assistance, Supplemental Security Income (SSI), Aid to Families with Dependent Children (AFDC), General Relief, Medicaid, and Food Stamps. These data were aggregated to the MCD level and input manually into a database for analysis. Only the data for 1990 was analyzed in detail. These data were not available in digital format.

Employment and Industry Data

Employment, unemployment, and industry data for this study came from two primary sources: 1980 census data and Massachusetts Department of Employment and Training (DET) data. Employment totals for 1980 by industry, broken down by race and Hispanic origin, were gathered from a series of reports entitled *Report 3: Social Indicators for Planning and Evaluation, 1980 Census of Population*. These reports contained data for Lawrence and for Massachusetts. They were produced by the Lawrence Berkeley Laboratory in Berkeley, California using 1980 census data.

Employment and wage data by industry, for establishments covered by unemployment compensation, were provided by the DET. These data included total number of jobs by industry for each of the cities and towns in the LMVSDA and Lowell. DET data was collected back to 1967, however, only a very small portion of the early data was used.

Changes in standard industrial classification (SIC) codes in 1967 and 1972 and the addition of Government as an included sector in 1972 posed problems for time series data comparability. Sectors used in this study included the following: Government, Agriculture, Forestry & Fisheries, Mining, Contract Construction, Manufacturing, Transportation, Communication & Utilities, Wholesale & Retail Trade, Finance, Insurance & Real Estate, and Services. Monthly and annual unemployment statistics by city and town were also provided by the DET.

Housing Data

Like the demographic data, these data were extracted from the 1980 and 1990 STF's-1A. In addition to demographic data, STF-1A also contains a complete count of housing data including units in structure, value and rent, number of rooms, tenure, and vacancy characteristics. The fields that were extracted included data on tenure, values, and rents at the block group level for Lawrence and at the MCD level for the cities and towns in the Lower Merrimack Valley Service Delivery Area and Lowell.

TIGER/Line™ Files

TIGER stands for Topologically Integrated Geographic Encoding and Referencing System. It is the automated geographic data base used by the Census Bureau for their 1990 census taking. One extract of selected geographic and cartographic information is called the TIGER/Line™ Files. A partial listing of the information in the TIGER/Line™ Files includes roads, railroads, water bodies, geographic area codes, latitude/ longitude coordinates of geographic features, and the name and type of each feature. Address ranges and ZIP Codes are also available for street segments in densely settled urban areas. The TIGER System was developed jointly with the U.S. Geological Survey

(USGS). Like the demographic data, TIGER/Line™ Files are available in CD-ROM format. Because the TIGER/Line™ Files provide geographic area codes including census block, block group, and tract numbers, they provide a powerful base map to help display census and other geographically referenced attribute data.

APPENDIX 2

CENSUS DEFINED COHORTS

This appendix provides a brief description of each of the census defined cohorts used in the study.

Spanish Origin/Hispanic and non-Spanish Origin/ non-Hispanic

The terms Spanish Origin and Hispanic are used interchangeably in this thesis.[1] The term Spanish origin refers to the 1980 census questionnaire asking people to identify their ancestry, nationality group, or lineage. The term Hispanic Origin refers to a similar question on the 1990 Census. Spanish Origin/ Hispanic refers to any one of the following categories: Mexican, Puerto Rican, Cuban, or other Spanish/ Hispanic origin. For the purposes of census cohort classification, persons are classified as either Spanish/ non-Spanish origin or Hispanic/ non-Hispanic. Persons of Spanish or Hispanic origin may be of any race. Race classifications are explained in the following sections.

White

White includes people who indicated their race as "White" or reported entries such as Canadian, German, Italian, Lebanese, Near Eastener, Arab or Polish.

Black

Black includes people who identified their race as "Black or Negro" or reported entries such as African American, Afro-American, Black Puerto Rican, Jamacian, Nigerian,

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[1] For a more detailed discussion of the subtleties between these two terms see the *1990 Census of Population and Housing Technical Documentation.*

West Indian, or Hatian.

American Indian, Eskimo, and Aleut

This category includes people who identified themselves as either American Indian, Eskimo, or Aleut.

Asian and Pacific Islander

Asian and Pacific Islander includes persons who reported one of the following groups. Asian includes Chinese, Filipino, Japanese, Asian Indian, Korean, Vietnamese, Cambodian, Hmong, Laotian, Thai, or other Asian. Pacific Islander includes Hawaiian, Samoan, Guamanian, or other Pacific Islander.

Other Race

This category includes all persons not included in the previous categories including those reporting multiracial, multiethnic, etc.

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