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TRENDS IN METROPOLITAN AMERICA:
SUBURBANIZATION IN THE BALTIMORE REGION

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The International Fellows in Urban Studies program sponsored by the Institute for Policy Studies of The Johns Hopkins University has for over twenty years brought urban scholars and practitioners from all over the world to The Johns Hopkins University campus in Baltimore, Maryland to conduct comparative urban research. In some cases, the Fellows have taken graduate level courses here; in other cases, they have taught courses for University students.

More than two hundred specialists in urban studies and related fields have participated in the program. The majority have been from Europe, including a significant number from Eastern Europe.

The impact of the program has been significant and its alumni have continued in distinguished careers. From among the former participants have come high ranking officials in the reform governments of Poland and Romania, as well as the Mayor of Barcelona. In addition, other projects have emerged from the Urban Fellows program, including a Technical Assistance Project supporting the emerging local governments in Poland and a book on The Future of the Industrial City: The Challenge Of Economic Change in America and Europe.

But the core of the program has been the research the Fellows have done while in residence in the United States. These "Working Papers in International Urban Studies" represent the fruits of those efforts. They are "working papers" in two regards: (1) they reflect work completed under the time constraints of a limited Fellowship; and (2) for most of the Fellows, they were written in English as a second language.

Although the reader may find flaws in the English here, I am convinced that the content of these papers constitutes an important contribution to urban studies in the United States and internationally. I hope that you will find them of value.

Lester M. Salamon  
Director  
Institute for Policy Studies  
The Johns Hopkins University
Acknowledgements

During my stay in the United States of America, in which period I conducted this research, I experienced that suburbanization in America is very exciting. Without the help of a number of people I would probably not have been able to make this statement.

First of all, I was fortunate to be able to participate in the International Fellowship Program at the Johns Hopkins University. I owe a lot of thanks to the "father" of this program: Jack Fisher. Maggy Shamer and Gail Jorg also deserve many thanks: they helped me out when bureaucracy became too strangling.

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Last but not least, I owe a lot of thanks to all the people willing to participate in the research. I conducted a lot of interviews with developers, brokers, leaders of community organizations, people working for government institutions, and so on. Especially the people at the Regional Planning Council deserve many thanks for their support.

Alex Jansen,
Utrecht, december 1988
EXECUTIVE SUMMARY

The purpose of this study is to give a description and explanation of recent changes taking place in metropolitan America, and the impacts on both the suburban area and the individual suburbs. The research focuses on differential development within the suburban area. The intention of is to promote a better understanding of current trends, and the factors contributing to these trends in metropolitan America. The development of the metropolitan system will prove to be of crucial importance for the different actors, who substantially influence the processes in a region, but also must face the results. Current problems demand for a better understanding of the developments.

This research is a case-study of the Baltimore Metropolitan SMSA and concentrates on the developments after 1970. First, the trends in population and employment are analyzed; they provide an important framework for the interpretation of the factors with impact on the processes in the suburban area. Second, some of the actors in, and characteristics of the suburbs are being discussed. Special attention is paid to current problems. Finally, the developments are being discussed from a perspective of growth corridors: in fact they are the physical embodiment of processes of differential growth and specialization.

Population

The population in the Baltimore region is still growing; a favorable situation and in contrast to the situation in many other metropolitan regions. The deconcentration shows no distinct directional bias and does not noticeably enhance competition among the suburban counties; the counties in the region all benefit from the increase in population.

Based on period of initial development and distance to Baltimore city a distinction is made between the 'older' and 'newer' suburban counties. The older counties have a rather distinct relationship with Baltimore city as far as migration is concerned and they show relatively much 'urban' population- and housing-characteristics. They themselves lose population to the 'newer' counties. Baltimore County even experiences net-outmigration. The further outward moving population is highly selective on socio-economic characteristics, while the population leaving Baltimore city is getting more diversified.

Differences in development between both the 'older' Anne Arundel and Baltimore Counties are predominantly due to their location relative to Washington D.C. Anne Arundel shows, just like the newer counties, net-immigration and relatively high patterns of interaction with areas outside the Baltimore region, while the intensity of relations with Baltimore city is decreasing. Developments in the Baltimore region are increasingly dependent upon interaction with areas outside the region, while the dominance and regional function of Baltimore city is decreasing. The counties on the south-side of the region experience the highest in-migration of suburban Washington residents. This is reflected not only in the characteristics of the population, but also in the type of housing constructed. The accessibility of the housing market at the south-side of the region has, due to high value residential developments increasingly become limited for lower-income population groups.
Employment

The Baltimore region still experiences a growth in employment, due to a favorable transportation situation, labor-force characteristics, the number of government jobs and the intensifying relationship with Washington D.C. The rate of growth slowed down after 1980, which is almost completely due to developments in Baltimore city and Baltimore County. The redistribution of employment to the suburban counties, however, showed an increase in speed. The center of the employment function tends to gravitate in southern direction, due to the catalytic growth of the Baltimore/ Washington Corridor. Within the state of Maryland, however, the Baltimore region is relatively loosing its employment function to the suburban Washington Counties.

Within the region distinct shifts in hierarchy occur. Baltimore city is is loosing its dominant position rapidly. In absolute terms the gain in employment is the highest in the 'older' suburban counties, while the 'newer' counties experience high growth rates. Baltimore city's loss of regional functions has lead to specialization on services of a higher order. The employment function has become the leading force behind the suburbanization in the latest stage. The beltway functions as a springboard, with the employment function moving out further, but also gravitating towards the beltway for reasons of accessibility. The office- and retail sector play an important role and have become magnets for other kinds of activities to occur. Baltimore County surpassed Baltimore city in amount of office floorspace in the 1980's. The office market in the Baltimore region is booming and among the tightest in the United States. The high development pressure throughout the whole region results in the construction of large scale projects in the newer parts of the suburban area and infilling and redevelopment especially in the older suburbs.

Actors

Urban policy is almost completely conducted within the general framework set by planning and zoning regulations. The 'older' Baltimore and Anne Arundel Counties adopted the most restrictive policies. The other counties are less restrictive in their policies. This means a relative advantage compared to the older suburban counties and, for example, suburban Washington D.C.

The restrictive policies indicate the end of a pattern of low interference with the ongoing developments. The relatively high degree of government interference sets the Baltimore region apart from most other metropolitan regions in the United States.

It also implies a formal commitment of the government to make huge capital investments. This provides the business community with clarity about planned developments and enables cooperation between government and developers. All the suburban counties have experienced tremendous increases in expenditures in the last two decades due to the ongoing suburbanization. Howard and Anne Arundel Counties have seen considerable improvements in their "wealth," an indication of their strength and largely due to the favorable economic situation in the Baltimore/Washington corridor. The relatively low level of expenditures in the new counties indicate the early stage of suburbanization of these counties.

The situation within the Baltimore region is in comparison to other metropolitan regions less competitive due to an ongoing growth of population and employment. In the early stages of suburban development, the competition
largely occurred between Baltimore city and Baltimore County. The differential growth within the region now leads to competition between Howard and Anne Arundel Counties, but mainly to competition between these counties and Baltimore County. Baltimore County tries to capture part of the development that would otherwise have moved south by the designation of the two growth areas.

Private sector

Market-forces influence developments in the United States more than public policy does. The investments made in the Baltimore region have risen significantly in the period since 1980, indicating the attractiveness of the region. Baltimore city still attracts the largest amount of investments. In absolute terms, the two older suburban counties and Baltimore city are among the most attractive areas for investment in the region. Within the counties the bulk of investments are largely directed towards the newer areas.

Changes in behavior of the developers are mainly based upon rising costs and the reaction has been a search for an increase in scale of developments, an increase in density of the land-uses, and emphasis on mixed-use projects. Developers increasingly show a strong preference for the government to interfere by means of stricter regulations. This is necessary not only for certain kinds of capital expenditures in the public sector, but also to ensure the safety of their investments in the future. Furthermore, the developers stress the public-private cooperation because of the relative scarcity of alternative investment opportunities. The future viability of a project is dependent upon many other factors, which may be captured in the "image" of a project. This image seems to be influenced by the characteristics of the region (accessibility, perceived character), composition of economic activities (and its evolution), the attitude of government, the attention paid by press and leasing agents, and the focal point function.

Suburban area

The results of the combined efforts of developers and government make a distinction possible among new- and mature investment areas within the suburban area. Rather important in setting the older suburbs aside from the newer suburbs in the outer ring, is the fact that most of these former bedroom communities have a small town center which in time has become a focal point of orientation for the surrounding community. Rehabilitation policy is a distinct feature in the inner ring of the suburban area. The bottom line is that with the initiation of the rehabilitation policy a change in governmental attitude has occurred. The emphasis in development is on the private sector with room for public-private partnerships; the county assists the actions of the private sector by way of re-zoning, capital improvements and improvements in public facilities. The results can be worthwhile for the older suburbs, although the differences between the suburbs are large. Much of the efforts are dependent on the strength of the local Development Corporations. Difficulties are largely related to the process of attracting developers, scarcity of finance and number of small local developers that are involved in the developments.

The suburbs in the outer ring, at some distance from the existing built-up area, are characterized by a rapid growth and thus a short history. The suburbs in the newer parts of the suburban area are predominantly "hubs" of economic development, while the major residential developments still have to happen. This pattern of development differs considerably from that of most of
the older suburbs, which initially started as residential communities. As a result, the newer suburbs lack a "sense of place" and are highly automobile oriented.

Problems

The speed of deconcentration of especially the employment function aggravates the problems in the region. Other mature metropolitan regions, however, face severe losses of their suburban population and employment. The differences in characteristics create different problems in the older and newer suburban areas. Among the main concerns of the suburban firms are: rush hour traffic congestion, inadequate public transportation, and poor circulation within the area.

One of the general and structural problems in the metropolitan areas in the United States is the mismatch between the location of population and employment. The changes in direction, the increasing commuting distance and an the increase in inter-metropolitan commuting indicate a trend towards chaos; resulting in a higher entropy in the metropolitan region. Problems with the transportation system are related to an increase of traffic intensity, the change in direction, as well as more qualitative aspects of the system. Public transportation, if ever available, was efficient as long as the dominant pattern of commuting was along the radial lines from the central city to the suburb. With the exception of Baltimore city, the use of the public transport system has decreased in every county.

A factor strongly linked to the mismatch of employment and population is the access of the workforce to the labor market. The diversification of the employment structure in the suburbs creates an increasing demand for a low-skilled workforce. The increasing distance between employment location and central city make them almost inaccessible for the low-skilled groups of the labor force, that are overrepresented in Baltimore city. Moreover, the employees have little or no access to the housing markets in the newer areas, since the housing prices are unaffordable. While the transportation system thus remains an important factor for the attractiveness of a suburb, in general it contributes to a clustering of activities on points of high access, mostly close to the beltway.

Most of the solutions to the problem are very short term or only partial. The real solution must be sought in bringing the employment and population closer to each other. The Baltimore region in general has undertaken some steps in that direction. Examples are the designated growth areas Owings Mills and White Marsh, which combine the residential and employment function, while counties also have allowed to build in higher densities.

Differential growth: corridors

Within the Baltimore suburban area a differential pattern of growth has occurred, which makes it possible to delineate growth areas or corridors. Roughly five growth corridors and two growth areas can be pointed at in the Baltimore region. Differential development, as a result of new activities, redevelopment and infilling, takes place throughout the whole suburban area and is enhanced by high development pressure in the region.

The factors contributing to an explanation of the patterns of growth occur at the metropolitan, county and local level. Although patterns of development
and underlying factors on a higher level (accessibility, location relative to high growth areas, period and scale of initial developments, government interference/attitude, and so on) provide an important general framework; local factors turn out to be of crucial importance for developments to occur on the level of the suburb itself.

General factors largely seem to determine trends towards specialization at the level of the corridor, while local factors also determine patterns of competition within the corridor. Factors such as availability of space, perceived image, strength and attitude of the local community, competition on a sub-regional scale and location relative to high-growth areas are almost as important and contribute to differences among, for example, inner-ring suburbs.

The market is the driving force behind the restructuring of the suburbs. Within the regulations set by government, the market is looking for (safe) investment opportunities. Investment decisions are themselves based both upon general and very specific factors. The general factors in the Baltimore region are favorable, while, due to the restrictiveness of planning and zoning regulations the investment opportunities are scarce. Together this results in development pressure and a complex pattern of concentration of activities all over the suburban area. This development pressure increases the rate infilling and restructuring.

Policy considerations

The situation in the Baltimore region is quite favorable. Severe problems as exist in other metropolitan areas, do not exist yet in the Baltimore region. The observed trends in the region demand, however, attention to problems that may arise or aggravate in the near future and to define responsibilities.

* Several trends lead to a stronger quest for intensified regional cooperation:

- The Baltimore region is relatively losing its employment function to the suburban Washington counties, and Washington has a strong position in the developing Baltimore/Washington Corridor,

- Financial inequality between counties exists and seems to be growing,

- The financial relation with federal government is subject to changes,

- The older suburban counties now experience an increase in population with an on average lower income,

- The problems in the region have aggravated and have become metropolitan scale problems, while the costs of suburbanization are increase with the distance from Baltimore city,

- Current development patterns in the Baltimore region could easily end up in a more severe competition between counties.

The function and power of governmental institutions such as the Regional Planning Council should be reconsidered.
More attention should be paid to the lower-income groups. The accessibility of the housing market in large parts of the Baltimore region becomes increasingly limited. In contrast, the diversification of the employment structure in the suburban area increasingly demands a low-skilled labor-force.

The mismatch between employment and population is a structural problem. The transportation system needs to be improved. Improvement of the transportation system alone creates additional activity in the suburban area. These improvements should be accompanied by improvements of:

- Inter-center and inter-county linkages,
- Traffic management organizations (such as the TMA's),
- Bring the population closer to the employment: mix of activities, increase in densities, housing more affordable,
- The policy of designated growth areas is efficient only when implemented on a regional scale (otherwise a further outmovement of activities),
- Public transport and the use of it, but also paratransit,
- Accessibility on the leve of the individual counties.

Last, but not least, the region should create databases and/or make databases accessible. Several institutions expressed the need for data on employment on the sub-county level. Information is essential for a better understanding of processes in the metropolitan region. Policy should be supported by a sound base of information. This information is often not available, not gathered or not easily accessible (too expensive due to the structure of the information system).
1. INTRODUCTION

In his comprehensive work on "Contemporary Suburban America," Peter Muller seemingly agrees with Samuel Kaplan when he quotes: "The quintessence of America is now suburbia" (1981). He is not the only one. Jackson, as an urban historian, is even more emphatic when he writes that suburbia is not only "the quintessential physical achievement of the United States," but also "the fullest, most unadulterated embodiment of contemporary culture" (1985). Jackson sees "suburban sprawl," together with the appeal of low-density living, home ownership and commutation as typical American characteristics. For the United States, the U.S. Census for 1980 reveals that more than 44 percent of the total population lived in suburban areas, a higher portion than resided either in rural areas or in central cities. However, the United States is by no means exceptional, because the dominant residential pattern in most of the developed western world is suburban.

There is a strong and continued trend toward suburban living. A recent survey of the National Association of Home Buyers (Orski 1987) comes to the conclusion that more than 70 percent of prospective home buyers want to live in a suburban setting. And although these home buyers prefer a location 17 minutes from work, the focus of the dispersal process takes place at increasing distance from the central city. Herbers (1987) noticed this trend for California, where the movement of population is occurring beyond the suburbs and into what he calls the "New Heartland." This trend sometimes goes to extremes. An article in the New York Times (September 20, 1987) provides an exceptional example of this trend: "'Some people think we're out of our minds to commute this far', Mrs. Ready said, 'it's 3 hours and 20 minutes door to door -on a good day-'.." These people "never felt comfortable living in New York City," and "think the trip is worth it."

Suburban developments have undergone a change in recent years. While the suburban population is growing slowly, employment in the suburban area is mushrooming. The traditional out movement of retail services, following the population into the urban fringe, is going on; but also the traditional big-city-downtown oriented firms are now moving into the suburbs. Fulton (1986) speaks of the emergence of a new kind of "downtown" in the suburbs. This is an indication of the dramatic changes that sometimes have occurred in the suburban centers.

The central city turns out to be the loser of the intra-metropolitan game with the suburbs. Since the 1950's, most cities in the United States have lost vast amounts of their population and employment to the suburbs. The response, despite the success of revitalization programs, has been weak until now. Inner-city revitalization and housing and community programs have not been able to stop the outward movement. New phenomena, as for example the huge suburban shopping malls, are attracting increasing numbers of central city residents (Friedrichs 1987). As a result, the central city in the United States has undergone a functional reorientation which has resulted in a stronger emphasis, or specialization, on economic activities that deliver products with a high threshold and thus require a large market (e.g., tourism, conventions).
The process of suburbanization in the past few decades has resulted in a multi-nucleation within the metropolitan regions, in which the central city is losing, or already has lost, its previously dominant position in the urban hierarchy. The locational freedom of almost all urban economic activities has grown, and is no longer restricted to a location in the central city. New firms now originate more often in the suburban area than in the central city. The economic importance of the suburbs has increased and, as a result, has created a certain momentum for new developments to occur, increasingly independent from those in the central city. At the same time, relationships between the suburbs are intensifying and have become more competitive in character. Residents and firms are relocating within and between the different suburbs. Although competition with the central city will continue, it is growing among the suburbs themselves and processes of specialization become obvious.

Little is known about the future direction of urban dynamics and the impacts on the suburbs. Common opinion among scholars does not exist and efforts to provide a general theoretical framework have not kept up with the speed of the developments. This must partly be due to the complex character of the process of suburbanization. The development of the metropolitan system, however, will prove to be of crucial importance for the different actors (e.g., government, private sector, residents). These actors substantially influence the processes in a region, but also must face the results. Current problems (rising costs, deteriorating environments in the older suburbs, the mismatch between employment and population, transport) demand for a better understanding of the developments because they are crucial for the future of each of the actors. The intention of this research is to promote a better understanding of current trends, and the factors contributing to these trends in metropolitan America.

Research Outline

The purpose of this study is to give a description and explanation of recent changes taking place in metropolitan America, and the impacts on both the suburban area and the individual suburbs, thereby emphasizing the changing relationship in the metropolitan region between the central city and the suburbs, and among the suburbs themselves. The research focuses on the process of suburbanization and the outcome of the process: the suburban area and the suburbs, places with their own characteristics and development. This results in the following goal of the study:

"Which developments, with regard to housing, population and employment, have recently taken place in the Baltimore metropolitan region and in the different types of suburbs within that region; which are the problems that result out of these developments; which factors contribute to an explanation of the processes of specialization and differential development within the metropolitan area?"

This research is a case-study of the Baltimore Metropolitan SMSA. The exact definition of the research area is given in Chapter 3. The choice of an SMSA as the research area was made because an SMSA is supposed to have a certain level of internal functional relationships. However, during the research it became evident that the Baltimore SMSA is strongly developing an intensive relationship with the Washington D.C. SMSA. This SMSA is not included in the research, but, where necessary, references are made.
Defining the research-area (suburb) sometimes causes problems due to the "continuing" character of neighboring suburban developments. The Regional Planning District (RPD) is chosen as a statistical base for delineating the suburbs. RPD's are aggregations of Census Tracts (US Bureau of the Census), and they form a representation of a consistent and comprehensive geographical area. In fact they provide a simplification of Census Tract information in more manageable area-units. The Census Tracts are small geographic areas which are fairly homogeneous with respect to population characteristics and living conditions.

The research concentrates on the recent period. Starting with the year 1970, in most earlier studies being recognized as a break-point, both the 1970 and 1980 census could be used for comparison. The importance of the historical component in suburban development, however, made it necessary to shortly consider earlier developments.

Developments are, as far as possible, operationalized by changes in number and composition of the different activities. The changing relationships within the suburban area are operationalized by considering the relative location of the activities (for example, retail sales, indicating changing shopping behavior), relocation of firms and movement of population. Many interviews are held with government officials at various levels, developers, brokers, community leaders and so on. Where possible, use is made of existing databases (for example, from the Regional Planning Council, developers) and existing research. Together this ought to give a rather complete picture of the suburbanization in the Baltimore area.

It was sometimes impossible to collect statistical data, which becomes even worse when one tries to collect data on a lower or sub-county level. Data on, for example, migration of population, (re)location of new or expanding firms is not available, or very fragmented and not consistently gathered. This makes it difficult to study dynamics in the metropolitan region other than comparing characteristics in time. Furthermore, it is not only the availability (often further limited by lack of funds), but also the validity of the data (for example, those on employment). Employment and population figures for suburbs are projections largely based on the 1980 census. Furthermore, developers, housing agents and realtors, among others, coincidentally collect data, which is mostly confidential. The lack of information seriously complicates the efforts to support policy for the institutions involved. In my opinion a better understanding of metropolitan regions should start here.

This research is one of the few that have tried to study recent developments in a broad and integrative manner. The reason for a rather broad approach is that most research on the subject narrows its goal down to certain aspects of the process. A gap exists in research considering different scale-levels and, moreover, the relations among the developments in the different sectors are highly interrelated.

For the present study, the region is first approached by analyzing trends on the metropolitan level. This results in an introduction in the area, a description of the process of suburbanization and the changes taking place in the metropolitan area. A distinction is made between developments in population (chapter 3) and employment (chapter 4). Both sectors have their own locational and temporal pattern of development. The region's characteristics and its development will make a first distinction within the suburban area.
possible, which also provides the context in which differential developments in the suburban area need to be interpreted. Because of its importance in the latest stage of suburbanization the employment function is discussed more elaborate. The trends in employment will be sub-divided, and trends in industrial, retail and office employment are discussed more thoroughly.

Second, attention will be paid to government and developers in the Baltimore region and their role in developments in the suburban area (chapter 5). Policy and investment-behavior determine for a large part the developments and they work out differently for the different parts of the suburban area. As a result, a global distinction is made between 'older' and 'newer' parts of the suburban area, which are both characterized. Since the problems arising in the metropolitan region often lead to government interference with the ongoing developments, this chapter ends with a discussion of some of the most important problems.

Finally, in chapter 6, the spatial outcome of the developments in the latest stage are being discussed from the perspective of growth-corridors in the region; each having their own (spatial) pattern of growth and developments. This allows to have a closer look at processes of differential growth, specialization and the resulting patterns of competition. A number of suburbs is selected, representing a broad range of different stages of suburban development in the region, in order to analyze the processes on the local level.

This report starts, however, with a discussion of some of the theoretical aspects of the process of suburbanization and specialization, the suburban area and the suburbs in the United States (chapter 2).
2. METROPOLITAN SYSTEMS, SUBURBANIZATION AND SUBURBS

The dominant residential pattern in the United States is suburban. The suburban share of the total population in the United States increased from 15% in 1940 to 45% in 1980. Of the fifteen largest metropolitan areas in the United States in 1980, only in Houston did a minority of the population (55%) live in the suburban area (Jackson 1985). Boston leads with as much as 84% of its metropolitan population residing in the suburban area, while Baltimore is 11th with 64%.

The statistics are even more impressive, when only the growing number of metropolitan areas are considered; the suburban population share grew from 32% in 1940 to 60% in 1980. The growth of population in the United States has largely been captured in the suburbs (figure 2.1). With the exception of the period during the Second World War, the central cities continuously lose their share in the growth. The rural areas, on the other hand, have been able to slowly increase their share in the growth since the 1950's. The trend of "sprawl" of population, further away from the central city, has resulted in a continuously expanding suburban area. This outward population shift is accompanied by a shift of jobs into the suburban area. Between 1960 and 1970 alone, the suburban share of jobs in the fifteen largest metropolitan areas increased from an average of 37% to 48% (Muller 1981).

Figure 2.1 Percentage Share of Total U.S. Population Change, 1900-1970

![Graph showing population change](image)

Source: Muller, Peter O. (1976). The Outer City, p. 3.
any factors, changing over time, influence the process of exchange between central city and suburb. Moreover, these factors all perform their roles on different scale-levels and vary from the very general to the very specific. At the general level, factors like international orientation of firms, worldwide specialization, the post-industrial society, advances in information technology, higher incomes, aging of the population, the decreasing importance of the family, the role of government, and so on, have their influence. At a lower level, the spatial and functional integration of parts of settlements, increased social mobility, clustering of socio-economic groups, social and physical characteristics of the site among others can be mentioned (Carr 1970, Simmons 1986). Some of the most important factors will be discussed in the next section.

2.1 Suburbanization in the United States

The first signs of suburbanization in the United States were to be seen around 1850 (Muller 1981). At that time, it was the exclusive right of the highest income groups, who could afford some kind of transportation, to leave the city. The rural ideal, the strong image against living in the city, and the appeal of low density single family housing were the forces for the outward movement. In the urban society at that time a tendency existed towards a residential sorting by economic class.

The outward movement grew in size when more efficient means of transportation became available. The transportation situation is even now still seen as one of the main bottlenecks and explanatory variables for the process of suburbanization. It will also be of crucial importance for future urban and suburban developments (Erickson 1985, Lijnberger 1987). Based on the transport situation, a distinction is possible among four different urban transport eras (Muller 1976, 1981): the Walking-horse car era (before 1880), the Electric Streetcar era (1880-1920), the Recreational Automobile era (1920-1945) and the Postwar Freeway era (1945-present) (figure 2.2).

Figure 2.2 Intra-urban Transport Eras and Metropolitan Growth Patterns.

Growth Patterns.
I Walking-Horsecar Era (pre-1850—late 1880s)
II Electric Streetcar Era (late 1880s—1920)
III Recreational Automobile Era (1920—1945)
IV Freeway Era (1945— )

Source: Muller, Peter O. (1976), The Outer City, p. 5.
The spatial organization of urban growth in the first and the third period is one of directional freedom of movement and a circular development pattern, allowed by uniform transport surface conditions. The second and fourth period, with their movement network biases, produce an irregularly shaped metropolis, in which axial growth takes place along arterial transportation routes (Muller 1981).

With the construction of the highway system after World War II and the availability of the automobile for personal use and the truck for freight transport, the process of suburbanization began to flourish. However, factors such as availability of land, zoning regulations and innovations in the housing industry (mass-production) -together with the post-war demand for housing- were at least as crucial for the process of outward movement. In general the sites easiest to develop were used first: mostly along the transportation routes and adjacent to existing sewer and water systems.

In the 1950's the government enacted some regulations with major influence on the spatial development of the metropolitan areas. While no direct "urban policy" at the federal level can be recognized, many of the governmental measures implemented in the past were directly influenced by or have had influence on the process of urban development. Some of the most important will be discussed here. It has to be noticed, though, that market forces more than public policy seem to shape the suburban landscape. Investment decisions made by the private sector determine the location of all kind of activities.

The transportation policy, embodied in the Federal Highway Act (1916) and The Interstate Highway Act (1956), provided the infrastructure necessary for the outward movement (Murphey 1976, Jackson 1987). This emphasis on the road, together with the availability of cheap fuel and the mass production of automobiles greatly enhanced the process of suburbanization.

The federal housing policy, first initiated in 1931, influences where and how people live. In the period between 1934 and 1972 home ownership increased from 44% to 63% of the households. Long term amortized mortgages, encouragement of low interest rates and institutionalized aid towards private efforts to build low-income facilities, were all in favor of the suburban sites (Jackson 1987). An evaluation of the policy in the 1950's and 1960's gives a huge body of arguments all leading to the conclusion that this policy favored the suburbs: "a negative attitude towards city-living" (Jackson 1987). Jackson: "Single family projects were favored and multi-family projects discouraged"; "loans for repair of existing structures were low and of short duration"; "[there was] agency bias in favor of all white subdivisions in the suburbs" (1987). Finally, the federal tax codes encouraged businesses to abandon old structures by permitting greater tax benefits for new construction.

In the late 1960's the first signs of a change in attitude were to be seen at the federal level. The concept of the "urban crisis" is a clear example, enhanced by the riots in the late 1960's. Federal attention changed in favor of the central city. The major points of concern receiving attention were the central city's fiscal crisis, the suburban exploitation of the central city, and racial discrimination in schooling, housing, and employment. The effectiveness of the initiated programs will be reduced even further because of recent cuts in federal spending.
Compared with the federal government, local governments are more directly concerned with urban development issues. The recent rapid growth of the suburban areas confronts them with conflicts between, on the one hand, residents in their county, most of them objecting to too much growth, and on the other hand financial considerations and pressure by the developers.

The most effective tool to influence the process of suburbanization is zoning. It is basically used for three reasons: minimization of negative external effects (separating incompatible land uses), fiscal motives (determining the level of public services) and exclusionary motives (Rolleston 1987). Down- and upzoning were widely used in the 1960's and early 1970's as mechanisms for some kind of a social strategy. The goal was to exclude certain groups of population from certain local communities. Concern for environment and the tax-base become more important in the 1970's and 1980's and result in so-called growth management policies.

2.2 Metropolitan Dynamics

The few efforts to produce descriptive models of metropolitan dynamics, can be divided into, on the one hand, the more general models of urbanization (with emphasis on the process and the time-factor) and, on the other hand, the models specifically concerned with the spatial and sectoral development processes in the suburbs themselves. The second group of models is newer and emphasize developments in employment structure. Both types of models have in common that they are directed towards the congruent and interrelated process, consider factors of different levels of explanation and make a distinction between developments in the population and the different sectors of the employment structure.

One of the models frequently used for the description of developments in metropolitan areas in general is the so-called phase model, first described by Hall (1980). The metropolitan development is considered to be built up by a number of sequential phases, each with its own specific characteristics of concentration and deconcentration. The model initially defines three stages (urbanization, suburbanization, desuburbanization), with regard to changes in the population in the central city, the suburban ring and the total metropolitan area, and anticipates a fourth stage: re-urbanization (table 2.1). This phase-model is descriptive, based on developments in time, related to developments in population and is strongly policy oriented. Deviations in the model are caused by variations in scale, distance, direction, land use, morphological characteristics, planning and so on (Van der Laan 1984).

Table 2.1 Phases of urbanization

<table>
<thead>
<tr>
<th>Changes in population:</th>
<th>Central City</th>
<th>Suburban Ring</th>
<th>Metropolitan Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Urbanization</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>2. Suburbanization</td>
<td>-</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>3. Desuburbanization</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>7. Re-urbanization</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: Dieleman, Jansen & De Smidt 1986.
In the discussion whether the stage of non-metropolitan growth must be seen as one of on-going suburbanization or as a growth in areas with little or no relations or functional links to the central city, the bottom line is that the differences between the urban and rural areas are diminishing. Muller (1976) concludes that the increasing metropolitan scale and mobility of the population lead to the concept of the "Outer City." The Outer City is in social and economical aspects independent of the central city. It is no longer "sub to the urb" and becomes a counterpart to the central city. In fact, Muller challenges the simple models of a centrum-periphery metropolis, dominated by a single central city (Hoekveld 1985). Evidence can be found for spatial specialization and fragmentation, and functional integration in a more widespread area.

The international discussion in the late 1970's on the topic was stimulated by Berry's introduction of the concept of "counter-urbanization" (1976). He spoke of a "clean break with the past," referring to the dispersal of population further away from the central city in settlements that form counterparts to the central city and are outside the sphere of influence of the central city. As major causes, he indicated the increasing links between social and spatial mobility, a maturing of the post-industrial economy and the increasing influence of information-technology and efficiency in suburban housing production. Consequently, one could argue that the locational behavior of firms is less and less explained by the traditional models of decentralization. New activities increasingly take place in the suburbs, which provide a good environment for almost all the activities.

Little evidence was found for this "clean break" in the European situation (Fielding 1984). The main problem in Europe was the inability to delineate the boundaries of the urban areas and, accordingly, what was inside and what was outside. In fact, this discussion led back to the discussion about deconcentration and decentralization (Dean et al. 1984).

2.3 Suburbs and Suburban Areas

Defining a suburb is difficult, if not impossible. The old stereotype of a suburb, fed by what once was "the suburban myth," must be left behind. The "American way of life," heavily idealized especially in the first stages of suburban growth, found its physical embodiment in the suburbs. Low density single family dwellings, a garden, patios and the station wagon, all far away from the central city problems, were to be sought in the suburbs.

In the American situation, suburbs appear in almost every form and shape: rich and poor, industrial and residential, new and old (Jackson 1985). The concept of suburb, in fact, refers to all parts of metropolitan areas outside of the central cities. Suburbs may include unincorporated areas as well as suburban municipalities, and the size can be as high as 80,000 inhabitants or as low as a few hundred. The distance to the central city may vary from several hundred meters to possibly a hundred miles.

In general, the suburb is still interpreted as "sub to the urb," thereby referring to the original meaning of the word (near to the city). Implicitly, the characteristics of the suburbs are defined in relation to those of the central city, which are unclear themselves and subject to change. Most of the time the city is considered to fulfill certain minimum conditions with regard to population size and density (spatial and morphological characteristics), the
production-structure (functional) and social-economic and cultural characteristics of the population. The suburbs are thought to be defined by the same characteristics, but with different thresholds. Gober and Behr (1982), however, doubt whether it is possible to make clear distinctions among the central city and the suburbs. Although they observed some differences, especially on the aspect of the presence of minorities, they speak about a very complex relation in which it is sometimes easier to make a distinction between the suburbs themselves than between the central city and the suburbs.

Overseeing the broad range of international definitions of the concept (Van Ginkel 1979), the only conclusion can be that common sense among scholars in the field is absent. Defining a settlement as a suburb in the end always turns out to be a subjective judgement. Van Ginkel (1979) speaks of a "Babylonian confusion of tongues," with regard to the international literature. This confusion is due to different national circumstances, an inadequate description of concepts that are used to describe and explain the suburbanization process, multi-formity of the concept and the use of different phenomena (for example, population growth or changes in migration) to represent the process, and on different spatial levels (Hoekveld 1985). Some of the differences of opinion concern the following aspects of the concept: to what degree a functional relation with the central city has to exist, the distance between the central city and the suburb, the scale of the process and the size of the settlements towards which the process is directed and, last but not least, whether suburbanization must be seen primarily as a process of outward population movement or as an increase in urban activities.

First of all, a distinction must be made between the suburb as a place, with its own characteristics and development, the suburban area and the process of suburbanization. The process of suburbanization is broadly defined as the decentralization or deconcentration of urban activities and land uses out of the central city and into the area surrounding the central city. This process of suburbanization has a multi-dimensional character, is subject to change over time and creates functional linkages between the central city and the suburban area. The suburban area, on the other hand, is defined as the area outside the central city where the number and intensity of urban activities and urban land uses has increased. Traditionally this area is limited to a distance at which no functional linkages with the central city exist.

Within the suburban area, the process of suburbanization is directed towards specific locations, the suburbs, that form neighborhoods in the suburban area comparable with the urban neighborhoods in the city. As a result, the process leads to the emergence of a system of settlements, or suburbs, each with its own characteristics and most likely, its own specialization. Some of the suburbs continue to have strong relations with the central city, while others develop more independently. In this way a hierarchical pattern of suburbs develops and it becomes even more necessary to make a distinction between the development of the suburb itself and the process of suburbanization. It is in this stage that the dual role between the central city and the suburb is at least changing.

Moreover, the fundamental transformation of the physical and the social environment has made the conception of "urban" to be no longer tied to place. Sharpe and Wallock (1987) ask: "What direction is the quest for a new vocabulary of urban experience taking, and what challenges face the (writers and) urbanists who seek to name the modern city in its latest phase?". Muller (1976) speaks
about the emergence of a new kind of "urbanism," which spatially concentrates in the suburbs. Indeed, the increase in urban functions in the suburbs has certainly resulted in the urbanization of the suburbs (Dean 1984, Fielding 1982, Hall 1983). However, the urbanization of the suburbs has not, and especially not in the newer suburbs, created a "sense of place," which is an important characteristic of cities.

After considering these arguments it is clear that defining a suburb with social-geographical (functions, location and interrelations) or sociological (characteristics of the population) concepts is rather difficult, if not impossible. At this point, the choice for formal-juridical criteria becomes attractive. Most researchers concerned with the American urban system, utilize the "outside central cities" portion of the SMSA (Standard Metropolitan Statistical Area) in defining the suburbs.

2.4 Suburban Development Models

The first model to be discussed is Baerwald's (1978), which is a broad one and based on a case study in Minneapolis. He was the first to speak about the emergence of a new kind of "downtown" in the suburbs. He named this phenomenon the "Suburban Freeway Corridor" (SFC), which would probably take over the economical function of the Central Business District (CBD) in the future. Important factors for the way the suburb develops are the period of initial development ("relative timing") and the availability of vacant land.

The first stage is that of initial development (1945-1955). In this stage, the residential function of a suburb gains in importance and developments take place near the highway. The second stage, that of corridor development (1955-1970), includes the construction of an additional freeway, which increases the speed and volume of traffic. This stage of industrial diversification and commercial expansion is characterized by the availability of relatively cheap land, first attracting space-demanding activities and later on high-technology (electronics and computer-oriented) industries. The corridor expands further out, and retail relocates to major interchanges. The third stage is one of speculative development (late 1960's until early 1970's) influenced by favorable economic conditions. Land-values rise and large investments are made in, for example, office buildings, but also in apartments and thus resulting in higher density. Office buildings and parks gravitate towards the end of the corridor, in search of larger and more accessible sites. The last stage (from the mid 1970's) is one of initial redevelopment and is highly influenced by the lack of vacant land and the economic recession. Competition within the suburban area exists, older neighborhoods deteriorate and attract "discount" or "second hand" retailers. Although, the low densities and the linear form of the existing developments make it relatively easy to redevelop.

While discussing this development pattern, Baerwald makes a distinction between offices, industry and other commercial activities (such as shopping centers). Within each sector he recognizes waves of succession. The industrial and warehouse sectors are decentralizing first, followed by electronics and offices. Schiller (1986) explores these waves for the decentralization of retail in England and finds evidence for three "waves" of decentralization. Offices tend to locate at the periphery of the suburbs for reasons of space. Bateman (1986) argues that the location of office space is determined more by supply than by demand of floorspace. Baerwald (1978) contributes to
this notion that SFC locations are among the safest sites for speculative investment.

Suburban space economy

Erickson presented his more elaborate model of "the evolution of the suburban space economy," based on employment data for suburban municipalities in a large number of metropolitan areas in 1983. This model provides a framework for the spatial and structural evolution of the suburban economy based on the locational requirements of business establishments. The developments are characterized in three stages.

Developments in the early phase (1920-1940) take place contiguous to the central city, primarily along railways and waterways, and consist mainly of manufacturing, while the commercial functions lag behind. Functional links with, and distance to, the central city remain important. This spillover phase is followed by one of specialization, in which different requirements for specialized locations (accessibility, space) and rent paying abilities are factors determining the location. Among the municipalities, relative attractiveness is determined by zoning policy and provision of infrastructure.

Figure 2.3 Erickson's Model: Evolution of the Suburban Space Economy


In the intermediate phase (1940-1960), massive suburbanization of population and employment takes place; personal transportation provides a wider range of location choices and at the same time the quality of the inner ring of suburbs weakens. First, the locational pattern is one of dispersal and is mainly influenced by the nature and lack of (excessive) zoning. Large tract zoning, together with speculation, discourages strip development (characteristic of the phase of spillover) and leads to multiple dispersed centers. Shopping centers develop near the edge of the existing urbanized area and pull addi-
tional commercial and residential activity into their intermediate sphere. Later on, diversification occurs, dependent upon growth-rate and size of the suburb. This is further enhanced by involvement of the public in the land development process, especially in the older suburbs, where vacant land is scarcely available.

In the contemporary phase (from 1960), one should expect a continuation of these trends. But, in contrast, the older, inner-ring suburbs attract a higher share of the developments. Several causes can be pointed to. In local policy, growth management becomes more and more the leading theme and thus discourages the urban "sprawl." Also, in comparison to the suburbs located in the urban fringe, the inner-ring suburbs are increasingly attractive for the location or expansion of business because of the higher density of the labor force, and the relatively favorable location to mass-markets. Furthermore, the suburban freeway system in this time-period is altered dramatically: the development of a circumferential system (beltway) increased the accessibility of the inner suburbs and provided excellent access to both intra-metropolitan markets and the metropolitan network.

In the last phase, one of multinucleation, the key word is agglomeration. Multi-purpose trips and comparison shopping behavior, the possibilities of sharing common infrastructure and facilities (especially for the internationally oriented businesses), the labor force and also a "follow-the-leader" effect are responsible for a trend of clustering.

In later research on employment densities in a large number of metropolitan areas, Erickson confirms his model (1987). Older metropolitan areas, like Boston and Philadelphia, show more compressed and regular outward shifts over time, while the newer and less concentrated areas (for example Los Angeles) display growth at greater distances from the central city and with greater spatial variability. Erickson thus differentiates between the older and newer metropolitan areas in rate and levels of deconcentration.

Sector specific development

By comparing developments in activity patterns in Central Business Districts and suburbs, Daniels created a more sector specific model of metropolitan deconcentration (1986). He focused on producer and consumer service location patterns, but mainly concentrated on retailing, warehousing and office-based activities, many of which are producer services. The model describes a sequence of characteristic phases: before 1960 service activities tend to concentrate in the CBD, the 1960's are characterized by a pattern of widespread suburban dispersal (disbenefits of the CBD, growth and diversification of producer services), while during the 1970's dispersal becomes concentrated in a small number of well located suburban centers (with agglomeration economies similar to those in the CBD before 1960). Since 1980, with the exception of the office parks, for unclear reasons, the suburban office centers have been consolidated and intra-suburban relocation takes place by firms which may have originally moved during the 1960's. Although the CBD has continued to attract new office development, mainly by replacement and rehabilitation of outdated premises since 1960, this process has intensified since 1980. Parallels exist between the model of Erickson and Daniels. The random dispersal phase of Daniels shows similarities with Erickson's phase of dispersal and diversification, while Daniels' phase of centralization and consolidation
(after 1970) parallels the phase of infilling and multinucleation. With respect to the office development process, which seems to play an important role in the latest phase of suburban developments, Bateman (1987) states that it is the supply side rather than the demand side which has shaped the urban system. Office activities are mobile and they easily move towards areas of available office space. The extent of change in urban areas varies widely, and reflects the "aggregate decisions of suppliers of new office space." It has become a vehicle for large scale financial investments; market experience, intuition and a "willingness to take measured risks may be more important to the decision-maker than a knowledge of urban land use theory" (Bateman 1987).

As a result of a study done in the metropolitan areas of Atlanta, Houston and Philadelphia, Hartshorne and Muller proposed in 1986 a more detailed scheme of suburban employment growth. The period after 1970 is split into a stage of Catalytic growth (1970-1980) and one of High Rise/High Technology. They talk about a critical mass of economic activity in the suburban area, with a continuing process of business center differentiation. These centers gravitate to the outer-city sectors and must, indeed, be seen as urban centers. In the latest stage, the suburban centers surpass and dominate the CBD, not only in retail function, but also in office activity. A strong tendency exists for the emergence of high-technology in the suburban area.

Future

Finally, the question might be addressed: What about the future of the metropolitan system? There is no consensus among scholars in the field. According to Erickson, the phase of multinucleation means at least a slow down of the outward movement. Daniels (1986) mentions that public policies, institutional factors and the degree to which technological changes have effect, finally determine whether the outward trend will continue. The location of the labor force will be one of the important consideration for future location of firms, especially since housing costs in the suburban area do not allow the lower-income groups to choose their location freely, and the transport situation in the suburban area is far from efficient, or even sufficient.

The contemporary stage of suburbanization may further be changed by many other factors and they all lead to the conclusion that a process of concentration in the suburban area is inevitable. First of all, the environmental costs of suburban development rise with every mile of distance from the central city, while at the same time the cost of money and land are rising. The CBD’s undergo a process of revitalization, race and fear becomes less important as a stimulus to white-flight and at the same time the structure of the American family changes. Furthermore, no new technological changes in residential housing occur. Finally, the federal government is stressing a policy of conservation, rehabilitation and mass-transit (e.g. Community Development Act, 1974). Jackson (1987) states: "as the suburban world begins to experience unmistakable signs of decay, both central cities and rural areas are making a comeback."
3. THE BALTIMORE REGION

The metropolitan area in which a suburb is located provides an important general framework or context for the interpretation of the factors with impact on the processes in the suburban area: suburbanization is generally considered a process on the regional scale (Hoekveld 1985). Considerable differences exist among the metropolitan regions in the United States, especially among the older and newer metropolitan regions, but also between the older and mature regions themselves.

The time, speed, scale and direction of the process of suburbanization will in this chapter be examined on the level of the Baltimore metropolitan region. In the latest stage of suburbanization noticeable differences occur in speed of deconcentration between population and employment. The emphasis in this chapter will be on the population or residential function, while the employment function is considered in more depth in the next chapter.

3.1 The Regional Setting

The Baltimore region or SMSA is part of the State of Maryland, and holds about 50% of Maryland's population. Maryland is located on the dividing line between the North-Eastern and South-Atlantic states, although it is functionally part of the Boston-Washington Megalopolis.

The North-Eastern states as a whole (the "Rust-belt") experienced a substantial loss in population due to net migration, while the South-Atlantic states (the "Sun-belt") have shown an increase in population. The State of Maryland (total population = 4.39 million), which is among the smallest states in the USA, experienced an increase in population of 1.27 million persons between 1960 and 1985, an increase of 41%

The "Rust-belt" decline happened only temporarily in Maryland in the late 1970's. With the exception of this period Maryland has a long history of immigrants exceeding out-migrants. This is partly due to the diversity of manufacturing activities and the presence of a vast amount of governmental jobs. In the 1980's Maryland benefitted from the economic recovery in the North-Eastern states and its location in relation to the growing Sun-belt and Washington D.C.

This research considers the Baltimore Standard Metropolitan Statistical Area (SMSA) as defined by the U.S. Bureau of Census. A SMSA is a county or group of contiguous counties which contains at least one city of 50,000 inhabitants or more. Contiguous counties are included in the SMSA if, according to certain criteria, they are socially and economically integrated with the central city. The Baltimore SMSA includes Baltimore city (the central city, which is a separate legal entity) and all of Anne Arundel, Baltimore, Carroll, Harford and Howard Counties (figure 3.1).

The Baltimore SMSA has been expanding continuously since the 1950's. As recently as 1950, only Baltimore city, Baltimore County and Anne Arundel made up the entire SMSA. In 1960 the other three counties were added to the SMSA, which led to an increase in total acreage of about 50%, while the total population increased by only 5% (Clawson 1971). Recently, and as a result of
intensifying commuter-relations, Queen Anne's County was added to the Baltimore SMSA. This county is physically divided from the other parts of the SMSA by the Chesapeake Bay and will not be considered part of the Baltimore Metropolitan region in this research.

The U.S. Census definition is, on the one hand, a fairly generous definition of a metropolitan area as it includes, for example, the rural area in Baltimore County at the Pennsylvania State border (north). This does, however, not mean that this area might not experience future population growth. On the other hand, it also includes parts of Howard County that might plausibly be considered part of the Washington D.C. SMSA. As will be shown later in this chapter, some of the counties in the Baltimore SMSA have considerable population gains due to in-migration from some of the suburban counties of the Washington D.C. SMSA (Prince George and Montgomery, both located in Maryland). This pattern of intensifying relationships between the two SMSA's (The Baltimore-Washington Corridor, which contains about 80% of Maryland's population (Dilisio 1983)) will prove to be of major importance in the process of suburbanization in the Baltimore region. Some people are even inclined to speak about the developments in southern Maryland as "Washington spillover" effects.

Figure 3.1 The Baltimore Region

![Map of the Baltimore Region](image-url)
3.2 Stages of Suburban Development

The historical component has proven to be an important explanatory variable for developments that occur at the moment. The development of the suburban area can be divided into four stages, each with its own distinct spatial pattern of population and employment development.

The early stage (before 1945)

The first signs of (residential) suburbanization in the Baltimore region were to be seen long before the Second World War. The developments slowly extended over the city boundary, stimulated by improvements in the transportation situation. The residential development largely took place at the west-side of Baltimore city (Pikesville, Catonsville), away from the industrial activities at the east-side. They represented the major part of suburban development at that time. Specialization within the suburban area was largely based on physical characteristics; competition was almost absent.

The port-related industrial activities at the east-side of Baltimore city were the main reasons for the early growth of places like Dundalk and later Essex (figure 3.2). As a result, these places experienced an early growth and already reached a considerable size in this stage of suburban development (table 3.2). The speed and intensity of the developments were not repeated in later periods. In contrast to other suburbs, these suburbs show a more or less planned character (one employer built a large part of the houses - in a relatively short period) and have a distinct employment-function. The industrial image of these suburbs, together with a location in the already built up area near the harbor, make new investments in the growing sectors of the economy less likely to occur.

Except for the industrial development east of Baltimore city, economic development in other parts of the suburban area was minimal. The retail sector was primarily locally oriented and followed the population out of the city, largely along the arterial transportation routes.

The post-war stage (1945-1960)

Finally after World War II, Baltimore participated in the national suburban development boom (Adams 1976). This stage was characterized by a massive suburbanization of population and, to a lesser degree, employment. The outward movement was largely directed towards the settlements that were already established in the first period. Places like Glen Burnie and Pikesville, but also Catonsville, experienced a rapid growth and absorbed large tracts of the surrounding rural area. The spatial pattern was one of dispersal, first along the transportation routes and, later in this stage, away from the transportation routes. This stage is characterized by greater freedom of locational choice, but restricted by the availability of services and the transportation system.

The suburban employment increase in this period was substantial in manufacturing and retail and impressive in wholesale and service. It is in this period that the first shopping "malls" arise in the suburban area. The "buying-power" became more and more concentrated in the suburban area. These were "..the first signs of a weakening of the market and functional linkage..."
bonds of wholesale and service establishments to the central city" (Erickson 1983). As the county government seat and only major subcenter in the region at that moment, Towson was the first suburb to experience office deconcentration. The hegemony of the central city is, however, still unchallenged.

Figure 3.2 The Suburban Area of Baltimore

By the end of the period the fundamental geographic structure, with highways and the beltway (figure 3.3), was in place. The boundaries of the built-up area at that moment were largely set by the beltway (I-695), although the residential function extended far into the rural area; housing projects consisted of low-density, single family dwellings. The finance for the transport system was provided by the federal government. State legislation
gave the suburban counties the power to provide urban amenities such as water, sewers, fire protection and schools.

The intermediate stage (1960-1970)

This stage is characterized by an ongoing out-movement of population, though one more diversified in composition. The increase in employment function is spectacular, while a diversification of the employment structure in the suburban area takes place. Factors with major influence in this period are the beltway construction and non-involvement of local government with the ongoing developments. However, the first signs of concern about the decline in the central city are noticeable, both on the federal level (resulting in a strong movement against exclusionary zoning as, for example, was practiced in Baltimore County (Adams 1976)), and on the local level (in Baltimore city itself).

Among other factors, the sorting of population, together with the increase in deconcentration of employment, weakened the financial position of the central city considerably. Within the metropolitan area an extreme polarization of population by race and income occurs (Adams 1976). Adams speaks, based on 1969 Census figures, of "large spatial discontinuities". With the distance from the CBD the average income increases. Not surprisingly, it is in this period that the plans for the inner-city revitalization are being prepared, although it will take until the mid-1970’s before they are actually executed.

The beltway

The beltway, which played an important role in the development of the suburban area, was in place around 1960. The major radials of the highway system were built or under construction. The beltway itself was largely completed in 1959. The beltway was originally planned to provide a bypass of the central city in order to relieve traffic problems in the central city and in the region, the latter caused by the outmovement of population and economic activity. But, like in many other larger cities, the construction of the beltway (or pattern of circumferential freeways), attracted considerable additional suburban population and economic growth (figure 3.4, Muller 1981). In the contemporary stage, the concentration of activities in the suburban area causes problems and results in a decline in accessibility: the beltway is getting more crowded every day and according to the planners at the Maryland Highway Administration, will reach its maximum capacity in the very early 1990’s.

The construction of the beltway thus resulted in the emergence of new concentrations of employment and housing along its path, but also provided incentives for ongoing developments in already existing places. Several important suburban facilities in the Baltimore region, however, were already located close to the beltway (Bethlehem Steel in Sparrows Point near Dundalk, for example). Towson, north of Baltimore and just within the boundaries set by the beltway, developed as a major urban subcenter close to Baltimore city. It has become one of the biggest and most diversified employment concentrations in the suburban area.

The beltway increased accessibility, one of the main pull-factors of the suburban area, enormously. Other factors, however, were also of importance. Economic activities were attracted by the availability of land at competitive
prices (partly as a result of lower taxes in the counties), the characteristics of the sites (enough parking space and good connections with the region), the visibility of the projects and the advantage of the flexibility of the site (possibilities for expansion).

Additional factors are of importance, although they became even more important in the more recent stages of suburban development. The locational choice of the firms is often based on the rationality of serving a growing regional market that is increasingly located in the suburban area. Furthermore, the locational decision of the executive, who often lives in the suburban area, is increasingly decisive for where the firm locates (Klaassen 1987).

Figure 3.3 The Transportation Situation in the Baltimore Region
Within the suburban area the advantages of agglomeration of commercial activities and a "follow the leader effect" created a tendency towards concentration. One of the favorite places of clustering was, and still is, in locations along the beltway. However, this pattern of growth has even been stronger in the suburban parts of Washington in Maryland, where suburbanization started earlier. Suburbs like, for example, Bethesda and Tysons Corner have long been recognized as national hot-spots for development.

The contemporary stage (1970 - present)

Suburban housing and to a lesser degree employment overflowed the Beltway already in the 1960's, mostly along the radial pattern of the major roads. This trend is stronger in the latest stage of the process of suburbanization, when the beltway functions as a springboard for development to take place further out in the suburban area (the second generation of suburbs).

The Baltimore region experiences an ongoing process of suburbanization, with noticeable differences in speed of deconcentration between employment and population. The older or inner-ring suburbs experience processes of infilling and redevelopment, while the rate of suburbanization in the newest parts of the suburban area increases significantly after 1980 and is largely guided by the growth of employment. In fact this justifies a subdivision of this stage in two periods. In the remainder of this chapter the developments in population will be considered.

The advantages of agglomeration, which are very obvious in this stage, result in processes of concentration in some of the suburbs and create ongoing multi-nucleation within the suburban area. This means, above all, a further threat to the dominance of the central city, but also implies increased competition among the suburbs themselves.
3.3 Population in the Region

Since the 1950's most central cities in the United States have lost a considerable share of their population to the suburbs, with the amounts accelerating in the 1970's. Baltimore city is no exception, although the population decline has been more modest in the 1970's than in other central cities (Goodman 1983).

Baltimore city

Baltimore city's population loss, which is due to net-migration to the suburbs but also to the areas outside the region, decreased considerably in the period 1975-1985 (figure 3.5). The total loss in population decreased from 71,965 in the period 1975-1980 to 34,624 in the last period and may well indicate the effectiveness of the efforts to reduce the population losses in the central city. In part this is due to the successful downtown revitalization program, which has been one of the most spectacularly successful. It began to show results in the mid-1970's. Baltimore surpassed Pittsburgh and Philadelphia as world-famous examples of dramatic redevelopment in the United States.

Figure 3.5 Population in the Baltimore region, 1950-1987

![Graph showing population in Baltimore region from 1950 to 1987](image)

Source: RPC

The revitalization program, still far from completion, also creates additional high standard housing facilities (condominiums, most of them at the waterfront) that have worked out to be an incentive to the process of gentrification in Baltimore city. According to the owners of the apartments and condominiums, residents of the Washington D.C. area are willing to move to the attractive, newly developed area in and around the Inner Harbor; the prices of the houses are high, but competitive with those in the Washington, D.C. suburban area.

Despite the success of downtown and neighborhood redevelopment, in terms of education, unemployment, poverty and prospective growth, Baltimore's future
looks grim (Owens 1987). Baltimore city also has a disproportionate share of the State and region's poverty and social problems. Baltimore city's residents have a median household income of 18,000 dollars, compared to a suburban-county mean of 37,380 dollars in 1987. The unemployment rate in the city (11%) is also high compared to the suburban county-mean (4%), as is the number of households which are below the federal poverty line (22.9% and 6%) (U.S. Census 1980). The over-representation of minority-groups in the central city is evident (blacks 56% in 1980, compared to a suburban county mean of 10%), and this contributes as a push-factor to the outward movement of population.

Redistribution

While the population of the central city is declining, the five surrounding counties are prospering. The population decline in the central city was offset by the growth of population in the suburban counties (figure 3.5). The Baltimore region faces a stage of relative deconcentration. The SMSA as a whole gained population, and, considering the population forecasts, will continue to do so, although the growth-rate has steadily declined since the 1950's. This is in contrast to the pattern in many of the other SMSA's in the north-eastern part of the United States. The Philadelphia metropolitan region, for example, not only showed a loss of population in the central city but also in the suburban counties. While the population in the Baltimore region increased by 5% during the 1970-1980 period, the metropolitan regions of Pittsburgh and Philadelphia showed a decline in population of respectively 5.7% and 2.2% (US Census 1970 and 1980).

Table 3.1 Share of the counties in the region population, 1950-1987 (%)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Baltimore City</td>
<td>65</td>
<td>44</td>
<td>36</td>
<td>33</td>
</tr>
<tr>
<td>Baltimore County</td>
<td>19</td>
<td>30</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>Anne Arundel</td>
<td>8</td>
<td>14</td>
<td>17</td>
<td>18</td>
</tr>
<tr>
<td>Carroll County</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Harford County</td>
<td>4</td>
<td>6</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Howard County</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>7</td>
</tr>
</tbody>
</table>

Source: Regional Planning Council.

The share of population living in the suburban counties increased from almost 36% in 1950 to as much as 67% in 1987 (table 3.2). In absolute terms, however, the figures are even more impressive: while Baltimore city lost almost 200,000 persons since 1950, the suburban counties together accounted for a gain of 1,015,800 persons, an increase of more than 200 percent. This pattern of suburban growth roughly reflects the national pattern of population redistribution (Fox 1985).

The redistribution of population (and employment) in the Baltimore region has affected all the surrounding counties, without any directional bias, and in this respect the Baltimore region is comparable to most of the other mature metropolitan regions. In the newer metropolitan regions in the United States the directions of the developments are, in contrast, often limited. In Atlanta for example, nearly all the developments have taken place in the northern part
of the SMSA, while the southern part is largely unaffected (Leinberger 1987). Another example is Dallas, where most of the developments take place in the north and north-western directions. For the Baltimore region this results in growth-associated problems throughout the whole region, and thus considerable government attention. It also results in opportunities, which in part reduce the competition between the different local jurisdictions (counties).

Table 3.2 Population change in the Baltimore SMSA, 1950-1987 (%)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Baltimore City</td>
<td>-1.1</td>
<td>-3.5</td>
<td>-5.0</td>
<td>-8.6</td>
<td>-4.5</td>
</tr>
<tr>
<td>Baltimore County</td>
<td>82.2</td>
<td>26.1</td>
<td>4.1</td>
<td>1.4</td>
<td>3.6</td>
</tr>
<tr>
<td>Anne Arundel</td>
<td>76.0</td>
<td>44.0</td>
<td>16.2</td>
<td>7.3</td>
<td>11.7</td>
</tr>
<tr>
<td>Carroll County</td>
<td>17.6</td>
<td>30.7</td>
<td>16.4</td>
<td>20.0</td>
<td>19.5</td>
</tr>
<tr>
<td>Harford County</td>
<td>48.1</td>
<td>50.4</td>
<td>16.0</td>
<td>9.1</td>
<td>9.1</td>
</tr>
<tr>
<td>Howard County</td>
<td>56.7</td>
<td>71.0</td>
<td>56.2</td>
<td>22.6</td>
<td>31.6</td>
</tr>
<tr>
<td>Region</td>
<td>23.8</td>
<td>14.8</td>
<td>4.5</td>
<td>0.5</td>
<td>4.6</td>
</tr>
</tbody>
</table>

Source: Regional Planning Council.

Within this general pattern of redistribution of population in the Baltimore region a distinction can be made between the different counties. With respect to the period of "initial development" (time) and distance to Baltimore city (location), a distinction can be made between the "older" (Baltimore and Anne Arundel) and "newer" (Howard, Harford and Carroll) suburban counties. The direction and speed of the process of suburbanization varies accordingly.

A division into older and newer suburban counties

Both Baltimore and Anne Arundel Counties gained the largest amount of population in the period after 1950, in absolute as well as relative terms. These suburban counties are located immediately adjacent to Baltimore city. During the 1950's both the rate (82%) and the absolute amount of growth (222,000) was highest in Baltimore County (table 3.2). It continued to be at a high level in the 1960's, especially in absolute terms, but slowed down considerably in the period after that time.

Baltimore city is the biggest single contributor to Baltimore County's population through net-migration. Recently, however, the net-migration from Baltimore city to Baltimore County has been decreasing. In turn, Baltimore County showed sizeable losses due to net-migration to the contiguous Carroll and Harford Counties and to a lesser extent to Howard and Anne Arundel Counties, an indication of a movement further away from the central city. In contrast to the 1975-1980 period, in which Baltimore County experienced a net in-migration (10,440), it showed a net out-migration in the most recent period, 1980-1985 (6,548) (table 3.3).

Anne Arundel County showed, just like Baltimore County, a high growth rate in the 1950's (76%). This trend in Anne Arundel County, however, continued during the 1970's and to a lesser degree in the 1980's. Anne Arundel continues to attract population, with an increasing share originating outside the Baltimore region (table 3.4).
Anne Arundel County is the region's county with the highest percentage of interaction with counties outside the Baltimore region. The inter-metropolitan or inter-suburban linkages with the counties of suburban Washington are strong. As much as 62% of the out-migration in the period 1975-1980 was directed towards areas outside Maryland, with suburban Washington accounting for 20% of the total out-migration. In the period 1980-1985 the interaction decreased to 52% of the out-migration, while the high-share of in-migration of residents from outside Maryland slightly increased from 46% to 48%. Anne Arundel lost population to Carroll and Howard Counties due to net migration. This is the result of the further outward movement of population and is comparable to the process in Baltimore County.

**'Newer' suburban counties**

The three less populated counties, Howard, Harford and Carroll, at some distance from Baltimore city, are experiencing a smaller absolute growth in population, but have high relative growth rates (table 3.3). These counties are the "newer" suburban counties in the Baltimore region and not directly adjacent to Baltimore city. Together the newer counties hold 19% of the total population in the region in 1987; more than doubled compared to 1950 (table 3.2). These counties all experience a net gain of population largely due to migration. Both net immigration directly from Baltimore city and net-immigration from the other counties in the region (with an important role for Baltimore County) contributed a large part to the population increase.

The growth in the 'newer' suburban areas is more recent (the built-up area of Carroll County, for example, contained only 8% of the total amount of land available), and is strongly influenced by an overspill of population and employment from the "older" suburban counties. These counties show, with regard to the migration patterns, a distinct external orientation with a relative decline in importance of Baltimore city and increasingly strong linkages with counties outside the Baltimore region.

Both Howard and Harford Counties are experiencing a relatively high interaction with counties outside Maryland, and both are in this respect comparable with Anne Arundel County. In the case of Howard County a considerable net immigration occurred from counties especially in the suburban

### Table 3.3  Net Migration, Baltimore region, 1975-1985 (x 1000)

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Total from city region</th>
<th>Other Maryland</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baltimore City</td>
<td>-30.1</td>
<td>-72.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baltimore Co</td>
<td>-13.9</td>
<td>10.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anna Arundel</td>
<td>-1.4</td>
<td>21.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carroll County</td>
<td>8.3</td>
<td>-1.6</td>
<td>12.4</td>
<td></td>
</tr>
<tr>
<td>Harford County</td>
<td>5.6</td>
<td>-5.6</td>
<td>7.5</td>
<td></td>
</tr>
<tr>
<td>Howard County</td>
<td>1.2</td>
<td>2.4</td>
<td>18.9</td>
<td></td>
</tr>
</tbody>
</table>

Source: Regional Planning Council
With the exception of Baltimore County, the resulting pattern of interaction between Baltimore city and the suburban counties is weak. The interaction between Baltimore city and County is high, while both have relatively low interaction patterns with areas outside the SMSA. Anne Arundel, Harford and Howard Counties experience high exchange rates with areas outside the SMSA. The US Census data support these trends (Appendix 2). The differences in interaction and development patterns between Anne Arundel and Baltimore County are largely due to the location with respect to Washington D.C.

### Table 3.4 The Baltimore SMSA and the share of migration to and from the State of Maryland outside the Baltimore SMSA and Suburban Washington, 1975-1985 (%)

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>State</td>
<td>Suburb. Wash</td>
<td>State</td>
<td>Suburb. Wash</td>
</tr>
<tr>
<td></td>
<td>In</td>
<td>Out</td>
<td>In</td>
<td>Out</td>
</tr>
<tr>
<td>Baltimore City</td>
<td>21.3</td>
<td>24.6</td>
<td>3.7</td>
<td>2.3</td>
</tr>
<tr>
<td>Baltimore Co</td>
<td>23.0</td>
<td>28.8</td>
<td>2.4</td>
<td>2.9</td>
</tr>
<tr>
<td>Anne Arundel</td>
<td>45.9</td>
<td>62.0</td>
<td>25.3</td>
<td>8.2</td>
</tr>
<tr>
<td>Carroll County</td>
<td>24.7</td>
<td>35.4</td>
<td>10.3</td>
<td>6.8</td>
</tr>
<tr>
<td>Harford County</td>
<td>30.6</td>
<td>44.9</td>
<td>1.4</td>
<td>1.5</td>
</tr>
<tr>
<td>Howard County</td>
<td>12.6</td>
<td>26.5</td>
<td>34.8</td>
<td>10.9</td>
</tr>
</tbody>
</table>

Source: Baltimore Regional Planning Council

### Population characteristics

Suburbanization tends to attract young family households. The (traditional) married persons are over-represented in the "newer" suburban counties, as is the youngest age group. The "newer" suburban counties are also less exposed to aging of the population than the "older" suburban counties. Howard and Carroll Counties even experienced a relative decline in elderly population (65 years or over) (table 3.5).

Baltimore County showed a sharp decline in the youngest age group, while at the same time the share of elderly people in the population grew even further. The families in the later stages of the family cycle in this "older" suburban county gain in relative importance, which is also true for the one-person households. Anne Arundel shows a comparable pattern of development of "urban" population groups, though at a more moderate level. Although Howard County also attracted many one-person households, the county shows comparable characteristics to the other two "newer" suburban counties.

### Table 3.5 Population characteristics of the counties, 1970-1987

<table>
<thead>
<tr>
<th></th>
<th>Balt.</th>
<th>Balt.</th>
<th>Anne</th>
<th>Harford</th>
<th>Howard</th>
<th>Carroll</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>City</td>
<td>County</td>
<td>Arundel</td>
<td>County</td>
<td>County</td>
<td>County</td>
</tr>
<tr>
<td>Median hh income x1000</td>
<td>18.0</td>
<td>34.4</td>
<td>37.3</td>
<td>35.4</td>
<td>45.9</td>
<td>36.2</td>
</tr>
</tbody>
</table>
The presence of blacks is often used as an explanatory variable for the process of population deconcentration. The percentage of blacks has long been very high in Baltimore city, which is said to have caused the so-called "white-flight" into the more homogenous (by race and status) suburbs. In the latest stage of suburbanization an increase in black population in the suburban area is noticeable (table 3.6).

The suburbs have long tried to maintain their homogenous character by exclusion of people who belonged to different ethnic groups or were less affluent than the local norm. This process of socioeconomic and ethnic sorting of the population has changed significantly. The black population, and especially the better paid middle-class, is now moving to the suburban area on a short distance from Baltimore City, while the population moving further out is predominantly white.

Table 3.6 Population change and migration by race, 1970-1980

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Blacks (%)</td>
<td>Blacks</td>
</tr>
<tr>
<td></td>
<td>1970 1980</td>
<td>Abs. %</td>
</tr>
<tr>
<td>Baltimore City</td>
<td>47 56</td>
<td>15712 4</td>
</tr>
<tr>
<td>Baltimore Co</td>
<td>3 10</td>
<td>43953 206</td>
</tr>
<tr>
<td>Anne Arundel</td>
<td>12 13</td>
<td>13798 39</td>
</tr>
<tr>
<td>Carroll County</td>
<td>4 4</td>
<td>659 23</td>
</tr>
<tr>
<td>Harford County</td>
<td>9 10</td>
<td>4472 44</td>
</tr>
<tr>
<td>Howard County</td>
<td>9 15</td>
<td>11397 196</td>
</tr>
<tr>
<td>Region</td>
<td>24 27</td>
<td>89991 18</td>
</tr>
</tbody>
</table>

Source: Regional Planning Council, U.S. Census 1970 and 1980

The increase in black population in the suburban counties is largely due to in-migration, while the increase in Baltimore City is largely due to natural increase. Due to net out-migration the white population in Baltimore City and Baltimore County decreased. The rate of increase of black population is very high in Baltimore County. Howard county shows a high increase due to migration of middle-class blacks both from suburban Washington (Frederick and Montgomery Counties) and from Baltimore and Anne Arundel Counties.
Housing characteristics

In accordance with the growth of the population, Baltimore and Anne Arundel Counties accounted for the biggest absolute increase in housing stock (table 3.7). Baltimore County, just like Howard County, has experienced a particularly strong increase in "urban characteristics" of the housing stock: the share of dwellings with 5 or more units in the structure has risen significantly, as has the absolute number and share of the rented stock. Baltimore County built, especially in the early seventies, for the most part multifamily dwellings. This is in contrast to all the other counties, which have emphasized the (typically suburban) single family dwellings, with the figures increasing in the research period.

Howard County can again be seen as an exception. The mean price per housing unit is the highest in the region, but still competitive with the housing prices in the Washington area. Location near the suburban Washington area has also influenced the prices in Anne Arundel County. Recently, however, Columbia is said to have had problems selling houses because of the prices. The vacancy rates in this planned new town are higher than anywhere else in the region. The counties with the most "rural" characteristics of the housing stock are Harford and Carroll counties. They continue to build owner occupied single family dwellings. However, just like in the other counties, there is a slight increase in multiple unit dwellings.

Table 3.7  Housing characteristics of the counties, 1970-1986

<table>
<thead>
<tr>
<th></th>
<th>Balt. City</th>
<th>Balt. County</th>
<th>Anne Arundel County</th>
<th>Harford County</th>
<th>Howard County</th>
<th>Carroll County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing stock 1980</td>
<td>302680</td>
<td>243994</td>
<td>129031</td>
<td>49435</td>
<td>42499</td>
<td>32115</td>
</tr>
<tr>
<td>%Change stock '70-80</td>
<td>-0.9</td>
<td>27.9</td>
<td>45.5</td>
<td>47.7</td>
<td>136.6</td>
<td>59.2</td>
</tr>
<tr>
<td>Mean unit (1980 $)</td>
<td>32475</td>
<td>61484</td>
<td>72669</td>
<td>65161</td>
<td>91297</td>
<td>62248</td>
</tr>
<tr>
<td>Permits 1971-86</td>
<td>18285</td>
<td>81511</td>
<td>60465</td>
<td>25930</td>
<td>39421</td>
<td>19295</td>
</tr>
<tr>
<td>%Single fam '72-75</td>
<td>11.4</td>
<td>34.9</td>
<td>76.9</td>
<td>73.7</td>
<td>63.6</td>
<td>84.7</td>
</tr>
<tr>
<td>%Single fam '76-80</td>
<td>24.1</td>
<td>71.5</td>
<td>89.9</td>
<td>87.8</td>
<td>82.3</td>
<td>91.4</td>
</tr>
<tr>
<td>%Single fam '81-86</td>
<td>35.3</td>
<td>75.4</td>
<td>88.4</td>
<td>88.3</td>
<td>72.7</td>
<td>94.2</td>
</tr>
<tr>
<td>%Owner occ. 1980</td>
<td>47.2</td>
<td>64.2</td>
<td>70.3</td>
<td>70.0</td>
<td>70.7</td>
<td>76.5</td>
</tr>
<tr>
<td>Change 0.0 '70-80</td>
<td>0.6</td>
<td>-5.9</td>
<td>-0.1</td>
<td>4.3</td>
<td>-5.7</td>
<td>6.3</td>
</tr>
<tr>
<td>Units 5, 5+ 1980</td>
<td>20.7</td>
<td>22.3</td>
<td>15.6</td>
<td>14.3</td>
<td>22.7</td>
<td>7.1</td>
</tr>
<tr>
<td>Change 5, 5+ '70-80</td>
<td>2.9</td>
<td>8.4</td>
<td>3.9</td>
<td>2.7</td>
<td>12.6</td>
<td>2.3</td>
</tr>
</tbody>
</table>


Concluding remarks

The total population in the Baltimore region is still growing. This is a favorable situation and in contrast to the situation in many other metropolitan regions. The suburban area is expanding and population is moving further outward, but the rate of deconcentration is slowing down. The direction of deconcentration shows no distinct directional bias and does not noticeably enhance competition among the suburban counties: all the counties in the region benefit from an increase in population.
The further outward moving population is highly selective on socio-economic characteristics, while the population leaving Baltimore city is getting more diversified. Based on period of initial development and distance to Baltimore city a distinction is made between the 'older' and 'newer' suburban counties. The older counties have a rather distinct relationship with Baltimore city as far as migration is concerned and they show relatively much 'urban' population- and housing-characteristics. They lose population to the 'newer' counties.

Differences in development between both the 'older' Anne Arundel and Baltimore Counties are predominantly due to their location relative to Washington D.C.. Anne Arundel shows, just like the newer counties, net-inmigration and relatively high patterns of interaction with areas outside the Baltimore region, while the intensity of relations with Baltimore city is decreasing. Baltimore County experiences net-outmigration.

Suburbanization in the Baltimore region is increasingly dependent upon interaction with areas outside the region, while the dominance and regional function of Baltimore city is decreasing. The counties on the south-side of the region experience in-migration of suburban Washington residents. This is reflected not only in the characteristics of the population but also in the type of houses constructed. The accessibility of the housing market at the south-side of the region is increasingly limited for the region's inhabitants (with on average a lower income) due to high value residential developments.
The latest stage of suburbanization suggests an increase in the rate of deconcentration of employment, as well as a change in composition. While the industrial sector continues to move out, a spectacular increase in deconcentration of office employment occurs recently. It has become a magnet for other kinds of activities.

Various names have been proposed to name the newly emerging suburbs: they range from Urban Villages (Lijnberger 1986) and Suburban Activity Centers (Urban Land Institute 1988) to Suburban Business Centers (Hartshorn and Muller 1986). These Suburban Business Centers (SBC) appear all over the United States, regardless of vintage, location, or overall growth tempo of the metropolitan area. The SBC consists of a towncenter, or a suburban downtown, with a mix of activities: commercial, retail, housing, and entertainment (hotels, restaurants). The towncenter or downtown area consists of mid- to high rise buildings and attracts high levels of employment. As a result, the traffic congestion is severe. Their locations gravitate towards the outer edge of the suburban area, mostly in high income areas. Amidst the suburban landscape they have become focal points of orientation, which is their best advertisement: the "image" of a new development or project plays a crucial role in determining the potential for future investment.

4.1 The Regional Setting

According to the U.S. Census figures, the 15 largest metropolitan areas experienced a radical shift in employment between 1960 and 1970 (Murphy and Rehfuss 1977). The number of jobs in the suburbs increased by 3 million or 40 percent, while the 15 central cities lost 800,000 jobs, a 7 percent drop. Baltimore city is no exception (table 4.1). Even where central city economic activity has continued to grow, it has been at a slower rate than previously and much slower than in the suburbs.

Table 4.1 Employment in the Baltimore region and share of the counties in regional employment, 1964-1985

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>abs.</td>
<td>%</td>
<td>abs.</td>
<td>%</td>
</tr>
<tr>
<td>Baltimore City</td>
<td>436,9</td>
<td>58</td>
<td>473,4</td>
<td>50</td>
</tr>
<tr>
<td>Baltimore County</td>
<td>174,4</td>
<td>23</td>
<td>245,3</td>
<td>26</td>
</tr>
<tr>
<td>Anne Arundel</td>
<td>83,9</td>
<td>11</td>
<td>134,2</td>
<td>14</td>
</tr>
<tr>
<td>Carroll County</td>
<td>17,7</td>
<td>2</td>
<td>24,0</td>
<td>3</td>
</tr>
<tr>
<td>Harford County</td>
<td>34,9</td>
<td>5</td>
<td>47,1</td>
<td>5</td>
</tr>
<tr>
<td>Howard County</td>
<td>10,5</td>
<td>1</td>
<td>27,1</td>
<td>3</td>
</tr>
<tr>
<td>Region</td>
<td>758,3</td>
<td>100</td>
<td>951,1</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Regional Planning Council

The Baltimore region in total experienced an increase in employment, despite the heavy losses in manufacturing. However, the rate of increase steadily declined between 1964 and 1985 (table 4.2). Within the State of Maryland, however, the region's share in total employment declined from 59% in 1970 to
54% in 1985 (Maryland Department of State Planning, 1986). This is largely due to a relative loss of employment to the suburban Washington counties. These developments further indicate a shift of the center of activities to the south. In the same period the suburban Washington counties increased their share in total employment in the State from 25% to 31%.

Table 4.2 Changes in employment in the Baltimore region, 1964-1985

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Abs.</td>
<td>%</td>
<td>Abs.</td>
</tr>
<tr>
<td>Baltimore City</td>
<td>36500</td>
<td>8.4</td>
<td>-13100</td>
</tr>
<tr>
<td>Baltimore County</td>
<td>70900</td>
<td>40.7</td>
<td>99600</td>
</tr>
<tr>
<td>Anne Arundel</td>
<td>50300</td>
<td>60.0</td>
<td>25400</td>
</tr>
<tr>
<td>Carroll County</td>
<td>6300</td>
<td>35.6</td>
<td>4600</td>
</tr>
<tr>
<td>Harford County</td>
<td>12200</td>
<td>35.0</td>
<td>1200</td>
</tr>
<tr>
<td>Howard County</td>
<td>16600</td>
<td>158.1</td>
<td>27400</td>
</tr>
<tr>
<td>Region</td>
<td>192800</td>
<td>25.4</td>
<td>145100</td>
</tr>
</tbody>
</table>

Source: Regional Planning Council

Regional production factors

Compared with other regions in the United States, Maryland as well as the Baltimore region are doing well with respect to business growth. One of the rankings (Inc. Magazine, October 1986) places Maryland sixth among the 50 states (and third on the East coast). This ranking is based upon economic expansion and considers job generation, business creation and young company growth. The diversified structure of production in manufacturing, together with the following specific factors have contributed to this performance. These factors are to be noticed also because they were frequently mentioned by the firms in the region that were interviewed. Together the factors contribute to an international orientation of the business climate in the region, which is often mentioned as one of the strong locational pull factors.

A first factor is the transportation situation in the region. The region itself is highly accessible by air, land and sea. Interstate highways provide the region with good connections to other metropolitan areas along the East coast. The region has one international airport and access to two other major airports in the Washington region. The accessibility is enhanced by the Baltimore-Washington International (BWI) Airport, which by means of "spin-off" also creates additional employment near the airport.

Furthermore, the port of Baltimore not only increases the international accessibility of the state, but is also of economic importance since it provides a significant number of jobs for the State of Maryland. Most of the international firms mention this factor (e.g., Toyota and Panasonic with their distribution centers located near the port). Although the port is declining due to heavy competition with other ports along the East coast (e.g., Philadelphia, Norfolk Va.), it still is a generator of jobs. Directly it provides 24,000 jobs and indirectly 55,000 jobs (Goodman & Puryear 1983). A second factor is the availability of a well-educated labor force in the area. This must be seen in relation to the presence of some universities and the employment structure. At the same time, the overall high level of education of the labor force has created a shortage of "blue-collar" employees. Recently
this contributed to a decision by Kodak, to reject Baltimore on the site of a new chemical plant, and instead located in the Philadelphia region.

A third factor is the availability of a large number of governmental jobs (22% of the region's total employment in 1985), especially in the military services. The innovativeness of the military centers (e.g., the Goddard Space Center) attracts numerous related firms and creates an enormous "spin-off." Two important military bases are Fort Meade, located in between Baltimore and Washington in Anne Arundel County, and the Aberdeen Proving Grounds, located north of Baltimore in Harford County. They provide a huge number of highly classified jobs. Moreover, the Baltimore region is the location of the U.S. Social Security administration. Furthermore, the state capital Annapolis, and Washington, D.C., both provide jobs in civil service and this also means easy access to the places where the decisions are made.

A fourth and related factor is the intensifying relationship between Baltimore city and Washington D.C. leading to the emergence of the so-called Baltimore-Washington Corridor as a promotional designation. This new industrial/commercial district with a high concentration of high-tech firms, offices and R & D firms, is quickly developing. It attracts firms from all over the USA. By providing good transportation between the two cities, the State of Maryland tries to capitalize on its convenience to the national capital.

The Corridor is already a leader in international trade, with a large number of international companies and a high share of the top multinationals in the United States have a major corporate presence in the region (Washington/Baltimore Regional Association 1987). One of the new growth poles in the Corridor is the National Aeronautics and Space Administration. Millions of dollars in investments have been made in both the Goddard Space Flight Center (85 million dollars in ten years) and the Space Science Data Center, which is newer and even more expensive. Most of the technical and professional personnel at Goddard have been recruited from out of state. Universities act as subcontractors (Johns Hopkins University and University of Maryland).

The last factor which contributes to the attractiveness of the area is an amenity factor: the availability of a diversity of landscapes and natural resources. The Baltimore Regional Planning Council once characterized the region as a "region of plenty." They not only referred to the resources for economic growth, but also to the environment which provides all the possibilities for a "pleasant urban living," an increasingly important locational factor.

All these factors have resulted in a steady increase of the number of firms (almost 17%, from 34,184 in 1980 to 39,861 in 1983). The highest increase in number of firms in this period took place in Howard County (40%) and Anne Arundel County (24%). Baltimore city showed a much smaller increase (9%).

The trend towards smaller firms is confirmed when the growth rate by firm size is considered. While the number of large firms slightly decreased, the number of small firms increased significantly and accounted for almost all of the growth. In the Baltimore region, 80% of the total number of firms had less than 20 employees in 1983. The larger firms (more than 50 employees) are mainly located in Baltimore city and the two "older" suburban counties.
The central city has long lost its dominant position with regard to population and the industrial and retail sectors. Recently it also lost its dominant position in the office based sector to Baltimore County. An indication of the shift in hierarchy is the locational pattern of employment activity within the region and the resulting commuter patterns.

In general the trend is one of outward orientation, with a weakening importance of the central city. The suburbs gain a more dominant position, with an increasing interaction between the counties, and with areas outside the Baltimore Region. The share of residents working in their jurisdiction of residence has experienced an overall decline.

Table 4.3  Place of residence by place of work 1964-1980 (%)

<table>
<thead>
<tr>
<th>Residence</th>
<th>Place of Work</th>
<th>Same County</th>
<th>Balt. City</th>
<th>Balt. County</th>
<th>Other SMSA</th>
<th>Outside SMSA</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>BACITY</td>
<td>1964</td>
<td>87</td>
<td>-</td>
<td>10</td>
<td>2</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>1970</td>
<td>75</td>
<td>-</td>
<td>16</td>
<td>4</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1980</td>
<td>76</td>
<td>-</td>
<td>16</td>
<td>5</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>BACO</td>
<td>1964</td>
<td>48</td>
<td>46</td>
<td>-</td>
<td>4</td>
<td>2</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>1970</td>
<td>48</td>
<td>43</td>
<td>-</td>
<td>6</td>
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<tr>
<td></td>
<td>1980</td>
<td>44</td>
<td>45</td>
<td>-</td>
<td>7</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>AACO</td>
<td>1964</td>
<td>65</td>
<td>25</td>
<td>3</td>
<td>1</td>
<td>7</td>
<td>100</td>
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<tr>
<td></td>
<td>1970</td>
<td>61</td>
<td>19</td>
<td>7</td>
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<td></td>
<td>1980</td>
<td>56</td>
<td>16</td>
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<td>CARCO</td>
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<td>72</td>
<td>9</td>
<td>10</td>
<td>1</td>
<td>7</td>
<td>100</td>
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<td></td>
<td>1970</td>
<td>63</td>
<td>9</td>
<td>15</td>
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<tr>
<td></td>
<td>1980</td>
<td>52</td>
<td>13</td>
<td>16</td>
<td>6</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>HARCO</td>
<td>1964</td>
<td>70</td>
<td>10</td>
<td>14</td>
<td>0</td>
<td>6</td>
<td>100</td>
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<td>17</td>
<td>17</td>
<td>2</td>
<td>5</td>
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<tr>
<td>HOWCO</td>
<td>1964</td>
<td>38</td>
<td>19</td>
<td>12</td>
<td>12</td>
<td>19</td>
<td></td>
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<tr>
<td></td>
<td>1970</td>
<td>33</td>
<td>17</td>
<td>14</td>
<td>13</td>
<td>23</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>1980</td>
<td>32</td>
<td>15</td>
<td>10</td>
<td>10</td>
<td>34</td>
<td></td>
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<tr>
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<td>1964</td>
<td>-</td>
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<td>20</td>
<td>15</td>
<td>3</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>1970</td>
<td>-</td>
<td>49</td>
<td>26</td>
<td>21</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1980</td>
<td>-</td>
<td>44</td>
<td>23</td>
<td>24</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

Source: Regional Planning Council, 1985

Baltimore city has, until now, been the location of the greatest number of jobs, but it is losing its dominant position rapidly. Baltimore city still accounts for 39% of the jobs in the region in 1985, but the rate of increase in the suburban counties is high. Baltimore city was able to gain employment in the period 1964-1970, but lost almost 40,000 jobs in the period after 1970: the numbers increasing in the most recent period (table 4.1). The suburban counties, in contrast, gained in the same period a sizeable number of jobs.
(between 1964 and 1985 in total 3,729,000 jobs, or an increase of almost 120%). Their share in total employment in the region increased from 42% in 1964 to almost 62% in 1985.

In absolute terms the gain in employment was the highest in the "older" suburban counties and they raised their share in region's employment from 34% to almost 50%. Baltimore County experienced a strengthening of its relative position in the region until 1970, but shows a relative decline in importance after 1970, in favor of other counties in the suburban area.

The "newer" suburban counties experienced a less impressive growth in absolute numbers, as well as in the share of the total region's employment. Howard County is an exception with in 1964 only a minimal employment function, which since then rapidly increased (highest rate of growth in the region).

The residents in the newer suburban counties Carroll and Harford County show an increase in orientation to Baltimore city, while Howard and Anne Arundel Counties have the highest work trip orientation to areas outside the Baltimore region, an orientation that has continuously become stronger since 1960. The number of people living in Howard County and working in the Washington area increased from 19% in 1960 to 34% in 1980. This growth was as spectacular for Anne Arundel County, from 7% in 1964 to 20% in 1980.

The central city turns out to be the loser of the intra-metropolitan game with the suburbs. The bottom line is that Baltimore city cannot escape common central city problems such as high costs of development, scarcity of available land and cuts in federal financing. As a result of the shift in hierarchy in the metropolitan region the central city has become one among equals. This has resulted in competition and leads, just like in the suburbs, to specialization.

One of the strategies of the central city to survive the severe competition with the suburbs is the revitalization program, which has the goal to create a new job base. The revitalization program includes the rehabilitation of "The Inner Harbor" area. A first step in the inner city revitalization was the Charles Center office block (1973), which was followed by more new office buildings and public facilities (Friedrichs and Goodman 1987).

A distinct search is noticeable for services of a higher order (large trade area) and may well be seen as a reaction to the loss of regional functions (migration, commuting) to the suburban area. In reaction, the central city specializes more and more in services with very large markets (tourism and conventions), special leisure activities (restaurants, nightclubs) and high quality retail stores. Tourism has become an increasingly important sector. The yearly surveys by the Office of Promotion and Tourism in the Inner Harbor and adjacent areas, reveal that pleasure travel (restaurant, sightseeing, shopping) is the most frequently mentioned purpose for visiting Baltimore city (City of Baltimore 1987). Each year an increasing share of the visitors stay overnight (1987: 43% for one or more nights); 65% come from places outside the state of Maryland.

The competition on a regional scale continuous, however. Recently, an upscale downtown shopping mall ("The Gallery") opened. The characteristics of this mall are almost similar to those in the suburbs. One of the objectives of the developer (the Rouse Company) was to create a mall that would be competitive with the suburban malls. Baltimore city largely has to rely on the specific
characteristics of the labor-force (presence of blue collar jobs) and, more important, on the concentration of high-level services, such as finance, which all require frequent contacts, for the attraction of firms. In the latest stage of suburbanization, however, not only the clerical jobs such as credit reporting ("back-office" functions) tend to locate in the suburban area, but so do computer, accounting, insurance and savings and loan activities (Sattler 1987). The suburban area increasingly attracts firms that were formerly restricted to the central city.

Transformation

Like other older and mature metropolitan regions, the Baltimore region has been participating in the general transformation from a highly manufacturing oriented region to a service society (table 4.4). These changes in the employment structure are characterized by, on the one hand, a heavy loss of jobs in manufacturing (more than 70,000 jobs since 1970), and at the other hand an increase in services (e.g., hotel, bus, medical, professional), finance (e.g. banking, insurance, real-estate) with more than 170,000 jobs and trade.

Table 4.4 Employment by sector in the Baltimore region, 1967-1985 (%)

<table>
<thead>
<tr>
<th></th>
<th>Agric/ Mining</th>
<th>Constr/ Transp.</th>
<th>Manu-fact.</th>
<th>Trade*</th>
<th>FIRE/* Serv.</th>
<th>Gover-nment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balt City</td>
<td>14 11</td>
<td>19 11</td>
<td>22 20</td>
<td>29 41</td>
<td>16 16</td>
<td></td>
</tr>
<tr>
<td>Balt County</td>
<td>2 1</td>
<td>10 10</td>
<td>30 15</td>
<td>20 26</td>
<td>17 28</td>
<td>22 19</td>
</tr>
<tr>
<td>Anne Arundel</td>
<td>1 1</td>
<td>8 9</td>
<td>13 12</td>
<td>15 19</td>
<td>13 21</td>
<td>50 38</td>
</tr>
<tr>
<td>Carroll Co</td>
<td>10 9</td>
<td>11 16</td>
<td>31 18</td>
<td>17 22</td>
<td>14 19</td>
<td>17 16</td>
</tr>
<tr>
<td>Harford Co</td>
<td>5 4</td>
<td>7 10</td>
<td>10 8</td>
<td>13 19</td>
<td>12 18</td>
<td>53 40</td>
</tr>
<tr>
<td>Howard Co</td>
<td>5 3</td>
<td>13 11</td>
<td>20 10</td>
<td>15 29</td>
<td>28 39</td>
<td>18 13</td>
</tr>
<tr>
<td>Region</td>
<td>1 1</td>
<td>12 11</td>
<td>21 12</td>
<td>20 22</td>
<td>23 32</td>
<td>24 22</td>
</tr>
</tbody>
</table>

Source: Maryland Department of State Planning (1986)

*FIRE= finance, insurance, real estate/Trade=wholesale and retail

Baltimore city and Carroll County were the only counties to show an absolute decrease in jobs in manufacturing in the period after 1970, while in Harford County the number of jobs kept steady. The decline in jobs in Baltimore city was also due to both an absolute and relative decline in trade, transportation and construction. Finance and services are still over-represented in the central city (41% in 1985), although the rate of growth of these sectors is much higher in Baltimore County and Howard County. Baltimore city's dominant position is eroding rapidly.

The Baltimore region has always had a high share of jobs in government (22% of the total employment in 1985). Harford (Aberdeen Proving Grounds) and Anne Arundel (Fort Meade and the state capital) Counties are leading with respectively 40% and 38% of the jobs in government. Harford experienced a decline in military jobs, while Anne Arundel gained through expansion of the National Security Agency at Fort Meade. The cut in spending of the federal government since 1980 have meant that, with the exception of Howard County
(which has had an increase in both military and state jobs), not only the
direct financial aid, but also the number of jobs and thus the tax-base of the
local governments has weakened. The share of government jobs for the region is
expected to decrease even further than it has done since 1980. Since the
region leans heavily on (federal) government jobs, this may prove to be a weak
base in the future.

Investment patterns

The investment patterns in the different sectors of the employment structure
allow a closer look at the developments after 1980, when nationally the rate
of office employment significantly increased in the suburban area. Moreover,
they indicate the investors vision of market potential. The investment
patterns for the Baltimore region can be studied with the help of the Building
Permit File of the Regional Planning Council. This database contains
information about approved building permits (based on zoning and building
regulations) above 250,000 dollars. A distinction is made between residential
and non-residential investments and new and additional (expansion, improve-
ments) investments. The estimated value of the permits might be somewhat lower
than the actual value of the investment, since the developers pay a percentage
of the permit-value as a fee to the local government. Furthermore, it might
also be possible that the year the permit is approved is not be the year of
the construction. This does, however, not result in a bias between the
 counties in the region.

Baltimore city is the only jurisdiction that has been able to attract an
increasing share of the investments in industry in the period 1984-1986, when
compared to the period 1980-1983 (table 4.5). The newer suburban counties,
Carroll and Harford County, experienced a high share of the investments in
industry in the first period, an indication of the outward movement of the
industrial function. This industrial share decreases rapidly after 1983,
indicating a slow down of the outward movement.

Howard and Anne Arundel Counties experience a relatively high share of
investments in industry. This may be an indication of the relative shift
towards other (defense related, high-tech) sectors within industry, since
manufacturing is declining. Investments in retail have gone up especially in
the newer suburban counties, and Anne Arundel, and are strongly related to the
increase in population. The increase in the office related sector is
surprisingly strong after 1983 in all the counties (and comparable with the
national trend). Baltimore and Howard Counties further strengthened their
position, with more than half of Howard County investments in offices, while
even the new suburban counties attracted considerable shares of office-related
industry.

Table 4.5  The value of Non-Residential New investments by sector,
1981-1986

<table>
<thead>
<tr>
<th></th>
<th>1981-1983 (%)</th>
<th>1984-1986 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ind. store off. other</td>
<td>ind. store off. other</td>
</tr>
<tr>
<td>Baltimore City</td>
<td>18 10 20 52</td>
<td>23 12 38 27</td>
</tr>
<tr>
<td>Baltimore County</td>
<td>20 13 39 28</td>
<td>19 13 48 20</td>
</tr>
<tr>
<td>Anne Arundel</td>
<td>30 15 25 30</td>
<td>24 34 30 12</td>
</tr>
<tr>
<td>Howard County</td>
<td>32 14 32 22</td>
<td>28 8 51 13</td>
</tr>
<tr>
<td>Carroll County</td>
<td>42 20 9 29</td>
<td>20 28 16 36</td>
</tr>
<tr>
<td>Harford County</td>
<td>52 22 2 24</td>
<td>28 25 28 19</td>
</tr>
</tbody>
</table>

Source: RPC Building Permit File
The prospective growth in employment in the counties will also be in the service and trade sectors (Maryland Department of State, 1986). High-technology is growing, especially in Baltimore and Howard Counties, but also in Anne Arundel. Howard County already has a large share of the largely small, foreign owned firms (in high-tech, R & D) and this share is expected to increase even further. These firms can be considered as spin-offs of the defense-related industry. The National Security Center, for example, requires the supporting firms to locate near their complex. The number of jobs in professional services in the suburban area was in 1967 only 2,700, in 1985 it had been increased to 16,800 jobs. In the same period Baltimore city experienced only a small increase from 8,800 to 13,000 jobs.

4.2 The Industrial sector

Processes of differential growth within the suburban area are accompanied by trends towards concentration and specialization in the different cores. The competition between the cores is going on, not only between the older and newer developments, but also among the newer developments. In the remainder of this chapter, attention is paid to the development of the individual sectors of the employment function (industrial, office, retail), each with their own, but interdependent, pattern of development. The retail-and office sector play an important role in the developments in the recent period.

The trends in the industrial sector are primarily a continuation of the trends already obvious in earlier stages. All the counties experience a relative decrease in investments in the industrial sector, with the exception of Baltimore city. Many of the firms that have recently moved to Baltimore city are in light manufacturing or distribution (BEDCO 1988). The city has put emphasis on establishing industrial parks, thus capitalizing on the characteristics of its resident labor force.

The construction of the Seton Industrial Park at the edge of the city may be seen as an effort of Baltimore city to survive the competition. The director of BEDCO (Baltimore Economic Development Corporation, whose main goals are to increase the number of jobs and the tax-base in the city) characterized the park as a "suburban style industrial park, with a lot of amenities". The highly successful park, with enough parking space and suburban style buildings, is in his view a clear example of the possibility of combining both a suburban environment and the advantages of the central city. Access to the blue collar labor force is one of the most important advantages of a central city location for many firms.

Jobs in manufacturing were the first to deconcentrate from the central city to a suburban location. Their current trend is, on the one hand, to move even further out into the suburban area (seen in the emphasis on industrial investment in Harford and Carroll Counties in the period 1981-1983) and, on the other hand, concentration in the industrial/business parks. These parks have in general a location that is highly visible; much attention is paid to the architecture; and they offer a wide range of services (shops, restaurants, sometimes even hotels). The rents are, however, also higher. The tenant mix increasingly diversifies; R & D, high-tech and offices make use of the parks, although the trend is to keep the sectors separated in different parks (probably the best example is Columbia which strictly controls the kind of firms in each park). The introduction of these parks indicated the end of the construction of single user plants.
The business parks in the Baltimore region are highly concentrated along Interstate 95 (specifically the Route 1 corridor and BWI Airport, the north-east corridor and around Aberdeen in Harford County), which provides good access to other regions in the United States, or in existing concentrations of employment with easy access to the interstate highway system (I-83 corridor, especially Hunt Valley or Columbia). The industrial vacancy index (Coldwell Banker 1988) indicates a small increase in vacancies in the United States (from 4.7% at the end of 1984 to 5.8% in 1988), while for the Baltimore region the figures almost constantly decline, from higher than national until 1986 to 2.3% in 1988. Seen in the context of an almost constant increase in number of parks, this may well suggest a strong industrial performance.

4.3 The Retail Sector

In the contemporary stage, the trend is to concentrate the retail sector in huge shopping malls, which almost have become tourist attractions because of their size. Shopping malls, or super-regional malls, with 150-250 shops and 3-6 department stores present the latest in retail development. They have become focal points of attention and a magnet for, or guiding force behind, a wide range of other kind of activities. Offices, industrial parks, hotels and the residential function locate in close proximity. This combination is a profitable one, since the employees all become potential clients, while the parking spaces can be used intensively during the whole day. Moreover, huge, new shopping malls receive a lot of attention in the press and from the brokers, which further enhances their focal point function.

The newest shopping malls indicate the end of a pattern in which the retail function follows the population. The newest malls locate on the outer edge of the suburban fringe in highly visible and accessible places, preferably in higher income areas. In general these malls attract a lot of traffic. Clear examples in the Baltimore region are Hunt Valley (0.9 mil sq. feet), Owings Mills (0.8 mil sq. feet) and White Marsh (1.2 mil sq. feet).

Table 4.6 Retail sales in the Baltimore region, and share in the regional total, 1977-1985 (millions of dollars)

<table>
<thead>
<tr>
<th></th>
<th>1977 abs</th>
<th>1977 %</th>
<th>1982 abs</th>
<th>1982 %</th>
<th>1985* abs</th>
<th>1985* %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baltimore City</td>
<td>2089</td>
<td>30.4</td>
<td>2644</td>
<td>28.6</td>
<td>3252</td>
<td>24.3</td>
</tr>
<tr>
<td>Baltimore County</td>
<td>2654</td>
<td>38.7</td>
<td>3898</td>
<td>39.3</td>
<td>5288</td>
<td>39.5</td>
</tr>
<tr>
<td>Anne Arundel</td>
<td>1216</td>
<td>17.7</td>
<td>1880</td>
<td>19.0</td>
<td>2661</td>
<td>19.9</td>
</tr>
<tr>
<td>Howard County</td>
<td>295</td>
<td>4.3</td>
<td>522</td>
<td>5.3</td>
<td>801</td>
<td>6.0</td>
</tr>
<tr>
<td>Carroll County</td>
<td>239</td>
<td>3.5</td>
<td>380</td>
<td>3.8</td>
<td>525</td>
<td>4.0</td>
</tr>
<tr>
<td>Harford County</td>
<td>369</td>
<td>5.4</td>
<td>591</td>
<td>6.0</td>
<td>843</td>
<td>6.3</td>
</tr>
<tr>
<td>Region Total</td>
<td>6860</td>
<td>100</td>
<td>9915</td>
<td>100</td>
<td>13375</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: 1977 and 1982 Census of Retail Trade and RPC
* estimate

The shopping malls have contributed to an even further decline of the share of retail sales in the central city. Baltimore city's share in the total regional retail sales decreased from 30.4% to 24.3% between 1977 and 1985 (table 4.6).
Stages of deconcentration

The development of shopping malls in the Baltimore region suggests a distinction among roughly three stages, each with differences in the locations and characteristics of the malls.

In the first stage (1955-1970), the malls locate both in the central city and in the suburban area. In the suburban area, the beltway is an attractive location. Outlying and remote malls (small compared to the other suburban malls) emerged to serve their own regional population, and had their own trading market (e.g., Bel Air).

As early as in the postwar stage, the retail function experienced an enormous growth in the suburban area. Early developments took place along the highways, in strip developments, eventually developing in small clusters in direct connection with the highway (Reisterstown Road, Ritchie Highway). Strip developments are to be found all over the metropolitan region. They extend out from the city. Later developments are connected to the earlier developments along the transportation route. These developments continued to serve the local population until the first supermarkets were introduced in the 1950's (figure 4.1). The supermarkets were attracted by an expanding market and the availability of space. They frequently located in or at the edge of the existing clusters. The location of the supermarkets was made possible by an increased mobility of the population. It was around this time that the central city business leaders became worried about their position in the developments. Larger department stores in the inner city were closed and re-opened in the suburban area, resulting in a massive decrease in retail sales in the central city.

The early malls had almost no amenities, few were enclosed, and they generally had only one department store. The small shopping centers sometimes developed into small clusters of commercial developments, comparable with the centers of much of the inner ring suburbs. The range of products and services that are offered was determined by the "buying-power" or average income of the households in the area. Pikesville is in this sense a "higher order" center, while the East Point mall (figure 4.1) predominantly offered discount lines of products.

In the second stage (1970-1980), the beltway continues to be a favorable location. Most of the malls in this period were built in the early 1970's. At that time they presented a new and very modern sort of mall. Some of them were as large as the contemporary malls today. The older malls are now out-dated and in most of them rehabilitation has taken place. The process of aging resulted, in the case of the East Point mall (figure 4.1, nr. 5), in the emergence of a new mall in later years, the Golden Ring mall (nr. 15), in close proximity. Since then the area in between was filled in with strip-like and spot developments, while the center of the shopping area tends to gravitate somewhere in between. Recently the dominance of both these centers at the east side was challenged by the opening of the new mall in White Marsh, which is said to have led to a decline in sales in the earlier mentioned malls.

In the latest stage of development (after 1980), locations near the beltway offer almost no new possibilities for development. The new malls thus locate in strategic, high growth areas in the fringe. The malls offer a wide range of products and increase the competition within the region considerably. Characteristics are easy access and enough parking space.
The opening of the mall in Hunt Valley (nr. 9), in the fringe area, was according to the developer a "risk," and by others (planners, competitors) seen as a bad bet. It was said to be located too far out in the suburban area. Although not highly successful (retail sales are below average, vacancies and high turnover exist), the mall has a moderate performance, largely due to the mix of tenants (Macy's, Sears). The White Marsh Mall is doing better in that respect, with almost no vacancies and retail sales higher than in Hunt Valley. The remote malls attract almost no population from the central city, in contrast to the beltway malls.

**Figure 4.1 Large Shopping Malls in the Baltimore Region**

![Map of Baltimore Region with shopping malls marked]

Source: Baltimore Sun

**Key:**

1. Harford Mall  
2. Reisterstown Road Plaza  
3. Towson Marketplace  
4. Glen Burnie Mall  
5. Eastpoint Mall  
6. Harundale Mall  
7. Mondawmin Mall  
8. Marley Station  
9. Hunt Valley Mall  
10. Westview Mall  
11. Towsontown Centre  
12. The Gallery At Harborplace  
13. Security Square Mall  
14. Owings Mills Mall  
15. Golden Ring Mall  
16. Annapolis Mall  
17. Columbia Mall  
18. White Marsh Mall  
19. Cranberry Mall  
20. Jumpers Mall  
21. Tollgate Mall  
22. North Plaza  
23. Parole Plaza
The Owings Mills Mall is one of the most recent shopping malls (1986) and is already a success. It is located in an outlying area along Reisterstown Road and is the first large shopping mall at this side of the central city. It offers shopping opportunities not matched elsewhere in the area. An average of 65-75% of the shopping population comes from 25 or more minutes away (Research and site strategy, Rouse Company). The other shopping centers and strip developments located along Reisterstown Road offer predominantly convenience goods to a spatially very limited market. The goal of the developer was to capture part of the 44% of the households with an annual income above 50,000 dollars, who shop frequently in Washington D.C. or Philadelphia. The Rouse Company labeled the region as "underserved." The Baltimore region had, for example, no Sacks Fifth Avenue store. The strategic plan for the Owings Mills mall was to stop the outflow of dollars by creating a supply location of higher-priced fashion apparel.

Table 4.7  Shopping Malls in the Baltimore region by location and period built, 1955-1987 *

<table>
<thead>
<tr>
<th></th>
<th>Within City</th>
<th>Beltway</th>
<th>Outlying</th>
<th>Remote</th>
</tr>
</thead>
<tbody>
<tr>
<td>1955 - 1965</td>
<td>2,7</td>
<td>4,5,10,11</td>
<td>6</td>
<td>23</td>
</tr>
<tr>
<td>1965 - 1980</td>
<td>-</td>
<td>13,15,22</td>
<td>20</td>
<td>1,17</td>
</tr>
<tr>
<td>1980 - present</td>
<td>12</td>
<td>3</td>
<td>8,9,14,18</td>
<td>16,19,21</td>
</tr>
</tbody>
</table>

Source: Baltimore Sun  * see key with figure 4.1

The retail sales of Hunt Valley and Towson declined respectively 20% and 10% since the opening of the mall in Owings Mills, an indication of the heavy competition. This competition is also noticeable in the Pikesville/Reisterstown shopping area. The effects have not yet occurred, but the Pikesville Rehabilitation Growth Plan (1980) projected a 10% decline in sales at apparel stores within the Pikesville area, while other retail sales are projected to remain stable. With regard to the industrial and office sectors (Pikesville has no vacant land), it is said that the influence of Owings Mills will be minimal.

4.4 The Office Sector

The office is often said to be the "factory" of the future. The deconcentration of office based employment presents the latest stage in the process of suburbanization. The Baltimore region, just like most of the other metropolitan regions in the United States, experienced a boom in office space after 1980, and especially between 1983 and 1987 (table 4.8).
Table 4.8 Office space (in million square feet) and number of buildings in the Baltimore region, 1983-1987

<table>
<thead>
<tr>
<th></th>
<th>1983 sq.ft</th>
<th>1985 sq.ft</th>
<th>1987 sq.ft</th>
<th>% Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>#</td>
<td>#</td>
<td>#</td>
<td>sq.ft</td>
</tr>
<tr>
<td>Baltimore City</td>
<td>8.2</td>
<td>11.1</td>
<td>13.8</td>
<td>68</td>
</tr>
<tr>
<td>Baltimore County</td>
<td>6.9</td>
<td>9.7</td>
<td>15.4</td>
<td>123</td>
</tr>
<tr>
<td>Anne Arundel</td>
<td>2.2</td>
<td>3.5</td>
<td>5.5</td>
<td>150</td>
</tr>
<tr>
<td>Howard County</td>
<td>3.0</td>
<td>4.1</td>
<td>9.4</td>
<td>213</td>
</tr>
</tbody>
</table>

Source: Black's Office Leasing Guides

The total amount of office space in the region more than doubled in this period (an increase of 117%, without considering Carroll and Harford Counties). The office deconcentration is largely limited to Baltimore, Anne Arundel and Howard County. However, Carroll and Harford Counties have experienced an increase in some of the "back-offices," such as credit card processing and other more routine activity centers. These kinds of office related activities present the earlier stages of office deconcentration and can be noticed to have happened in the late 1960's and 1970's in the older suburban counties. In the latest stage even the office functions formerly in need of a central city location are moving out to the suburbs.

A remark on the office data in general is appropriate here. The data are, even if available, far from consistent. Developers tend to collect, or let private research bureaus collect, data on absorption rates, amount of office space and vacancy rates: variables all of which influence their investment behavior. The definitions of office space differ considerably; they vary from considering only Class A office space, to considering only the buildings with floorspace above a certain minimum. A Manekin Study (1987) thus concludes in contrast to the findings of this study, that Baltimore city still is the dominant core, with 42% of the total leasable office space in 1987, while Baltimore County accounts for 38%. The data used in this study come from either the developers themselves or the Black's Office Leasing Guides, since it presents an overview of office space on a yearly base.

All over the United States office construction is booming. The market is said to experience a stage of overbuilding, resulting in high vacancies (and low absorption rates) and "good deals" for the renters (first month rent-free, upgrading of the space, and lower rent-levels). After the peak year 1985 with 344 million of square feet in the United States, the construction of office space declined (ULI 1987), due to a tax reform in 1986 (which limited the availability of finance and restricted the use of the formerly generous tax shelter regulations) and the stock market crash of October 1987 (New York Times, May 15, 1988, Section 13).

While oversupply still occurs in most of the metropolitan regions in the U.S. (with Houston and Denver being outstanding, but also Atlanta, Miami, and Phoenix), a better balance is reached in Chicago, Boston, New York and Washington, D.C. (ULI 1987). The absorption rate is a good measure for the degree of tension in a market. Compared to other regions the Baltimore office market is tight. When the total number of years without construction that is needed before the market reaches a 6% vacancy rate is used as an indication, it must be concluded that the Baltimore region (0.6 years) has, after
Washington (0.0 years) the tightest office market in the United States (ULI 1987). The figure is, for example, 5.8 years in Los Angeles and 3.4 years in Philadelphia.

Not surprisingly, most of the new office activity in the region is located in the suburban counties (both in number of buildings and floorspace). Baltimore city also experienced a growth in the office sector between 1983 and 1987. However, compared to the suburban counties, the increase in the central city was the lowest. Baltimore city lost its dominant position as jurisdiction with the highest amount of office space to Baltimore County in 1986. The I-83 corridor has the highest concentration of office space (Towson, Hunt Valley), while places such as White Marsh and Owings Mills experience high growth rates in the most recent period. Office development in the two designated growth areas largely takes place around the towncenter.

Within the office market some general trends may be noticed that are also to be seen in the Baltimore region. First of all, higher vacancy rates have become acceptable. As can be seen in table 4.9, the vacancy rates have been rising steadily in the Baltimore Region and are among the most important concerns of the brokers and developers. A market study by Manekin, however, notices much lower vacancy rates (increasing from 9% in 1985 to 13% in 1988), and this seems to be more in line with the tight market.

Table 4.9 Office vacancy rates in the Baltimore region, 1983-1987 (%)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Baltimore City</td>
<td>12</td>
<td>21</td>
<td>21</td>
<td>23</td>
<td>24</td>
</tr>
<tr>
<td>Baltimore County</td>
<td>19</td>
<td>22</td>
<td>20</td>
<td>31</td>
<td>25</td>
</tr>
<tr>
<td>Anne Arundel</td>
<td>25</td>
<td>21</td>
<td>34</td>
<td>31</td>
<td>29</td>
</tr>
<tr>
<td>Howard County</td>
<td>32</td>
<td>30</td>
<td>29</td>
<td>40</td>
<td>40</td>
</tr>
</tbody>
</table>

Source: Developers, and Black’s Office Leasing Guides

An important distinction has to be made between class A office space and class B/C space. The vacancy rates for the first kind of high quality prime office space are low (4%-8%). In Baltimore city, for example, it is almost impossible to rent existing class A office space, despite the high prices (table 4.10). New buildings are often pre-leased, even before the construction starts, but also dependent upon the requirements of the money-lender. This very tight market in the central city must have stimulated the process of outward movement of office employment and is in contrast to most of the other metropolitan regions in the U.S., where the central cities have higher vacancy rates (of class A space). Within the central city is the trend noticeable that banks, for example, are relocating from the CBD to the ring just around the CBD.

The vacancy rates in Howard and Anne Arundel Counties have risen in the past years due to the high rate of building activity. The absorption, however, is also high in these counties. Absorption rates the last few years were very good in Hunt Valley, Owings Mills, Columbia and Ellicott City. The vacancy rates in, for example, the BWI-airport area are low; they decreased from 23% in 1985 to only 5% in 1987. Columbia, however, has a higher vacancy rate.
A second general trend is the renovation and rehabilitation of office buildings. Especially in more mature office environments, such as Hunt Valley, a high share of the leasable office space is in re-let or already existing office buildings (70% of total space as of 9/30/87, McCormick, unpublished).

The trend towards renovation is partly linked to the third trend, one of rising prices of office space (table 4.10). The prices in the Baltimore region are seen as moderate, especially when compared to the Washington market. In the Baltimore region the prices rose significantly after 1979. Among the suburbs exist enormous differences. The prices in table 4.11 are, where possible, the gross rent levels, including all the utilities.

Although the median price is still highest in the central city, and especially for class A office space, the rent levels in the suburban locations have risen rapidly. If the rent levels were ever a dimension of the competition between the central city and the suburbs, they have become only minimal.

**Table 4.11 Rent levels of office space, 1979-1987 (in dollars per square feet per year)*

<table>
<thead>
<tr>
<th>Location</th>
<th>1979</th>
<th>1983</th>
<th>1987</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lo</td>
<td>Hi</td>
<td>Med</td>
</tr>
<tr>
<td>Baltimore City</td>
<td>6</td>
<td>12</td>
<td>10</td>
</tr>
<tr>
<td>Glen Burnie</td>
<td>7</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Pikesville</td>
<td>8</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>Catonsville</td>
<td>7</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Towson</td>
<td>4</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>Hunt Valley</td>
<td>9</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Owings Mills</td>
<td>7</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>White Marsh</td>
<td>3</td>
<td>8</td>
<td>6</td>
</tr>
</tbody>
</table>

Source: Developers, Black’s Office Leasing Guide and RPC
* highest, lowest and median and based on gross rent levels

The newest developments in general charge the highest prices (here overrepresented in Hunt Valley and Owings Mills). The inner-ring and older suburbs generally have the lowest prices, which makes them attractive for a price conscious firm, although it must be noticed that even in the central city prices as low as 6 dollars can be found.

**Concluding remarks**

The Baltimore region still experiences a growth in employment. The rate of growth slowed down after 1980, which is almost completely due to developments in Baltimore city and Baltimore County. The redistribution of employment to the suburban counties, however, showed an increase in speed. The center of the employment function tends to gravitate in southern direction, due to the catalytic growth of the Baltimore/ Washington Corridor. Howard and Anne Arundel Counties have the most favorable locations and show the most spectacular increase in employment. Within the state of Maryland, however, the Baltimore region is relatively loosing its employment function to the suburban Washington Counties.
In the latest stage the employment function has become the leading force behind the suburbanization. The beltway functions as a springboard, with the employment function moving out further, but also gravitating towards the beltway for reasons of accessibility. The office- and retail sector play an important role in the developments in the latest stage and have become magnets for other kinds of activities. Retail centers tend to concentrate in huge shopping malls, which tend to gravitate towards the outer edge of the suburban area.

The Baltimore region experienced a boom in office space after 1980. The office market in the Baltimore region is one of the tightest in the United States and results in high development pressure throughout the whole region. This leads to the construction of huge projects in newer parts in the suburban area and infilling and redevelopment especially in the older suburbs.

Within the region distinct shifts in hierarchy occur. Baltimore city is still the location of the greatest number of jobs, but is loosing its position rapidly. Baltimore County became in 1986 the jurisdiction with the highest amount of office space. In absolute terms the gain in employment was the highest in the in the ‘older’ suburban counties, while the ‘newer’ counties experience high growth rates. Baltimore city’s loss of regional functions has lead to specialization on services of a higher order. Within the suburban area concentrations of employment emerge, ranging from centers with a diversified structure (Towson, Columbia) to centers with a rather specialized structure (White Marsh). Interaction increasingly occurs between suburban counties and with areas outside the Baltimore region.

Investment patterns show a strong emphasis for the office related sector for Baltimore and Howard Counties. The south side attracts a considerable share of investments in industry and especially the newer sectors in industry, while Harford attracts a large part of the space-consuming sectors of industry. Investments in retail make up a large part of the investments in the ‘newer’ counties (Carroll, Harford, but also Anne Arundel) and indicate the process of adjustment to the intensified population-function.
5. **THE SUBURBAN AREA: ACTORS, CHARACTERISTICS AND PROBLEMS**

Among the most influential actors in the suburban area in the Baltimore region, as in any other metropolitan region, are government and developers. They play an active role in the developments and are themselves affected or confronted by the results of the developments. The actors to be discussed are the public sector, as represented by local government, and the private sector, as represented by developers. Sections 5.1 and 5.2 will pay attention to some of their characteristics, attitudes and actions. The result of their combined actions make possible a distinction among new- and mature investment areas within the suburban area (section 5.3). This distinction corresponds with differences in characteristics and development, but also problems.

The problems arising in the latest stage, together with factors such as concern about financial and environmental issues, are among the reasons for local government to interfere with the ongoing developments. This results in the implementation of different policies for different parts of the suburban area.

5.1 **Public involvement**

A large number of different governmental institutions have direct or indirect impact on developments in the region. Urban policy, in a direct sense, is almost completely in the hands of the local government, on which this section will largely focus. The Baltimore region is made up of six local governments: five counties and Baltimore city. Urban or growth policy on the local level is conducted within the legal framework set by planning and zoning regulations.

**Planning and zoning: stages in policy**

In order to guide or control development in the individual counties, the most important tools used are a set of planning and zoning regulations, which basically control the changes in land-use. The political context determines to a large extent the contents and guidelines of the "development plans". These plans present an overview of the anticipated and allowed developments and are the basis for review in the case of a rezoning request. Based upon the restrictiveness of the planning and zoning regulations of local government, a rough distinction can be made among three periods in the Baltimore region.

In the first stage, until the mid-1960's, the counties lack in general the power to influence development. Land was available and the financial situation of the county governments was favorable. Services could be provided easily. Zoning regulations existed in certain areas, such as minimum lot size, but requests for re-zoning (mostly away from rural zoning in this stage) could not easily be denied, due to the lack of a general and consistent land-use plan. The resulting spatial development pattern was one of dispersal in all the counties, and especially in the "older" suburban counties with serious development pressure at that time.

In the second stage every county adopts its own re-zoning policy as a basis for later plans. During the 1960's the local governments showed a growing concern about the ongoing developments, which were largely concentrated in
Baltimore and Anne Arundel Counties. Financial-, social- and environmental issues and problems in the counties demanded guidelines for development. General Development Plans (GDPs) or Masterplans were adopted in order to be able to control and restrict development, and review rezoning requests on the basis of the land-use map. Carroll, Anne Arundel and Baltimore Counties were the first to adopt these plans (in respectively 1964, 1967 and 1968). The other counties followed in the early 1970's.

Considerable differences exist, however, among the counties in the region. In Carroll County, for example, policy is very fragmented. It leaves the process of zoning in large part to its suburbs or municipalities, each of which prepares its own local plans. Baltimore County may be seen as the opposite and the county with the most comprehensive zoning policy, since it completely revises its zoning every four years.

The GDPs of the late 1960's and early 1970's turned out not to be effective enough, mostly due to lack of mechanisms to implement the plans. This became especially clear in the older suburban counties. It resulted in revisions of the existing GDPs in the late 1970's, which, in fact, meant the introduction of a third stage in the planning and zoning policy in the Baltimore region. The counties attempted to plan growth in a comprehensive way and most of them adopted a policy of "contained" growth, whereby growth had to take place in designated areas. It was in this stage that Baltimore County adopted its "growth management" policy (Baltimore County 1978, 1984). The GDPs are frequently accompanied by more specific plans, that were made for areas within the counties (Glen Burnie, Towson: mostly the older suburbs). The growth management policy of Baltimore County resulted in, on the one hand, a rehabilitation plan for most of the inner ring suburbs, and on the other hand, a growth plan for the newer developments. With regard to the growth plan for the newer developments, the goals expressed in the Master Plan for Baltimore County (1984) are to capture roughly 50% of the projected growth of the population in the county in two planned development areas: Owings Mills and White Marsh. The remaining 50% is projected as infill or fringe-growth in more dispersed projects (Figure 5.1).

Baltimore and Anne Arundel Counties adopted the most restrictive policies. Introduced were the Adequate Facility Ordinances (AFOs) (in which the developer is required to prove that, within a certain, variable range, the existing facilities (sewer, schools, roads) have enough capacity when the new development is in place), as were the impact fees (which the developer pays the local government based on, for example, number of houses built). The other counties are less restrictive in their policies. Harford County adopted its own version of contained growth, the "growth envelope", without implementing an AFO or impact fees. Howard and Carroll Counties basically designated restrictions to protect the agricultural zones in their counties. Financial problems with the school system may however, lead to adoption of an AFO and/or impact fees in Howard County in the near future. At the moment Howard County has for the developers still a relative advantage (more attractive environment for investments) compared to, for example, suburban Washington since those counties already use these (cost-rising) instruments. Less restrictive zoning regulations (no impact fees or Adequate Facility Ordinance) may turn out to be an incentive for investments.
The problems with plan implementation continued to occur and were the reason for Baltimore and Anne Arundel Counties to adopt new plans in the 1980's. These were basically the same, but with more restrictive AFOs (facilities have to be sufficient for a wider area) and higher impact fees.

The growth management plans, fees and ordinances, indicate the end of a pattern of low interference with the developments by local government. It gives, however, provides the business community with some clarity about planned developments and enables cooperation between government and developers, which in general is viewed as crucial for the success of projects, especially large scale ones. It also implies a formal commitment to huge capital investments. The financial situation of the counties, however, differ considerably.

Figure 5.1 The Growth Management Policy of Baltimore County

Source:
Baltimore County, 1984
Financial situation

The financial power of a government determines for a large part the power to guide and regulate developments. Every county likes to increase its tax base (number of jobs, number of residents, value of property), but is also responsible for the results of the increased activities (services and other capital expenditures).

All the suburban counties have experienced tremendous increases in expenditures in the last two decades, due to the ongoing suburbanization. Since 1980, however, with the exception of Howard County, all the counties have been able to decrease their expenditures. The Regional Planning Council (1986) concludes, with the assumption that the 1980 level was just enough to provide all the necessary services, that these reductions indicate not only a reduction of services to some groups, but also reduced investments in physical infrastructure.

Table 5.1 Tax base relative to the regional average and expenditures per capita in 1980 dollars, 1970-1984

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Anne Arundel</td>
<td>0.85</td>
<td>1.04</td>
<td>0.98</td>
<td>1.09</td>
<td>700</td>
<td>1082</td>
</tr>
<tr>
<td>Baltimore City</td>
<td>0.82</td>
<td>0.59</td>
<td>0.78</td>
<td>0.68</td>
<td>1105</td>
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Source: RPC, General Development Plan 1986

The central city is the biggest spender with 2050 dollar per capita in 1984, while the relative tax base is the weakest (table 5.1). Howard and Anne Arundel Counties have seen considerable improvements in their "wealth," an indication of their strength and largely due to the favorable economic situation in the Baltimore/Washington corridor. The relatively low level of expenditures in the new counties indicate the early stage of suburbanization of these counties.

The revenues of the suburban counties come from all three government levels (federal, state and local), of which the local level is the most important (45% of total revenues). The tax structure determines in large part the level of the revenues; financial relations with federal and state government do not discriminate between the counties. This implicitly means that an increase in population with 'urban' characteristics (chapter 3), and thus an on average lower income, threaten the level of revenues.

The revenue structure of the central city is different from the counties being only 25% based upon local revenues (RPC 1986). The cuts in federal expenditures are thus felt much more in the central city. For the period 1980-1984, the decrease in federal spending resulted in an average decrease for the
suburban counties of 9.2 million dollars, while the decrease for Baltimore city reached 242 million dollars. In contrast to the suburban counties, however, the central city has the possibility to make use of special federal funds (grants). These funds are used frequently by the Baltimore Economic Development Corporation (BEDCO) and by firms in the central city. The funds are largely directed to special projects (industrial parks, redevelopment) which prove to be successful.

The financial relationship with the state is the same for the central city and the counties. The state provides programs (e.g. training on the job) in order to transfer tax revenues generated in one jurisdiction to the others. Revitalization programs are supported, mostly with low interest loans. Furthermore, the state financially supports transportation improvements in the counties. The State Department of Transportation, responsible for the construction of the beltway, finances inter-county connections.

Regional and economic development organizations

Economic development organizations are an important instrument in attracting growth. While they perform an essential role in attracting firms, they differ in their approaches: some counties presenting themselves at international exhibitions, some waiting for the firms to announce themselves.

The Regional Planning Council functions as an intermediate planning level between the local and the state government "... to assure a continuous, comprehensive and cooperative land-use and planning process within the region." (Legislative Declaration 1957). The goals are: the coordination of planning activities, rendering planning assistance, stimulating public interest and participation, serving as the referral agency for problems affecting more than one county, reviewing local government programs and granting aid requests. It completes a General Development Plan every five years, which gives a comprehensive overview of developments and problems, and proposes solutions on the metropolitan level. The RPC performs a strong monitoring function, since it gathers all kinds of data in relation to developments in the region, which are made available to the public.

The RPC's potential function is very important, since it functions on a higher level than the local governments. The RPC has, unfortunately, a very limited power, although the cooperation with the counties is extensive. Despite the mostly good cooperation with local governments, the RPC lacks the legal power to force the local governments to take action.

The Maryland Department of Economic and Community Development (DECD) is active in recruiting firms for the State of Maryland, nationally and internationally, and works on this aspect closely with the economic development commissions of the individual counties. The efforts of the DECD do not discriminate between the counties in the region. It is always difficult to measure the effects of such an intermediary. In 1987, for example, the DECD assisted 17% of the new firms in some way (57 out of estimated number of new firms of 339) and 7% of the expanding firms (33 out of 502 firms), affecting 12% of total jobs and 11% of total capital expenditures.
The economic development commissions (EDCs) of the individual counties mostly offer a staff of specialists to assist the business community with financing, site selection, development processing, training programs, small business counseling, promotion and marketing and even with procurement of federal contracts. They deal directly with 30-50% of the new firms locating in the county, and with a lesser percentage of the expanding firms. The way the EDCs work varies considerably and is in the larger counties much more formalized.

Harford County offers an example of a small and very flexible EDC. Cases are known of firms that chose to locate in Harford because of, among other factors, the willingness of the EDC, in close cooperation with other departments, to speed up the processing of the necessary permits (for example the "just-in-time" automobile industry plant of Chrysler, which came from Delaware, and that of Douglas and Thomasson from Detroit). Instead of the three to six months it would have taken in other counties to arrange the permits, it took approximately 2 weeks in Harford County.

The EDCs are advertising the county's relative strengths, which may include the quality of the school system (Harford and Anne Arundel), the cheaper tax and land/rent prices (which are lower in the newly developing counties), lower wage levels and specific composition of the labor-force (however, scarcity of low-skilled labor was for a major Kodak chemical plant, in 1987, the reason to locate in the Philadelphia region instead of in the Baltimore region) or the unionization of the labor force, which is high in the harbor area and low in, for example, Harford County. The degree of unionization was one of the reasons for Mercedes Benz to locate a distribution center in Harford County and not closer to the harbor.

Competition: the counties

The situation within the Baltimore region is in comparison to other metropolitan regions, less competitive due to an ongoing growth of population and employment, which takes place almost everywhere in the suburban area. In other metropolitan regions the growth is much more directed towards a restricted number of areas or directions, which results in a more severe competition between the counties: each of them eager to take their share of the activities.

A commonly used tool such as, for example, tax-abatement is rarely used in the Baltimore region. Recently, in 1987, though, Harford County used this tool to get the Merry-Go-Round Enterprise within its borders (headquarters and warehouses). This firm, with 500 employees, was in search of more space than it had in the existing location (along the I-83) and could not come to an agreement within Baltimore County, largely on financial terms.

Competition is thus not completely non-existent: the individual counties all like to capture their share of the overall growth in the region.

In the early stages of suburban development, the competition largely occurred between Baltimore city and Baltimore County, which attracted much of the early suburban development. If one looks at the developments in taxable wealth (table 5.1), one can only conclude that the central city has lost the competition. Baltimore County itself is now subject to competition from the newer developments in the other counties.
The differential growth within the region mostly favors the south side of
the region due to development in the Baltimore/Washington Corridor, and leads
to competition between Howard and Anne Arundel Counties (although both attract
considerable amounts of activity), but also to competition between these
counties and Baltimore County. Baltimore County tries to capture part of the
development that would otherwise have moved south by the designation of the
two growth areas (Owings Mills and White Marsh): the county makes huge capital
expenditures in these areas (Baltimore County, 1986). Both areas were
designated in a period when it became obvious that within Baltimore County the
existing zoning regulations left almost no room for expansion or new ac-
tivities. The recent discussion about a third growth area near Catonsville,
closer to the competing areas, may also be enhanced by this competition.

Within the governmental framework as described above, the private sector
enacts their (investment) actions.

4.2 Private Involvement: Developers

Market-forces appear to influence development in the United States more than
public policy does. The restructuring of the metropolitan area, but also of
the suburbs themselves, seems to be largely dependent upon decisions with
regard to private sector investments. Decisions made by the private sector are
market driven and based upon feasibility studies. An indication of the
activities of the private sector is the resulting pattern of investments.

Investments

The investments made in the Baltimore region have risen significantly in the
period since 1980, indicating the attractiveness of the region (table 5.2). The
investments in the period 1981-1985 more than doubled compared to the
period 1975-1980 (102% increase). Below this average regional increase were
Baltimore city, Baltimore County and Carroll County, which experienced a
decline in investments. Anne Arundel County experienced the largest increase
with 255%.

Baltimore city still attracts the largest amount of investments. In
absolute terms, the two older suburban counties and Baltimore city are among
the most attractive areas for investment in the region. Within the suburban
counties the investments are largely directed towards the newer areas.

Table 5.2 Total, new and additional non-residential investments,
1975-1985 (in millions of dollars) (1)

<table>
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<td>46</td>
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</table>

Source: RPC, Building Permit File
(1) until 1980, permits higher than 100,000 dollars, after 1980: permits higher than 250,000 dollars are registered
(2) change in 1981-1985, relative to volume in 1975-1980
* except 100 million solid waste disposal facility

A distinction can be made between new and additional investments, which accounted for 46% of the total regional investments in the period 1975-1985. The distinction indicates a degree of maturity (scale of existing businesses) for the jurisdiction. In the latest period (1981-1985) the region experienced a growing share (51%) in additional investments compared to the first period (36%). Baltimore city and the older suburban counties (Anne Arundel and Baltimore Counties) experienced a higher share in additional investments in the second period, compared to the newer Howard and Harford Counties. In these counties the additional investments will probably rise in the (near) future.

Pluriformity

The private sector consists of an enormous variety of different actors. Among them are leasing agents, business-park owners or managers, brokers and so on. They form a heterogeneous group, mostly act very independently of each other and vary in size, market-area (local, regional, national, and international), sector (housing, offices, industrial) and the way in which they work. In this section the group is narrowed down to the developers.

One of the rare examples of cooperation in the private sector is the Washington/Baltimore Regional Association (W/BRA), an alliance of business communities in the counties and cities of Baltimore and Washington. As a private regional economic development corporation it promotes the common market. It works together with, for example, the Maryland Economic Growth Associates (MEGA), one of the larger private development corporations working for the Baltimore region. The W/BRA presents the corridor as one market, thus emphasizing its strength; the corridor is among the regions with the highest median income in the United States (31,700 dollars); it becomes the fifth largest retail market and the fourth largest consolidated market with a population of 5.9 million. The W/BRA has been very successful in its efforts, since the concept of the Baltimore/Washington Corridor is widely known now, while not many people had heard of it at the end of the 1970's.

Trends

Developers often own the land, make the plans for development, and either contract a building company for the construction or do it themselves. The smaller developers hand the projects over to leasing agents, while the bigger developers have their own leasing departments. The trend is, for both residential and non-residential activities, towards larger developers and larger projects.

This trend is especially clear for the newer developments. When, for example, the office market in Owings Mills, White Marsh and Hunt Valley is considered, the total of 56 office buildings (approximately 4 million square feet) are owned by respectively 5, 5, and 7 (total of 17) developers (Black's Office Leasing Guide 1987). In Owings Mills three, White Marsh two, and Hunt Valley three developers own more than 70% of the total office space. The situation in Pikesville is completely different, where 20 office buildings are
owned by 13 developers. The three largest developers in Pikesville (who are also active in newer developments) account for 40% of the total office space.

Changes in behavior of the developers are mainly based upon rising costs (such as those of materials, labor, land and money). The reaction has been a search for an increase in scale of developments, an increase in density of the land-uses, and emphasis on mixed-use projects, all in order to reduce the unit-costs of their activities. The Rouse Company (the developer of Columbia), for example, is the developer of approximately 50% of all the re-tail space in the Baltimore region, mainly concentrated in the larger shopping malls. Some of the larger housing developers (e.g., Bancroft Homes) almost constantly increase their share of the total housing market.

The construction of multi-family housing is such a cost reducing measure. This has led to the emergence of Planned Unit Developments (PUDs), such as Owings Mills and White Marsh. PUDs allow for land-uses in higher densities, which at the same time creates the opportunity to plan some open space, or other public facilities, within the project. Furthermore, one of the advantages of large scale projects is the availability of land, which gives the developers the possibility to rapidly create a certain base for development, as in the case of a shopping mall, but also leaves room for expansion afterwards. Not surprisingly, the location of these developments is largely directed to the newer parts of the suburban area.

Due to the large scale of the planned developments, the projects could turn out to be high-risk investments. The scale of the projects require large developers with much experience, and make the developers search for big money lenders (with loans often exceeding 100 million dollars); often nationally operating banks or pension funds (in Boston or New York). Moreover, it often takes 4-5 years between formulation of the plan of the developer and the actual execution of the plan, even more in the case of Owings Mills (7 years - due to a delay in provision of infrastructure). The Baltimore region has known several developers who, mostly for financial reasons, were not able to start or finish their projects. Recently the developer of a large part of the planned housing units in Owings Mills (Markov) announced a slow down of construction, due to financial problems. Other developers in the area fear the possibility of bankruptcy.

Furthermore, the PUD allows the developer to guide the development. Developers often complain that local authorities lack the political strength to guide developments, which often results in a lack of structure in the process. However, they are also aware of the necessity of cooperation with the other actors, and especially government, which is required for the success of a project.

Preference for government interference

In contrast, however, the developers increasingly show a strong preference for the government to interfere by means of stricter regulations. This is necessary not only for certain kinds of capital expenditures in the public sector, but also to ensure the safety of their investments in the future (and thus to reduce the potential risks of a project). Furthermore, the developers stress the public-private cooperation because of the relative scarcity of alternative investment opportunities, especially in mature metropolitan regions like Baltimore. This scarcity also provides one of the reasons to invest in the older parts of the suburban area.
The future viability of a project is dependent upon many other factors, which may be captured in the "image" of a project. This image seems to be influenced by the characteristics of the region (for example accessibility, but also perceived character), composition of economic activities (and its evolution), the attitude of government, the attention paid by press and leasing agents, and the focal point function.

Thus, in the latest stage of suburban development the trend is towards larger developers and new activities increasingly organized on a larger scale (PUD's). These trends are accompanied by a stronger preference of the developers for public interference. The government, at the same time, is implementing more restrictive policies. The combined efforts turn out to be location specific within the suburban area.

Developers and government both act differently in the different parts of the suburban area and contribute to differential development within the suburban area. The general context, though, is favorable: one of high development pressure, resulting in a rise in investment almost everywhere in the suburban area. The government's role has gradually become one that is placing restrictions on developments in the newer parts of the suburban area, while investments in the older areas with a weak economic base are stimulated. This is a change in attitude and the developers are not unwilling to participate. In fact this creates a sound base for cooperation in the near future, although it must not be forgotten that both actors basically intend to take their share of the growth.

5.3 The Suburban Area: New and Mature Areas

The division between older or inner-ring, and newer or outer-ring parts of the suburban area is roughly set by the beltway. This section will focus on the suburbs in both areas, since the distinction corresponds to differences in characteristics, differences in attractiveness for the developers and kind of government interference.

Mature areas: inner-ring suburbs

The suburbs in the inner-ring show some general characteristics and developments. Rather important in setting them aside from the newer suburbs in the outer ring, is the fact that most of these former bedroom communities have a small town center which in time has become a focal point of orientation for the surrounding community. These small town centers mostly perform a sub-regional retail and service function and consist of a mix of residences, offices and industrial buildings. The residential function, often in low densities, extends from this center out into the surrounding area. The amount of developable land is, however, limited due to restrictions in the zoning regulations, although the rehabilitation policy has recently resulted in rezoning activities in most of the older suburbs.

The economic climate in much of the older suburbs is weak, due to factors such as congestion, a deteriorating towncenter, little or no space for expansion, and competition with newer developments. However, the rent levels in these suburbs are relatively low, and they are located in what now is the most densely populated part of the suburban area, at a short distance from the central city. These characteristics provide strong locational pull factors for
specific kinds of economic activities and in these respects are these suburbs highly competitive with the newer suburban developments further away from the central city, which attract the bulk of the new investments. The firms in the older suburbs are predominantly cost conscious, small (start-up phase -incubation milieu-), or serve a subregional population.

Rehabilitation

Rehabilitation policy is a distinct feature in the inner ring of the suburban area. The bottom line is that with the initiation of the rehabilitation policy a change in governmental attitude has occurred. It is in fact the first time that local government in the suburban area has considered construction in higher densities and in mixed used projects.

All the inner-ring suburbs are, with the exception of Glen Burnie (Anne Arundel), located in Baltimore County. As early as in the 1960’s, Baltimore County became worried about the problems in the older suburbs (especially environmental deterioration and loss of economic vitality) and initiated a rehabilitation policy for most of the inner ring suburbs (figure 5.2), as part of the previously discussed growth-management policy. It took until 1978 before the plans were accepted by the county council.

Common characteristics of the rehabilitation areas are a corridor type of development and a distinct retail and service function for the area with a mixture of commercial developments. They all have inadequate road systems, scattered parking, extensive vacant areas and are lacking trees and street-scaping. The purpose of the policy is to preserve employment opportunities in the service and retail categories as they currently exist, and to provide incentives for new establishments, rehabilitation or expansion of existing businesses, and new infrastructure to correct deficiencies. The plans are worked out more specific for the different area in accordance with the local situation. Pikesville, for example, not only dealt with a decreasing economic vitality, but also experienced an outmovement of population to, for example, Woodlawn (west of Baltimore city).

Plans

Anne Arundel County accepted an urban renewal plan for Glen Burnie in the late 1970’s (Glen Burnie, 1980). Its difference from the rehabilitation policy of Baltimore County is found in the differences in power between the two county governments. Baltimore County has no possibilities to condemn property and/or to make the rehabilitation areas "special districts" (in order to enforce certain standards and controls over new developments or improvements). One of the main problems in, for example, Pikesville is the unwillingness of property owners to sell their land, or for the existing retailers to give up their on-street parking places, necessary for road improvements.
In the early period of the proposals of a rehabilitation plan, the county seriously considered the construction of regional shopping malls in some of the older suburbs (e.g., Glen Burnie). Challenged by the emergence of the developments in the newer parts of the suburban area, the considerations changed quickly from plans of demolition and redevelopment to less radical solutions of rehabilitation and selective redevelopment. The final plans demonstrated the goal of elimination of structural deterioration, development of an attractive and visually appealing business core (to revitalize existing and attract new businesses), provision of adequate daily services for the residents and strengthening of the economic base.

The efforts are directed towards a designated town center which has a mixed-use character and is built in higher densities. The town center should
attract government facilities (administrative and public service offices, cultural and service facilities), offices and retail activities located in low to mid rise buildings (up to 10 stories), and higher density residential developments (multi-family apartments), with emphasis on pedestrian oriented plans. This would give rise to the construction of housing for the elderly in close proximity to the center.

The emphasis in development is on the private sector with room for public-private partnerships; the county assists the actions of the private sector by way of re-zoning, capital improvements and improvements in public facilities. Unfortunately, it takes a long time to implement the plan and much of the efforts are dependent on the strength of the local Development Corporations, which consist of delegations of the business community, the residents and the county government, and are installed to coordinate and implement the developments. They work together with other county agencies and the Economic Development Commission.

Difficulties are largely related to the process of attracting developers (in Pikesville currently approximately 90% of the developments are by local developers) and the scarcity of finance (to be provided by the County's capital program, the federal Community Development Block Grants and Industrial Revenue Bonds). Another factor that slows down the process is the large number of small local developers, all involved in the developments.

Results

After all, the results can be worthwhile for the older suburbs, although the differences between the suburbs are large. In Towson, for example, additional parking has been established, a hotel annex parking garage and retirement center have been built and, probably most important, the accessibility in east and west Towson is improved by the construction of a loop road. Little by little it is losing its relatively poor image as a class B center. Class A office buildings are built in places formerly occupied by industrial buildings, low-rise buildings are replaced by mid to high rise buildings and road improvements are being undertaken.

Towson has found a competitive place among the newer suburbs. Towson holds about 28% of Baltimore county's office space. Office vacancy rates in the towncenter have dropped from 16% in 1980 to 10% in 1987, an indication of its attractiveness (Manekin 1988). Vacancy rates on the outer edge of Towson are even lower with a constant 5-9% in the period after 1980. Towson is, however, perceived by most firms as an older congested area, with not much space for expansion and with higher rents and land prices. These are important considerations for firms moving out, and the newer growth areas provide reasonable alternatives, with more space, newer buildings and competitive prices. Moreover, the newer areas are not far away, which gives the firms the possibility to continue to serve the same market. For firms moving in, however, factors such as the location in relation to a huge market and the nearness to Baltimore city, but also the advantages of agglomeration (the presence of the courthouse, for example, attracts many law-firms), are important.

In suburbs such as Pikesville, at least a consolidation of the situation has taken place with potential for new development and redevelopment to occur. Much of the new development, however, remains to be done, although some progress has been made: a retirement center has been built, a townhouse and
condominium projects are finished and around the metro an office project is being built. In Pikesville, in contrast to, for example, Glen Burnie, space is scarce, while the competition with newer developments is severe. Local population serving activities are moving in, also because land elsewhere in this part of the region is scarce. Pikesville, with its high-income group of population is furthermore strategically located between Baltimore city and the new growth area Owings Mills. Glen Burnie has experienced a considerable amount of new development and redevelopment, supported by its location in the booming BWI Airport area. Over time each of the older suburbs will at least be able to survive the competition with the newer developments.

New growth areas: outer-ring suburbs

The suburbs in the outer ring, at some distance from the existing built-up area, are characterized by a rapid growth and thus a short history. Ten years ago this suburban area was not much more than countryside. Most of the projected growth in the metropolitan area is expected to take place in the fringe area of the metropolitan region, as a result of the process of ongoing suburbanization at increasing distance from the central city. This general trend is obvious in White Marsh and Owings Mills, which both experience high growth rates in the period 1970-1987.

The suburbs in the newer parts of the suburban area (Hunt Valley, Owings Mills and White Marsh) are predominantly "hubs" of economic development, while the major residential developments still have to happen. This pattern of development differs considerably from that of most of the older suburbs, which initially started as residential communities. The employment function has increasingly become a major force behind the suburbanization in this latest stage. As a result, the newer suburbs lack a "sense of place," typical for an urban place, and are highly automobile oriented. The newer suburbs generally contain a large amount of office space, extensive regional retail facilities, sometimes light manufacturing, and public facilities and services. They are developed by only a limited number of large and mostly nationally operating developers.

Designated growth areas

As part of the growth management policy, Baltimore county designated two growth areas. Although part of the plans were already on line, the plans were adopted only in 1984 (Owings Mills) and 1985 (White Marsh). The county used for both areas basically the same concept; "guiding rather than dictating the location of the developments." The development-concept designates a town and community center near each other, in which higher densities are allowed and stimulated. The cores create opportunities for commercial activities (office, institutional, shopping and service) and must in the end provide enough public facilities, where possible built under public/private partnership. In White Marsh, for example, the developer built a library on his own land and leases it to the county. The county both lacked the land and the money to buy it. The developer (Nottingham Properties) said that its financial contribution in this case was only possible because it was part of the total plan, of which it is the sole owner and developer.

Residential facilities are constructed in proximity to the core in higher densities (to lower the costs in order to construct affordable housing and
make optimal use of the area). This concept shows similarity to the plans of the town centers in the rehabilitation plans. The accessibility (with emphasis on pedestrian orientation) within the core is carefully considered. Housing should be built in a wide variety and of good quality. Industrial development is allowed outside the core area to create jobs and tax-base.

The location of both areas was chosen for reasons concerning accessibility, the relatively low costs of providing the necessary services, and potential attractiveness for the business community (feasibility studies). The county made huge capital assessments in both areas (Owings Mills 407 million dollars, White Marsh 100 million), as part of the program to make the areas attractive to developers. Other incentives are the provision of special mortgage money pools, streamlining of plan processing and subdivision review and the early provision of public improvements and facilities. A large part of the capital expenditures went into road improvements. In White Marsh they consisted of extension of White Marsh Boulevard and improvements of some of the interchanges (in total approximately 50% of the capital expenditures), and in Owings Mills in construction of the Northwest Expressway and the Metroline (approximately 80% of total capital expenditures). Private investment were at the time of the plans estimated to be 250 million dollars for White Marsh (including the shopping mall, health center, business centers and residential development), while Owings Mills is supposed to attract 1.4 billion dollars in private investments (including the shopping mall, corporate campus and center (in total 1.9 million square feet) and the Lakeside project).

5.4 Problems in the Suburban Area

The differences in characteristics create different problems in the older and newer suburban areas. However, problems at the local level may vary with specific local characteristics. An example is Glen Burnie, where the existence of a large area with old summer houses, currently in use for permanent living, created a demand for renovation, which was among the main concerns of the government, and was addressed in its rehabilitation policy.

Until now, land has, most of the time, been readily available in the Baltimore region. The capacity of the transportation system has been sufficient to support the ongoing processes, and the suburbs have had the power to financially support the entropy that resulted from the increasing distance between the location of employment and population.

As early as the 1960's problems began to arise and became worse during the 1970's. At the end of the 1970's and in the 1980's, the speed of deconcentration and especially of the employment function aggravated the situation in the region. Furthermore, the amount of available land is getting limited (not available or restricted through zoning policy), the pressure on the transport system is growing, and the financial position of the local governments is weakening (as a result of many factors, among them the increasing scale of the process and its composition, and the growing costs of the development).

Most of the suburbs, in particular the older ones, are experiencing city-like problems such as homelessness, crime, substandard housing, decaying commercial strips and increasing demands for public services. In the newer suburbs the suburban office boom, for example, creates traffic congestion, a major concern among suburban residents and firms. Public transport, if ever available, was efficient as long as people worked downtown and lived in the
suburbs. The problems have stimulated land-use in higher densities, infill and redevelopment projects, but mean a further threat to a "suburban-style" environment. Compared to other mature metropolitan regions, however, the situation in the Baltimore region is favorable. Most other mature regions face severe losses of their suburban population and employment.

Inner Ring Suburbs

One of the problems in the older suburbs is congestion. These suburbs were originally located along major transportation routes, which provided the base for much of the retail activity. As a result of the increasing number of activities, accessibility now is limited and parking space is insufficient, which is of concern to all the actors in the area. The built-up environment in general is made up of older buildings, which are deteriorating. This weakens the economic function, which provides much of the base for the previously discussed focal-point function, which in turn is weakening. These older suburbs also face severe competition with the newer and larger developments, such as the super regional malls.

In the 1970's the town center of Glen Burnie lost much of its retail function as a result of the competition with retail developments just outside Glen Burnie (Anne Arundel 1980). The lack of basic services in the town center, further aggravated by the growing number of elderly people, is currently a target of the government's rehabilitation policy. Many of the other inner ring suburbs are supported by rehabilitation programs (see below), which creates its own problems. Among these are the lack of funds and the unwillingness of developers to sell their property at market value, for reasons of speculation.

The buildings in general are small and space is not readily available for expansion, which makes them inefficient. Rehabilitation or redevelopment is expensive, as well as difficult due to the large number of small owners. The development pressure, though, is heavy, and concentrated in the outer edge of the existing built-up environment, where space is still available. This pressure is mainly due to, on the one side, restrictions on growth in the more rural parts of the suburban area and, on the other hand, the existence of a large market-potential in the inner-ring suburbs. This further stresses the already existing problems (congestion, parking and competition).

The residents fear a further loss of the suburban character of their suburb as a result of ongoing development activities, and oppose most of the proposed developments (anti-growth sentiment). This also creates a dilemma, because new developments are necessary on the one hand, in order to retain the economic vitality of the suburb and, on the other hand, to create housing opportunities for new groups of residents. The children of the residents now have to leave the suburb in order to find a place to live. In the case of Pikesville, the trend is noticeable that young households who first moved to, for example, Columbia, in order to get their own house, now return because of the possibilities offered in Owings Mills.

Local government is facing problems such as the rising costs of providing the necessary services due to an increase in demand and a change in kind of services. They are dealing with an increasing share of minority groups (elderly, low-income, blacks). The required additional services mean a further pressure on the tax-base. The solution is to increase either taxes or the
In the context of the severe competition with the new developments and the strong opposition by the residents, the solutions differ for the different suburbs. In Dundalk, for example, the changing age composition has resulted in re-use of vacant schools as community centers for the elderly. Dundalk has, however, not much space for new development, while in the cases of Pikesville and Glen Burnie the developers were able to construct condominiums for the elderly.

Outer Ring Suburbs

The suburbs in the newer part of the suburban area face different problems than the older suburbs. Ten years ago this area was largely rural. The new developments resulted in an outmovement of population in search of housing in a rural setting. The local government, which has to provide most of the new services (transportation, sewer, school, library), has limited funds and is also concerned about the quality of the environment. The rate of development itself also creates problems for the county governments, such as understaffing and high turnover, and the government lacks the legal power to efficiently guide the developments. On the other hand, the developers experience problems with the lack of strength of government to guide development, but also with the zoning regulations (for example, not enough land zoned for light manufacturing).

The newer suburbs are highly automobile oriented and lack a suburban character, as well as a towncenter, and thus a focal point of orientation. With regard to the problems with a towncenter, Columbia may be seen as an exception. Its towncenter is momentarily not much more than a gathering of buildings. Columbia is, however, working on the implementation of a plan to construct such a center. Transportation related problems (transit and para-transit, circulation within the suburb, pedestrian movement) are among the main concerns of every actor. The firms are largely concerned about access to their labor force (difficulties with the recruitment of service personnel).

Mismatch

One of the general and structural problems in the metropolitan areas in the United States is the mismatch between the location of population and employment. This mismatch has become particularly obvious with the ongoing developments after 1980. The Baltimore region is no exception, but compared to other regions in the United States, however, the mismatch causes less problems so far. California is always mentioned to be the most extreme example of the mismatch, resulting in long rush hours and severe transportation problems.

An indication for the mismatch is the resulting pattern of commuting. This pattern has changed significantly due to the redistribution of both labor force and employment (table 5.3). Most of the suburban counties have seen a higher absolute increase in population than in employment in the period 1970-1985. The employment function, however, tends to locate further out and experienced an increase in rate of deconcentration in the period after 1980.
Table 5.3 Changes in employment, labor-force and population, and the employment base, 1970-1985

<table>
<thead>
<tr>
<th></th>
<th>Change 1970-1985 (%)</th>
<th></th>
<th>Empl. Base *</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baltimore City</td>
<td>-8.4</td>
<td>-8.4</td>
<td>-16.1</td>
</tr>
<tr>
<td>Baltimore County</td>
<td>33.1</td>
<td>48.6</td>
<td>7.1</td>
</tr>
<tr>
<td>Anne Arundel County</td>
<td>67.5</td>
<td>33.0</td>
<td>33.2</td>
</tr>
<tr>
<td>Carroll County</td>
<td>102.4</td>
<td>32.9</td>
<td>56.7</td>
</tr>
<tr>
<td>Harford County</td>
<td>70.1</td>
<td>8.5</td>
<td>35.5</td>
</tr>
<tr>
<td>Howard County</td>
<td>221.7</td>
<td>152.4</td>
<td>126.3</td>
</tr>
</tbody>
</table>

Source: U.S. Census 1970, Regional Planing Council, Maryland 1986

* total number of jobs divided by total labor force

The developments in commuter patterns in the region between 1960 and 1980 show the changing orientation very clearly (Table 5.4). The suburban counties have enormously increased their share of the daily commuting trips. The share of trips from suburb to suburb in the total trips made, increased from 30% in 1960 to not less than 49% in 1980. Among the suburb to suburb trips the commuting between rather than within the political jurisdictions in the Baltimore region has increased (RPC 1985). The percentage of commuters employed within their jurisdiction of residence declined from 74% in 1960 to 57% in 1980.

With the exception of Baltimore city and Baltimore County, all the counties in the suburban area have experienced a higher absolute increase in population than in employment in the period 1970-1985. The employment base (number of jobs per member of the labor-force) is higher in the older suburban counties than in the newer suburban counties (with the exception of Howard County), and only Baltimore County experienced an increase in this ratio for the period 1970 and 1985. Baltimore city has a stable ratio due to the simultaneous decline in labor-force and employment.

The share of trips made within Baltimore city decreased from 46% to 23%, while the trips originating in the counties and directed towards the central city increased. The jobs in Baltimore city are filled for only 52% by residents; this percentage was 75% in 1960. The majority of the Baltimore city residents still work in the city, although commuting, especially to Baltimore County, has grown in importance. After 1970 both the number of city to suburb trips and share of total trips decreased.

Table 5.4 Commuter patterns in the Baltimore region, 1960-1980

<table>
<thead>
<tr>
<th></th>
<th>1960</th>
<th>1970</th>
<th>1980</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>abs.</td>
<td>%</td>
<td>abs.</td>
</tr>
<tr>
<td>City - City</td>
<td>286,650</td>
<td>46</td>
<td>231,200</td>
</tr>
<tr>
<td>City - Suburb</td>
<td>42,900</td>
<td>7</td>
<td>78,400</td>
</tr>
<tr>
<td>Suburb - City</td>
<td>104,900</td>
<td>17</td>
<td>136,300</td>
</tr>
<tr>
<td>Suburb - Suburb</td>
<td>189,600</td>
<td>30</td>
<td>312,400</td>
</tr>
<tr>
<td>Total</td>
<td>624,050</td>
<td>100</td>
<td>758,300</td>
</tr>
</tbody>
</table>

Source: Regional Planning Council, 1985
The changes in pattern of commuting indicate a trend towards chaos; with changes in direction, commuting distance and an increase in inter-metropolitan commuting. This all results in a higher entropy in the metropolitan region. Moreover, the use of the automobile for commuting has increased, from 63% to 82% of all the trips made between 1960 and 1980, while the use of public transport declined from almost 18% to almost 10% in the same period. The number of cars per household in the region itself has also increased enormously, from 0.92 in 1960 to 1.47 in 1980 (FWC 1985). This adds up to problems with the accessibility in the region, and especially in the suburban counties. The problems are most severe in the outer ring of suburbs, further away from the largest population concentration. However, the mismatch creates problems for the total metropolitan area and has several dimensions, all related to accessibility.

Transportation

The system of transportation functions as the link between the residential and employment functions. Problems with the transportation system are related to an increase of traffic intensity, change in direction, as well as more qualitative aspects of the system. Those can be approached on the level of the metropolitan area and on the level of the individual suburbs, since they experience different problems.

Traffic jams are now a familiar scene on both levels: the beltway gets more crowded every year and inter-suburb connections are insufficient to handle the increasing numbers of cars every day. The outward movement requires new roads into formerly undeveloped areas, and this puts serious strains on the financial positions of the county governments, but is also made difficult by the unwillingness of the current property owners to sell their land.

The problems are not yet obvious everywhere in the metropolitan area. The current situation in Towson, for example, does not create serious parking or congestion problems (i.e., they are concentrated at a few intersections) (Towson 1986). The growth projections for Towson, however, show a strong increase in traffic intensity. This may also be noticed in other areas, for example, Hunt Valley. The total number of trips directed to this high growth area in 1980 was estimated at more than 75,000 a day. Projections for 1990, however, reveal an increase to a daily number of trips of up to 161,000.

The increasing pressure on the existing road system requires improvements. One of the problems with these improvements is to forecast where they are needed the most. An example of a rapidly changing situation is found in the case of Hunt Valley. A recent survey by the RPC conducted among employers in Hunt Valley, showed some changes in commuter-pattern between 1980 and 1986. The increase in firms recruiting their labor-force from south of Baltimore (BWI-area), and the movement of the labor force to places north of Hunt Valley (even to Pennsylvania), may lead to problems with the transportation system at the north side of Hunt Valley, while the State Department of Transportation has worked out a program for road improvements entirely based on the increase of traffic on the south side.

With the growth of the suburbs themselves, the problems also begin to arise on that level. Within the suburb the locations of employment and services (restaurants, shopping malls, but also bus and train stations) are either not within walking distance of each other, or are completely automobile oriented.
This leads to an additional peak hour in traffic around noon in the suburbs. The traffic situation in Tysons Corner, in suburban Washington, has already led to the implementation of a transportation plan for intra-suburb circulation.

A series of recent surveys among employers and employees conducted by the Regional Planning Council in Hunt Valley, Towson, BWI Airport and Columbia (largely unpublished), revealed that among the main concerns of the firms were: rush hour traffic congestion, inadequate public transportation, and poor circulation within the area. Insufficient parking and poor highway access were among the topics of minor importance. The complaints of the residents (interviewed were condo-associations, homeowners, development corporations, community associations and so on) were directed to three general points: inadequate and undependable bus service, pedestrian movement in the core area, and core-area parking. A fourth topic was the spillover of commuter parking into residential neighborhoods.

**Public transportation**

Public transportation, if ever available, was efficient as long as the dominant pattern of commuting was along the radial lines from the central city to the suburb. Transit appears to play a minimal role in the commuting patterns of employees, even when bus service is conveniently available, for example in the case of Citicorp on York Road in Towson (Towson 1985). With the exception of Baltimore city, the use of the public transport system has decreased in every county. The number of rail line connection in the Baltimore region is minimal (one line to Pikesville and Owings Mills, along Reisterstown Road) and entirely directed to the connection of central city and the suburbs. The recently proposed light-rail line from Hunt Valley to Glen Burnie will be the second connection in the region, but since it is another radial connection, its effectiveness remains to be seen. It will, however, improve access to the suburbs for the low-income groups residing in the central city.

In Howard County almost no public transportation is available. This problem concerns both the employer and the employee. Employers, very much concerned about access to their labor force, either provide transportation themselves (shuttle services), which is costly, or give wage incentives (for example, McDonalds, which in this kind of location pays more per hour, and promotion is achieved rapidly). Wage incentives have not proved to be very successful.

When Owings Mills is taken as an example, the connections within the suburb are non-existent. This metro rail line favors, in fact, only the suburb to city commuters. Travelling from Owings Mills in the direction of Baltimore city causes no problems, since the parking lot is directly adjacent to the station and offers plenty of room to park and provides easy access to the train. Travelling in the other direction, however, causes serious problems because any connection between the metro-stop and other places in Owings Mills is non-existent. The same holds true for many bus and train stations elsewhere in the region.

Of the existing employment vacancies (212) at the firms located along Route 1, approximately 40% were said to be caused by lack of public transportation. This percentage was even higher among the firms in Columbia: almost 50% of the total vacancies (754). In both areas, respectively 53% (totalling 3239 employees) and 40% (6060 employees) of the firms expressed the need for
commuter bus service and respectively 20% and 13% indicated to make use of it. However, it has been mentioned earlier, even when public transport is conveniently available, only a small percentage of the employees make use of it. It is, moreover, astonishing to notice that not many firms promote any other kinds of solutions.

The figures are almost the same in Columbia and at BWI: a minority of the firms, for example, promote ride sharing (1-3%), provide ride matching bulletin boards (3-10%) or provide reserved car pool or van pool parking spaces (less than 3%). In Towson, none of the firms interviewed made any special efforts to promote ride sharing among their employees, although a certain amount of car pooling takes place at many facilities. Other solutions proposed and undertaken for these problems are manifold. They range from variable work schedules, reserved parking spaces for van and car pools and the encouragement of employee use of public transportation, to cooperation with other employers in the area to initiate commuter assistance programs and financial support of programs to assist commuters. Since parking space is expensive, some employers even offer their employees financial incentives to not use their car. More common and expensive, though, is to organize own shuttle buses to get people to work.

Transportation Management

The RPC tries to get the employees to work together, which would also benefit them financially. Baltimore is one of the regions in the United States that have organized so-called TMA's (Transport Management Associations, well known examples of which exist, for example, in Los Angeles, San Francisco, and New Jersey). This is an institutional arrangement, or corporate framework, to facilitate the operation of private transportation management programs. These are voluntary organizations formed by corporate employers, developers, and private institutions to provide transportation services in suburban centers where public transportation is not available or not conveniently accessible. They generate their own revenues through voluntary assessments, membership dues and service fees, but also make use of federal, state and county funds. With these funds, various transportation activities that respond specifically to both the short and long run needs of the members are supported. An important aspect is the comprehensive plan for development, which on its own partly solves the problems. TMA's in the Baltimore region exist in Towson and at BWI Airport; Hunt Valley is in the process of organizing one.

The TMA provides solutions the individual firm or local government would not have been able to achieve. It is a functional organization that is not bothered by local government borders, and both the public and private sector can participate. An organization like a TMA could be the model for a metropolitan-wide government structure, with more power than the RPC and featuring private involvement.

Housing

A factor strongly linked to the mismatch of employment and population is the access of the workforce to the labor market. The diversification of the employment structure in the suburbs (hotels, restaurants), creates an increasing demand for a low-skilled workforce. The increasing distance between employment location and central city make them almost inaccessible for the
low-skilled groups of the labor force, that is over represented in Baltimore City. The costs of transportation, and/or the length of the trip (if transportation is available) make it unaffordable for these people to commute.

Moreover, the employees have little or no access to the housing market in the newer areas, since the housing prices are unaffordable. Housing prices in general have exploded in the last decade, but especially in the newer parts of the suburban area, and are among the concerns of almost every metropolitan resident. Even in the central city, the prices have gone up (Table 5.5). Furthermore, the number of rental houses in these areas is much lower than in the central city.

Average prices of owner occupied houses north of Hunt Valley in 1987 are as high as 137,000 dollars (election district 8, around Hunt Valley) or 140,000 dollars towards Harford County (election district 10) (RPC, statistics on residential property sales). Prices in the inner ring, nearer to Baltimore city, are in general lower, but the housing market in this part of the suburban area is often very tight, largely due to the high demand among people already living in the area or employees moving with their firm. Housing prices on the south side of the region are strongly influenced by the spillover of suburban Washington residents, which results in a strong demand for houses with prices above the regional average. There is but one conclusion: lower income groups are isolated as a result of these developments.

Table 5.5 Mean prices of houses sold in the region, 1982-1987 (x 1000 dollars)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Anne Arundel</td>
<td>81.7</td>
<td>85.0</td>
<td>90.8</td>
<td>82.8</td>
<td>89.5</td>
</tr>
<tr>
<td>Baltimore City</td>
<td>32.5</td>
<td>38.0</td>
<td>39.8</td>
<td>43.3</td>
<td>47.7</td>
</tr>
<tr>
<td>Baltimore County</td>
<td>70.4</td>
<td>74.6</td>
<td>77.8</td>
<td>74.6</td>
<td>79.2</td>
</tr>
<tr>
<td>Carroll County</td>
<td>68.0</td>
<td>69.3</td>
<td>71.2</td>
<td>75.6</td>
<td>84.4</td>
</tr>
<tr>
<td>Harford County</td>
<td>66.2</td>
<td>70.8</td>
<td>71.8</td>
<td>75.1</td>
<td>85.1</td>
</tr>
<tr>
<td>Howard County</td>
<td>85.8</td>
<td>90.6</td>
<td>95.9</td>
<td>93.2</td>
<td>106.9</td>
</tr>
<tr>
<td>Maryland</td>
<td>72.8</td>
<td>78.5</td>
<td>81.9</td>
<td>90.0</td>
<td>85.2</td>
</tr>
</tbody>
</table>

Source: RPC, Statistics of Residential Property Sales
* = median value (available only)

Concluding remarks

The mismatch between employment and population confronts the Baltimore region, as well as metropolitan America in general, with a huge and structural problem. Accessibility in general has always been among the most important locational variables for the firms. The process of outward movement, partly due to the search for locations with high accessibility, will be restricted in the (near) future by the accessibility to the labor-force. This will, on average, further increase the trend of concentration in the existing built-up area, and probably offer opportunities for the older suburbs, and maybe even for the central city.

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Most of the solutions to the problem are very short term (widening of roads) or only partial (use of public transportation, higher vehicle occupancy). The real solution must be sought in bringing the employment and population closer to each other. The Baltimore region in general has undertaken some steps in that direction. Examples are the designated growth areas Owings Mills and White Marsh, which combine the residential and employment function. Other counties have allowed building in higher densities, thus creating an environment to produce more affordable housing. This potential must be used, although the experiences in Columbia indicate that despite the intention, affordable housing is still rarely available. Certain population groups, just as certain areas, will turn out to be the losers of the changes taking place in the metropolitan region.

The "growth" problems in the Baltimore region have led to a change in government's attitude. Together with factors such as concern about financial and environmental issues, these are the reason for local government to interfere with the ongoing developments. The high degree of government interference sets the Baltimore region apart from most other metropolitan regions in the United States, although within the Baltimore region considerable differences in restrictiveness exist between the counties. These differences result in differences in attractiveness for investors and contribute to competition among the counties.

Scarcity of investment opportunities, changes in investment behavior and concern about the future of their investments have lead to a change in attitude on the side of the developers. The trend is that they increasingly demand government interference to secure their investments. In the end, this may result in comparative advantages for the counties that implement restrictive policies.
6. DIFFERENTIAL GROWTH AND SPECIALIZATION

Within the Baltimore suburban area a differential pattern of growth has occurred. A closer look at the developments results in the delimitation of growth areas or corridors in the first part of this chapter. The corridors each have their own pattern of development and are, in fact, the physical embodiment of the processes of specialization and differential growth. These developments take place through new developments and through processes of infilling and redevelopment.

The developments in a number of suburbs will be considered in more detail. These suburbs are selected by their pattern of growth, location relative to Baltimore city and size and employment structure. The selection is made on base of statistical information and interviews with specialists in planning in the region. The boundaries of the suburbs (Regional Planning Districts-RPD's) are given in Appendix 1. Most of the selected suburbs are located in Baltimore County. Among the group of selected suburbs are suburbs characterized by a mature stage of development (inner ring: Dundalk, Glen Burnie, Catonsville and Pikesville), and newly developing suburbs that represent the latest stage in suburban development in the region (outer ring: Owings Mills, White Marsh). In the second part of this chapter attention is paid to specific local factors that influence their differential development.

6.1 Growth Corridors

Roughly five growth corridors and two growth areas (Bel Air and Columbia) can be pointed at in the Baltimore region (figure 6.1). The growth corridors are almost all located in counties which have implemented policies of "contained" growth, in which the growth is allowed only to take place in designated areas (Baltimore, Anne Arundel and Howard).

North-corridor

The first corridor to be discussed is the north corridor (or I-83 corridor), along the Interstate 83 and York Road. These are the main roads along which most of the developments in this direction take place. This corridor is in fact comparable to Bearwald's description of a Suburban Freeway Corridor. The almost continuous pattern of development makes it difficult to draw a straight line between the different suburbs in the corridor (for example, Hunt Valley and, directly to its south, Cockeysville). Developments stretch out north into the Loveton area, but the accessibility has caused some firms to relocate to Hunt Valley. Developments further north are being stopped because of the existence of a drinking water reservoir, the unwillingness of the county government to support new developments in this direction (Hunt Valley has long been one of the most neglected areas) and, the existence of some large horse-farms unwilling to participate in the new developments. As far as public transportation is concerned, buses are running, but no other mass transit systems.

The north corridor holds a large part of the industrial and office development in Baltimore County, and although mature, development is continuing. Within the north corridor, Towson is closest to Baltimore city, just within the boundaries set by the beltway, and is the largest subcenter in the region.
It experiences ongoing development and is a good example of a suburb with much infilling and redevelopment activity. Most of the infilling and redevelopment is in office development (figure 6.2).

Figure 6.1 Growth Corridors in the Baltimore Region
The corridor is, within Baltimore County, one of the main (and earliest) competitors of the central city. The developments in the corridors south of Baltimore city (Howard and Anne Arundel County), the highest growth areas within the region, however, challenge the developments in this corridor. Direct competition also exists between the north-corridor and the newly emerging north-west and north-east corridors, which in general attract the bulk of investments and a large part of the government attention in the county.

Towson

Towson plays an important role in this corridor and may be characterized as a 'rehabilitated suburban business center'. Its continuous development has lead to diversification and is strongly stimulated by its location close to the beltway, but also a result of the government's rehabilitation policy. As the county seat, it is the location of many government administrative offices and services, but it also features hospital complexes, two major college campuses, a regional shopping mall and, for example, the world headquarters of Black and Decker, one of the big employers in the Baltimore region. This all adds up to a workforce of about 65,000 persons and a population of 55,000.

New developments in Towson take place either to the north, close to the beltway (figure 6.2), at the edge of the existing built-up area or as infilling or redevelopment projects. Redevelopment projects are built in higher density and mostly in the office-related sector, but also in the light manufacturing, warehousing and distribution sectors (e.g. industrial parks, north of Towson in the Hunt-Valley area).

Hunt Valley

North of Towson, the suburban developments stretch out into Hunt Valley. It is the most outstanding example of rapid development in the Baltimore region. Hunt Valley may be characterized as a 'suburban business center'. In contrast to the two growth areas, the suburb is unplanned and the government has not had much to do with the developments. With over two million square feet in office space (the I-83 corridor north of Towson having more than 40% of the county's office space) and about 20% of the industrial space in Baltimore County, it has become a major business complex in the region. Additional office and retail construction is expected to continue.

McCormick started out in Hunt Valley in the 1960's, in search of new space for expansion which was not available in the central city. For 15 years it was the only developer in the area, until, in the early-1970's, firms such as C & P Telephone moved in. Now it is perceived as a mature development area, with not much room for expansion and in general high prices. Hunt Valley is the prototype of the suburbs with problems as discussed earlier.

Single story industrial buildings are, under pressure of market forces, being, or planned to be, replaced by mid-rise (three to six story) office buildings, indicating a shift away from activities in distribution, warehousing and light-industry and causing an upgrading to a higher order suburban center (upgrading). The regional mall, although not among the most successful in the county, and the establishment of some class A hotels diversify the economic structure of the suburb. Hunt Valley attracts more than 25,000
Despite the fast and intensive developments over the last decade, Hunt Valley has become an already mature hot-spot for development in the Baltimore region. The advantage is an already built-up area, but it also implies scarcity of new and developable land. The corridor is considered "full," since not much space for expansion is available. This weakens the competitive position of Hunt Valley within the county and the region.

Source: Black's Office Leasing Guide
Hunt Valley's position is at the moment challenged primarily by the newer developments in White Marsh and Owings Mills. An aspect to be mentioned is the rising price of land and rent-levels. Firms are relocating to, for example, White Marsh because of the prices. White Marsh has at the same time the advantage that it has newer buildings and more space. However, developers will be attracted to Hunt Valley in the near future and thus cause processes of redevelopment to occur. Further growth will force further redevelopment of low density industrial properties into high density uses. This is costly and developers will go and look elsewhere first before making their investment decisions. White Marsh (north-east corridor) and Owings Mills (north-west corridor) are potential candidates.

North-east corridor

The north-east corridor stretches out into White Marsh/Perry Hall, along Bel Air Road, Route I-95 and Route 40 (in the direction of Harford County and, further out, Philadelphia). The area is one of the two designated growth areas in the Baltimore region. The developments in White Marsh, at the outer edge of the corridor, are very recent, although a small residential community already existed (figure 6.3).

Important factors resulting in a lesser degree of suburbanization in the east and north-east direction are the existence of low ground and swamps, which made cultivation in that direction more difficult, and the existence of mining and industrial activity, which made the area less attractive for the development of housing projects. Furthermore, the area has a strong perceived industrial character. The corridor has an over representation of industrial and warehousing activity, and has only recently experienced office location, stimulated by the opening of the shopping mall.

White Marsh

White Marsh is a designated growth area, to the north-east in between the old U.S. 1 and U.S. 40 highways. The area of roughly 12,000 acres makes up a large part of the north-eastern growth corridor. In contrast to Owings Mills, a small residential/commercial base already existed in White Marsh at the time the developments started. This area was formerly less attractive to the developers because the roads had to be provided and it also bordered the edge of the coastal planning. The image of White Marsh was until recently not very favorable as a result of the existence of warehousing, distribution and light industry. The area has a perceived industrial character (or image), which makes it a less appealing environment. The existing office space shows high vacancy rates (40%).
Furthermore, the residential area provides for lower to middle income households and has almost no executive housing, which means that almost no corporate decision makers live in the area. The developers are very sensitive to this image and in contrast to government officials, they expect a much smaller future growth. At the moment 7 national builders have planned projects in the area. The transport situation is another important aspect for the developers: despite good access to the highway system, no mass transit is available. These characteristics are believed to lead to investment decisions directed towards other parts of the county.
Recent trends, however, give evidence of a change in the image of White Marsh. The success of the mall has already led to considerable increases in land-prices. Class A office space is planned; there is an increase in R & D activities; and recently the Swedish firm IKEA announced it would open a large store in White Marsh (main reason: the location on I-95). An upgrading of the image of the area is thus taking place. In 1987 approximately 72,000 square feet of industrial space was converted primarily to office use. White Marsh has long been one of the few investment opportunities in Baltimore County, besides the I-83 corridor and Towson. Recently the American Bank Corporation announced it would build a twin building complex for its headquarters. It was formerly separately located in Hunt Valley and Towson. But the demand for office space comes also from the eastern parts of the county, due to the antiquated nature and age of the existing built-up area there.

North-west corridor

The north-west corridor is the growth area of Pikesville (inner ring) and Owings Mills, another recently developing and second designated growth area. The main highway arterial of the corridor is Reisterstown Road. The developments in this corridor stretch out as far as Reisterstown, close to Carroll County.

An advantage to this corridor is the existence of a metro-rail line connection with Baltimore city. After its construction, however, the Maryland Department of Transportation noticed that it had almost no effect on the traffic intensity on the roads. The traffic congestion in the corridor became severe at the end of the seventies and this was, together with the planned developments in the designated growth area Owings Mills, the reason to construct I-795, a bypass of the congested Reisterstown Road, which was completed recently.

Pikesville

Pikesville originated as a "streetcar suburb," and within the Baltimore region it was the location of one of the first "shopping centers". Pikesville is among the highest income areas in the region. Especially the retailers look anxiously at the competitive developments in Owings Mills. Strip development occurs almost contiguously from Baltimore city to Pikesville. For a long time Pikesville functioned as a small regional retail center, which was possible because of the non-existence of a large shopping center elsewhere in the area. Pikesville is designated as a revitalization area. New developments take place on vacant land near the beltway. The amount of land available is, however, limited, strong economic influences from adjacent areas is absent, the population has a strong anti-growth attitude and many small developers are all involved in the developments; factors that contribute to differences with other revitalization areas such as Glen Burnie.

Owings Mills

Many of the early developments in Owings Mills took place at the south side (development pressure on the north side of Pikesville), which is statistically part of Pikesville. Carroll County, with its lower taxes, experiences spillover effects just across the border. Owings Mills lags several years behind
White Marsh and does not have the population base White Marsh had. Owings Mills has a strong potential of competitive power within the region.

Owings Mills is one of the two designated growth areas in Baltimore County. It includes largely undeveloped lands (more than 13,000 acres) just north of the beltway. A concentration of economic activities and housing already existed south of the planned developments and in the direction of Pikesville. A super-regional shopping mall has recently been built and the office construction taking place at the moment is the take off signal for Owings Mills, some years later than White Marsh.

Owings Mills provides a good example of the trend, that the phenomenon of the super-regional shopping mall, with four to five department stores and about 150-250 smaller stores, has increasingly become a magnet or leading force for large scale developments (but the same holds true for White Marsh and Hunt Valley). The shopping mall attracts a lot of attention and performs a role as a focal point of orientation. Hotels and an inn are planned and the bulk of the office space is planned to be constructed in the period 1990-1995. The plans anticipate a total of 5 million square feet of office space to be built before the year 2000.

The start of the developments in Owings Mills were delayed because of the delays in the planned improvement of the transportation situation. The construction of the expressway (I-795) proved to be a crucial element in the plans for the developer. It provides at the same time evidence that a large scale project like Owings Mills can only be undertaken by a large developer: a smaller developer would not have been able to bear the financial burdens of the two year delay. It indicates also that, while these large-scale projects are huge investment opportunities, they bear huge risks. The planned investments are carried out by only a few developers, who are very dependent upon each other and must have enough experience.

Owings Mills got a disproportionate amount of attention from the press and from leasing agents. It has executive housing, excellent access, including the metro-rail line connection with Baltimore city, and architectural design and amenities superior to other parts of the county. The local government made commitments to provide the infrastructure for future development and the residential market is emerging. These are all factors that will further enhance the development of Owings Mills as a suburban business district. Unfortunately for the other suburbs, this also enhances the competition within the suburban area. Owings Mills is located closer to Washington than is White Marsh.

A last aspect to be mentioned is the housing market of Owings Mills. The opinion among developers about future development is in contrast to the objectives of the county's policy (affordable housing). The high prices currently achieved in Pikesville reflect where the Owings Mills market will be in the near future. Furthermore, it is said that one of the larger developers of housing projects in the area has serious financial problems. Together this could mean that the efforts by the county government to construct affordable housing will not be achieved.

Housing market

The increase in population in Pikesville, as noticed earlier, is partly due to housing projects in Owings Mills, that are part of the statistically defined
Regional Planning District of Pikesville, just outside the beltway (figure 6.4). The housing market in the north-west corridor consists in terms of quality and price levels of four different submarkets: Pikesville, Owings Mills, Randallstown and Reisterstown (Legg Mason Research). This housing market is discussed in some more depth since it is a good example of differential housing-market accessibility within the region.

Owings Mills is currently a sparsely developed submarket, with the lowest prices ($73,000) in the corridor. Pikesville and Randallstown offer houses of high quality and with high prices. The housing market in the older suburbs is in general tight, and the north-west corridor is a good example of that. The number of vacancies is low, due to the strong demand as a result of a combination of the growth of employment, the reasonable prices of large parts of the stock (despite their quality) and in general high demand for rental units. A large share of the starters in these areas are thus forced to move out.

Columbia (with relatively high vacancy rates) has long been one of the few alternatives. The same holds true for households moving out from the Baltimore city. The housing market at the south side is both expensive and, at the same time, under pressure from households moving in from suburban Washington, which further restricts the possibilities. The new demand as a result of the recent activities in housing in Owings Mills suggest that a part of the earlier out-moving households (to, for example, Columbia) are returning. A survey of 1326 visitors of new housing projects in Owings Mills in 1987 showed that more than 56% of the visitors came from outside the Owings Mills area. Almost 8% of the visitors came from northern states (Pennsylvania, New York, New Jersey) (Rouse Company).

Figure 6.4 Recent Housing and Office Projects in the North-west Corridor

![Map of the North-west Corridor showing housing and office projects](image-url)
South-east corridor

To the south-east of Baltimore city, in Anne Arundel County, developments pass Brooklyn Heights, just outside the central city borderline (30,000 residents), and Glen Burnie, in the direction of Annapolis, the state capital. The developments are largely concentrated along Ritchie Highway (Route 2: a major 'retail corridor'), but also along Route 3. The accessibility in this part of the suburban area was recently (1987) improved with the construction of Route 97, which has increased the accessibility outside the beltway enormously, but also with Howard County (connection with the U.S. 50).

Until 1970 the developments within the county were largely concentrated in the northern part: the Glen Burnie area. A major incentive in the development of Glen Burnie was the location of Westinghouse in the early 1950's (defense industry) and the existence of the National Security Agency in Fort Meade. Among the firms in the county are some of the largest in the region, although most of the firms are small and can be seen as spill-over developments of the larger, government-related activities. Anne Arundel County experienced a slow down in development in the late seventies, as a result of high interest rates, the lack of sufficient sewer capacity and the impacts of the transformation from a manufacturing to a service-oriented society.

After 1980, the speed of development increased as a result of development in the Baltimore/ Washington Corridor (the office boom and pressure from suburban Washington), which was supported by generous rezoning activities of the county government.

Glen Burnie

Glen Burnie started as an automobile oriented suburb, with a strong retail function for the area south of Baltimore city. The shopping mall just south of Glen Burnie was one of the first large malls in the region. In the seventies it experienced some redevelopment and, to a lesser degree, infilling. New residential developments took largely place in the direction of the waterfront and further away from Baltimore city along Ritchie Highway. Within the county the major residential developments were in and around Glen Burnie and around Annapolis (Severna Park) until 1970. In the 1970's the residential function developed at the waterside, stimulated by the recreational value there, and on the west side (Crofton, Seven Oaks and Rochard), adjacent to suburban Washington and Howard County. Housing is expensive and attracts a lot of residents out of suburban Washington.

The county government adapted a policy based on the principle of contained growth, thereby trying to preserve the agricultural function in the southern parts of the county from the heavy growth pressure, largely as a result of the overspill from suburban Washington. This pressure is enhanced as a result of the favorable location relative to Baltimore city, Washington D.C. and the state capital Annapolis.

The employment function is continuously expanding and gravitates, besides the commercial developments to the south, towards the existing concentration of businesses, located in and around (mainly north-side) the BWI-Airport (a major pull factor). Glen Burnie had, as a result of its location close to the harbor, an employment structure with emphasis on manufacturing, comparable with Dundalk. Developments in the 1970's have led to a diversification. The
firms are often in the defense industry or high technology (strongly government related). R & D, light manufacturing, distribution and warehousing (mostly serving the mid-Atlantic market) are found in the industrial and business parks, located conveniently to the major transport routes (I-95), the airport and the Baltimore harbor. This area contains the largest concentration of industrial/business parks in the region. High-tech, R & D and foreign firms are over represented. The county government is at the moment in the process of rezoning large tracts of land around the airport from a residential function into industrial/commercial functions. At the same time, it is rezoning the area near the harbor from industrial into residential.

Route 1

The developments around Glen Burnie are closely related to, and have to be considered part of, the developments in adjacent Howard County (Route 1 Corridor). Both counties rely on basically the same kind of firms. The employment function in Howard County tends to gravitate in the east towards Anne Arundel County and the airport. Route 1 is rapidly growing, has among the lowest vacancy rates in the region and is, together with the developments in Columbia, a major competitor to the suburban Washington counties. Route 1 takes up only a small percentage of the total residential function in Howard County, which is mainly concentrated in Columbia (see below).

Southwest corridor

Finally, the fifth corridor is to the southwest, the area of Catonsville (Baltimore County) and Ellicott City (Howard County), along routes 1-70, 40 and 29. Further south, the developments point in the direction of Columbia, but are divided from each other by a substantial acreage of farmland. Ellicott City is the county seat of Howard County. The area is adjacent to the developments at the west side of Baltimore city: Woodlawn is an example of new economic activity that later resulted in ongoing development. It is one of the suburbs that has continuously attracted substantial employment. A major and early incentive for development was the location of the United States Social Security Administration (with more than 13000 employees) to its headquarters office complex. It provided a sound base of government employment that stimulated further development in the area in later years.

Catonsville started as a bedroom (streetcar) community and has a development pattern similar to Pikesville. Both Catonsville and Ellicott City have a strong sense of community. The scarcity of developable land, restricted by zoning policy, have long been the reason for insufficient housing construction in the area. Rezoning in Howard County, however, made development in that direction possible. Baltimore County now has the intention to designate a third growth area, near Catonsville. This would increase the competitive power of this corridor enormously.

Housing market: south-side

The housing markets in Anne Arundel and Howard Counties both have a strong orientation to Washington. The housing market in Anne Arundel may, with regard to commuting and former residence, be divided into three distinct submarkets (Anne Arundel 1978). The research conducted by Anne Arundel County interviewed
490 residents who in 1977 had recently rented or bought a house, representing 22% of the sales transfers in 1977. The first submarket, in the south and south-west portions of Anne Arundel County, could be characterized as a bedroom community for Washington. More than 70% of the residents worked in the Washington area, mostly in Washington D.C. or in the adjacent Prince George's County. Approximately 50% of the interviewed had formerly lived in the Washington area.

The second submarket, further north of U.S. 50 on both the west and east sides of Anne Arundel County, showed a still high percentage of people working in the Washington area (48-54%), but the further north the larger the share of people who moved from a previous location in Anne Arundel County. The third submarket, greater Glen Burnie, is characterized as a Baltimore market. Almost 40% of the interviewed residents in this submarket worked in Baltimore city, Baltimore County or Howard County, and only 5-10% in the Washington area. In total, however, has Glen Burnie strengthened its function for movers within the Anne Arundel County.

Growth areas

The two growth areas to be discussed finally are Columbia in Howard County, and Bel Air in Harford County (figure 6.5). Both are located at some distance from Baltimore city and have a high share of the development in their respective counties. They are both conveniently located to major transportation routes in the area and perform a distinct regional function. One of the differences between the two is that Bel Air has a long history, while the area of Columbia was not more than agricultural land twenty-five years ago.

Columbia

Columbia is a so-called planned new town. Although Columbia is the only planned suburb in the region, Owings Mills and White Marsh show comparable characteristics. Columbia may be seen as one of the most outstanding examples of, more or less controlled, rapid growth in the Baltimore region. This Suburban Business Center has a diversified employment structure and is already mature in character, but many new developments are still going on. The emphasis in the employment structure is in high-technology, defense related industry, warehousing and research and development; a class A environment. Columbia's location is very favorable to Washington, Baltimore and Annapolis, and considering the population and employment relationships, one might even ask whether Columbia is part of the Baltimore or the Washington region.

Columbia has been almost completely developed and built under the authorization of only one developer (The Rouse Company), a project that started in the early 1960's. The New-Town concept was set up to avoid the problems normally occurring with unplanned developments. A salient detail, moreover, is that the developer has proven that construction of cities can be profitable. It took, however, until last year for the balance to prove positive. The original goal was to provide space for 100,000 residents (in 15 years) in a balanced community, with a job opportunity within the town for every resident and a wide variety of houses in size and prices.

The employment function is very diversified which was one of the goals of the developer, and is separated from the residential function. A concentration
of office parks, industrial parks and village centers exists (with in total 520 industrial and R & D firms in 1987), but also a huge shopping mall. Columbia has more than 5 million square feet of office space and a residential base of more than 60,000 people, of whom 30% also work in Columbia.

The bottom line is that the concept of Columbia has proven to be rather successful. The goals regarding the residential function were to offer substantial possibilities for low-income groups, but this goal is only partly realized. An indication is the average income, which was $45,000 in 1985, far above the region's average. The high prices of housing are one of the main concerns of the residents and the developer. Not surprisingly, the residential vacancy rate in Howard County is among the highest in the suburbs in the Baltimore region.

Bel Air

The second 'growth' area is Bel Air, and compared to Columbia less of a success story. Bel Air is older, with a strong sense of community, and has a regional function (e.g., the shopping mall). A lot of the in-movers in the county are attracted by the low density, the on-average lower prices for housing, and also the amenities (e.g., waterfront) and the good school system. Much of the new residential activity in Harford County is a result of out-movement of residents from the more congested area of Baltimore County. The residential developments take place at the outer edge of the existing built up area in Bel Air, while the town center itself has experienced some upgrading of the retail function. Growth pressure in the past has resulted in conversions from residential into commercial use in the towncenter. The town has in general a low density character, and both the residents and the county intend to preserve this character.

The largest share of the new developments is taking place along routes 40 and I-95, the same routes along which White Marsh and Perry Hall are developing. The developments in Harford County are concentrated near Edgewood and Aberdeen, east of Bel Air. The County recently initiated plans for a "development envelope" (figure 6.5), east of the town and in the direction of Edgewood and Aberdeen, to keep the growth under control and direct it towards a designated area.

Figure 6.5 The Bel Air Growth Area
The impact of industrial decline has been felt strongly in Harford County. Bel Air itself has only one industrial park, but Harford County has experienced outmovement of large manufacturing firms (for example, Bata Shoes, which moved their activities to low income counties) and, as a consequence, a decline in jobs in manufacturing. However, recent trends suggest that space consuming and labor intensive industrial firms are relocating from congested Baltimore County (but also from New York and New Jersey) into Harford County. The price of land is approximately half the price in Baltimore County, unionization is low and the county assists firms financially with programs such as training on the job, which add to the quality of the labor force. The transportation network, with good connections north to Philadelphia and New York, has proved to be an incentive for distribution and warehousing activity, but also creates easy commuter accessibility to both Baltimore and Washington, although only a very small percentage of the labor force commutes to Washington. Moreover, the area has an international orientation, due to the close location to three international ports (Wilmington, Philadelphia and Baltimore) and two international ports. New firms are also attracted by the existence of defense related activities at the Aberdeen Proving Grounds, which provide a base for spin-off developments. Unfortunately, these activities have been reduced since 1970, due to cuts in federal spending.

Differential development, as a result of new activities, redevelopment and infilling, takes place throughout the whole suburban area. As could be seen, many factors contribute to the observed patterns of growth. These factors occur at the metropolitan and county level, but also at the local level. The distinction made earlier between inner- and outer-ring suburbs seems to hold true at a general level, but specific characteristics at the local level are also of importance with regard to the developments.

6.2 Developments in the Selected Suburbs

In contrast to the population decrease in the older suburbs in most other mature metropolitan regions, the developments in most of the older suburbs in the Baltimore region show an increase in population (table 6.1). In the context of general developments such as processes of aging, increase in one-person households and decrease in number of persons per household, one should expect a decrease in population. Dundalk is the only suburb to conform this pattern completely.

<table>
<thead>
<tr>
<th>Table 6.1 Population in the selected suburbs, 1970-2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
</tr>
<tr>
<td>-----------------</td>
</tr>
<tr>
<td>Glen Burnie</td>
</tr>
<tr>
<td>Pikesville</td>
</tr>
<tr>
<td>Catonsville</td>
</tr>
<tr>
<td>Dundalk</td>
</tr>
<tr>
<td>White Marsh</td>
</tr>
<tr>
<td>Owings Mills</td>
</tr>
<tr>
<td>Bel Air</td>
</tr>
<tr>
<td>Columbia</td>
</tr>
</tbody>
</table>

Source: RPC, U.S. Census 1970 and 1980 * estimate/forecast
When a distinction is made between the period before and after 1980, the picture changes. Of the selected suburbs in the older part of the suburban area, Pikesville is the only one to experience an increase in population between 1970 and 1980. Pikesville continues to grow after 1980, but now, again with the exception of Dundalk, the other suburbs are also experiencing a small increase in population. Part of the growth of Owings Mills statistically belongs to Pikesville and this partly explains the difference. However, other factors are of importance.

A distinction can be made with regard to the growth pattern of the selected suburbs, as indicated by the time of construction of the housing stock (table 6.2). In Dundalk and Catonsville a large part of the housing stock was built before 1960. Glen Burnie and Pikesville show a somewhat later development, which is caused by substantial infilling.

In the case of Dundalk, the housing production is physically limited by the nearness to the waterfront. The children of the current population are forced to look elsewhere for housing. Most likely, they move to growth areas such as Essex (or move even further away into Harford —Edgewater—), which have the same industrial character as Dundalk. The other inner-ring suburbs are located around or just outside the beltway (points of high access) and still have land available, which only needs to be rezoned.

### Table 6.2 Age of the housing stock for the selected suburbs (in % of the housing stock 1-1-1987)

<table>
<thead>
<tr>
<th></th>
<th>Before 1950</th>
<th>'50-59</th>
<th>'60-69</th>
<th>'70-79</th>
<th>'80-87</th>
<th>Stock 1987*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dundalk</td>
<td>53.6</td>
<td>35.7</td>
<td>6.4</td>
<td>2.4</td>
<td>1.9</td>
<td>16,642</td>
</tr>
<tr>
<td>Catonsville</td>
<td>45.8</td>
<td>26.4</td>
<td>15.0</td>
<td>4.5</td>
<td>8.3</td>
<td>11,714</td>
</tr>
<tr>
<td>Glen Burnie</td>
<td>18.8</td>
<td>30.7</td>
<td>26.3</td>
<td>14.6</td>
<td>9.6</td>
<td>16,980</td>
</tr>
<tr>
<td>Pikesville</td>
<td>14.5</td>
<td>14.1</td>
<td>27.9</td>
<td>24.0</td>
<td>19.5</td>
<td>14,266</td>
</tr>
<tr>
<td>Owings Mills</td>
<td>9.1</td>
<td>9.8</td>
<td>35.4</td>
<td>33.9</td>
<td>11.8</td>
<td>13,294</td>
</tr>
<tr>
<td>White Marsh</td>
<td>7.5</td>
<td>11.6</td>
<td>9.5</td>
<td>32.5</td>
<td>39.0</td>
<td>16,532</td>
</tr>
<tr>
<td>Bel Air</td>
<td>13.7</td>
<td>11.2</td>
<td>25.4</td>
<td>30.8</td>
<td>18.9</td>
<td>17,466</td>
</tr>
<tr>
<td>Columbia</td>
<td>0.9</td>
<td>1.8</td>
<td>14.4</td>
<td>58.6</td>
<td>24.2</td>
<td>25,139</td>
</tr>
</tbody>
</table>

Source: U.S. Census 1980, RPC Building Permit File  * = estimate

Infill projects in Glen Burnie are strongly linked to the employment growth. Research conducted in Anne Arundel County in 1977 showed that a change of job was the most important reason for people to move to the northern part of the county (33% of the interviewed people). Processes of infilling occur only in a very selected number of locations. The RPD Glen Burnie, for example, experienced a total decrease in population of 900 persons between 1970 and 1980. The RPD is composed of eight census tracts. While six of the census tracts experienced a total decrease of 3117 persons, the remaining two census tracts gained 2220 persons (CT 7508.02 and CT 7512). These census tracts are located at, and in the direction of, the waterside. The same holds true for Catonsville (infill in the direction of Baltimore city, north-east of the existing built-up area), and for Pikesville.
The growth patterns of White Marsh and Owings Mills show their recent growth, but also the differences in stage between these newly developing suburbs. Bel Air and Columbia both account for a large part (respectively 37% and 66%) of the total population increase in their respective counties. In Bel Air, however, the growth of population is less than the average of the county, thus indicating faster growth in other parts of the county (east of Bel Air).

Population and housing: differential accessibility

The inner and outer ring of the suburban area perform a different role in attracting certain population groups from other areas. This is dependent upon the characteristics of the current (local) population, which has strong links with the historical component, but also upon the "accessibility" of the local housing market in the different suburbs.

Pikesville, for example, has developed into a predominantly Jewish community which is very cohesive. Most of the residents in the suburb have lived in it for a long time. Pikesville is also the suburb in the Baltimore region with the highest average income, and an exception to most of the other older suburbs where the average income is much lower. This is reflected in high housing prices: an attractive place for developers to build (for example, apartments for the elderly). To the east side of Baltimore (Dundalk or Essex) the suburbs have a more industrial character and a population with an on average lower income, which is reflected in the average price of housing.

Table 6.3 Residence of the population 5 years earlier, 1970 and 1980

<table>
<thead>
<tr>
<th></th>
<th>Same House '70 '80</th>
<th>Same County '70 '80</th>
<th>Same State '70 '80</th>
<th>Outside State '70 '80</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glen Burnie</td>
<td>61</td>
<td>15</td>
<td>14</td>
<td>10</td>
</tr>
<tr>
<td>Pikesville</td>
<td>59</td>
<td>13</td>
<td>21</td>
<td>7</td>
</tr>
<tr>
<td>Catonsville</td>
<td>68</td>
<td>13</td>
<td>21</td>
<td>6</td>
</tr>
<tr>
<td>Dundalk</td>
<td>72</td>
<td>15</td>
<td>15</td>
<td>4</td>
</tr>
<tr>
<td>White Marsh</td>
<td>70</td>
<td>14</td>
<td>19</td>
<td>4</td>
</tr>
<tr>
<td>Owings Mills</td>
<td>46</td>
<td>19</td>
<td>29</td>
<td>14</td>
</tr>
<tr>
<td>Bel Air</td>
<td>51</td>
<td>20</td>
<td>17</td>
<td>19</td>
</tr>
<tr>
<td>Columbia</td>
<td>30</td>
<td>5</td>
<td>20</td>
<td>29</td>
</tr>
</tbody>
</table>

Source: U.S. Census 1970 and 1980

The newer parts of the suburban area increasingly attract migrants from the older suburban area with a strong preference for the countryside. This is often a group of residents with high incomes (for example, the executives of the firms locating in this area), since the prices of the housing units are above the regional average.

The median value of the houses in the outer ring of suburbs, for example in White Marsh, in 1980 was $64,000 dollars, compared to a value of $39,000 in Dundalk and $52,000 in Glen Burnie. The two most outlying suburbs show the
highest median housing prices in the region, Columbia ($89,000) and Bel Air ($75,000). Many factors contribute to the higher average prices in the newer areas. Among them are type of housing, high level of amenities, rising costs of the construction of the houses, the extra costs of providing new services (water, sewer, roads), but also the impact fees in, for example, Anne Arundel and Baltimore Counties. Furthermore, in order to restrict development (and thus preserve low densities), especially in the rural portions of a county, the government may require certain minimum lot sizes (2 to 5 dwellings per acre), which implicitly leads to a further increase in the cost of the dwellings built on it.

This situation leads to migration to counties further away from Baltimore city, such as Harford County, where people move in order to avoid the high prices in the rural parts of Baltimore County. Bel Air and surrounding areas receive many of these people. The price-differences between Columbia and Bel Air are due to the older housing stock in Bel Air, but also to the pressing demand from suburban Washington residents.

The strong orientation to Washington is clear for Columbia. The period between 1981 and 1984, when the Rouse Company conducted interviews of inmovers, showed a slightly stronger orientation to the Washington region (an increase from 35% of the interviewed in 1981 to 38% in 1984) (Rouse Company 1985). Among the inmovers in both years, approximately 30% were people from other states or from abroad. The immigration of population from within Howard County has, however, increased over the period 1970-1980.

Pikesville and Glen Burnie have strengthened their function for movers within the county and experienced a relative decline in number of people coming in from elsewhere in the state.

A closer look at the type of housing constructed in the period after 1970, reveals that in almost all the suburbs in the older ring, the multi-family dwellings were over-represented (table 6.4). The change in type of housing increases the average density of the built-up area in these suburbs. The increase in percentage of multifamily dwellings in, for example, Pikesville is significant: from 33% in 1972 to 42% in 1987. The housing construction in Pikesville has predominantly taken place either on the edge of the existing built-up area or as infill in the existing built-up area, mostly in condominium projects. These condominium projects are in general built in small projects that represent a large number of units. A large part of these condominiums are built either for the elderly (empty nesters) or for other small households, formerly living in the central city or with their parents in the same suburb. Due to these developments the differences between the characteristics of the housing market in Pikesville and the other suburbs have grown.
Together with the trend to build more multifamily dwellings, changes occurred in owner- renter composition. In all the suburbs, with the exception of Bel Air (76% both in 1970 and 1980 in owner-occupied housing), the share of renter occupied dwellings has increased. This increase was most noticeable in Owings Mills and White Marsh (table 6.4). Although the housing production in Owings Mills is relatively low compared to that in White Marsh, in both suburbs the tendency exists to built in higher densities (especially in the designated towncenters). This has resulted in a housing stock in Owings Mills with 43% multifamily dwellings in 1980. After 1980, however, this trend changes in Owings Mills and the tendency is to build less multifamily dwellings. The housing market characteristics in White Marsh show considerable differences, due to the existence of a residential community at the time of designation as a growth area.

The relative emphasis in Bel Air on multifamily dwellings in the period 1972-1975 was strongly opposed by the citizens, who stressed the preservation of the low density character of the town. This contributes to a lesser percentage of multi-family dwellings in later years. In Columbia a high absolute number of multifamily dwellings were constructed throughout the period. The reason behind this was to provide low-cost housing, which, notwithstanding, is still hardly available in Columbia.

The newer suburbs tend to attract smaller and younger households resulting on the average in a younger population in the suburb (table 6.5). In contrast, the process of aging is very obvious in the older suburban area. The relatively closed communities of Pikesville and Catonsville already had an over-representation of these older age groups in 1970, and showed substantial increases in the 1970's. Glen Burnie again is an exception, due to in-migration of population (younger, smaller households) from suburban Washington.
Table 6.5 Population by age in selected suburbs, 1970-1980 (%)

<table>
<thead>
<tr>
<th></th>
<th>1970</th>
<th>1980</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0-17</td>
<td>18-64</td>
</tr>
<tr>
<td>Glen Burnie</td>
<td>37.6</td>
<td>58.2</td>
</tr>
<tr>
<td>Pikesville</td>
<td>28.9</td>
<td>60.3</td>
</tr>
<tr>
<td>Catonsville</td>
<td>26.7</td>
<td>57.7</td>
</tr>
<tr>
<td>Dundalk</td>
<td>23.3</td>
<td>60.7</td>
</tr>
<tr>
<td>White Marsh</td>
<td>37.1</td>
<td>57.2</td>
</tr>
<tr>
<td>Owings Mills</td>
<td>38.5</td>
<td>56.5</td>
</tr>
<tr>
<td>Bel Air</td>
<td>38.7</td>
<td>55.4</td>
</tr>
<tr>
<td>Columbia</td>
<td>42.2</td>
<td>54.7</td>
</tr>
</tbody>
</table>

Source: U.S. Census 1970 and 1980

Thus, within the older and newer parts of the suburban area considerable differences exist in population and housing characteristics. The accessibility of the local housing market is often limited to certain population groups and determine for a large part the patterns of migration. The growth in housing-stock (and population) in the newer parts of the suburban area is much bigger, but mostly only accessible to a very selective group of the population in the region.

Employment

All the suburbs experienced an increase in employment (table 6.6) after 1970. Almost all the suburbs have attracted employment at a higher tempo than their counties in the period 1970-1985, indicating a process of concentration on the level of the RPD in the suburban area.

Data on size and composition of employment are, especially on the sub-county or RPD-level, if ever available, very deficient. Whenever the institutions concerned with gathering these data (e.g., Maryland Department of State Planning or RPC) publish the statistics on these lower levels, the figures differ considerably, due to differences in methodology. Moreover, the data are compiled by using the Master Establishment Files (MES, which follows movements of firms) and the US Census data. The MES file is based upon information of the Maryland tax bureau, and confidential in nature and, due to its size, expensive to handle. The data used here originate from the RPD, mainly for reasons of accessibility.
Table 6.6 Employment by size in the selected suburbs, 1970-1985 (x1000)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>'70-80  '80-85</td>
</tr>
<tr>
<td>Glen Burnie</td>
<td>16.0</td>
<td>18.0</td>
<td>20.9</td>
<td>24.2</td>
<td>31  16</td>
</tr>
<tr>
<td>Pikesville</td>
<td>11.5</td>
<td>15.2</td>
<td>19.5</td>
<td>20.6</td>
<td>70  6</td>
</tr>
<tr>
<td>Catonsville</td>
<td>9.7</td>
<td>12.1</td>
<td>14.4</td>
<td>16.5</td>
<td>49  15</td>
</tr>
<tr>
<td>Dundalk</td>
<td>10.0</td>
<td>10.4</td>
<td>10.8</td>
<td>11.3</td>
<td>8   5</td>
</tr>
<tr>
<td>White Marsh</td>
<td>3.1</td>
<td>4.5</td>
<td>5.6</td>
<td>7.1</td>
<td>81  27</td>
</tr>
<tr>
<td>Owings Mills</td>
<td>5.7</td>
<td>7.8</td>
<td>9.0</td>
<td>11.2</td>
<td>58  24</td>
</tr>
<tr>
<td>Bel Air</td>
<td>8.8</td>
<td>11.8</td>
<td>13.2</td>
<td>15.3</td>
<td>50  16</td>
</tr>
<tr>
<td>Columbia</td>
<td>7.7</td>
<td>14.1</td>
<td>22.6</td>
<td>30.2</td>
<td>194 58</td>
</tr>
</tbody>
</table>

Source: U.S. Census 1970 and 1980, RPC * = estimation

All the suburbs conform to the metropolitan trend of a rapid decline in the share of manufacturing in the employment structure. This is accompanied by the trend of a larger share in the FIRE sector. Catonsville and Pikesville have seen a relative decline in their function as retail centers, while this function has relatively grown for the more outlying suburbs Columbia and Bel Air.

Dundalk is the only suburb that has not been able to achieve the transformation to a more diversified and service oriented employment structure (having a decrease in jobs in manufacturing of 15% between 1970 and 1980). The modest increase in employment in Dundalk was mainly due to expansion of existing firms. Moreover, Dundalk is the only suburb with an increase in jobs in both periods that is less than the county's average. The reason is partly found in the decrease of population and the severe lack of vacant land.

White Marsh and Glen Burnie have been able to compensate the decline in manufacturing with increases in other sectors or even in other industrial subsectors such as, high-tech or defense related industry (Glen Burnie) or distribution, warehousing and light industry (White Marsh) (table 6.7).

Among the older suburbs, Glen Burnie and Catonsville experience the highest increase in employment, due to their location in the rapidly growing southern part of the region. The growth is largely a result of developments near or along the beltway. The BWI-airport area (partly within Glen Burnie) attracts huge amounts of especially non-residential investment.
### Table 6.7 Employment by sector in the selected suburbs, 1970-1980 (%)

<table>
<thead>
<tr>
<th></th>
<th>Constr./ Manufact. '70 '80</th>
<th>Transp./ Public '70 '80</th>
<th>Trade '70 '80</th>
<th>F.I.R.E '70 '80</th>
<th>Other * '70 '80</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glen Burnie</td>
<td>34 29</td>
<td>9 10</td>
<td>21 22</td>
<td>8 9</td>
<td>30 30</td>
</tr>
<tr>
<td>Pikesville</td>
<td>37 26</td>
<td>4 3</td>
<td>30 27</td>
<td>11 13</td>
<td>40 44</td>
</tr>
<tr>
<td>Catonsville</td>
<td>23 20</td>
<td>6 7</td>
<td>25 22</td>
<td>11 10</td>
<td>35 41</td>
</tr>
<tr>
<td>Dundalk</td>
<td>51 37</td>
<td>7 9</td>
<td>19 20</td>
<td>5 9</td>
<td>18 25</td>
</tr>
<tr>
<td>Owings Mills</td>
<td>30 23</td>
<td>6 6</td>
<td>22 22</td>
<td>8 11</td>
<td>34 37</td>
</tr>
<tr>
<td>White Marsh</td>
<td>37 26</td>
<td>8 9</td>
<td>23 21</td>
<td>8 13</td>
<td>24 31</td>
</tr>
<tr>
<td>Bel Air</td>
<td>27 23</td>
<td>6 7</td>
<td>18 22</td>
<td>7 10</td>
<td>42 39</td>
</tr>
<tr>
<td>Columbia</td>
<td>20 13</td>
<td>5 4</td>
<td>11 15</td>
<td>14 13</td>
<td>50 55</td>
</tr>
</tbody>
</table>

Source: U.S. Census 1970 and 1980
* Other is medical, government and so on.

Until recently, Glen Burnie was a predominantly residential area. Both the rehabilitation policy and the growth of the Baltimore-Washington International Airport resulted in initiatives for new development. The growth in the Baltimore Washington Corridor creates additional employment through spin-off developments, supported by the county through rezoning of large tracts of land from residential to commercial/industrial, especially in the northwest parts of Glen Burnie. The changes are further supported by the amenities of the waterfront, which make the area an attractive place to live, but also by proximity to Annapolis, the state capital.

**Pattern of investment**

The emphasis in the other older suburbs is more continuously on residential developments, which is also reflected in the pattern of investment. Pikesville has been very successful (partly due to increases in Owings Mills), but the other suburbs also experience considerable increases in investment, Dundalk, again, being an exception. At least part of these investment activities are due to the renewed attention through the rehabilitation policy. In Pikesville the construction of the metro-line has led to some new projects, such as the construction of a small scale office project near the station.

Columbia is not surprisingly among the suburbs with huge non-residential investments, although the residential investments make up the largest part of the total investments. The newer parts of the suburban area in general experience a relative emphasis on non-residential investments: the employment function is developing more rapidly. An exception is Bel Air. In Bel Air the investments in the non-residential sector are low, while the housing market attracts considerable attention. This is due to the regional function of Bel-Air, but also because the employment function is growing rapidly elsewhere in the county. The investment patterns in Owings Mills and White Marsh reflect the later start of Owings Mills and the strong emphasis on residential investments in White Marsh.
Table 6.8 Residential and non-residential new investments, 1981-1986
(x 100,000 dollars) (1)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Glen Burnie</td>
<td>8.8</td>
<td>4.2</td>
<td>9.9</td>
<td>28.5</td>
</tr>
<tr>
<td>Catonsville</td>
<td>2.8</td>
<td>0.7</td>
<td>10.2</td>
<td>4.0</td>
</tr>
<tr>
<td>Dundalk</td>
<td>1.4</td>
<td>0.9</td>
<td>0.3</td>
<td>0.9</td>
</tr>
<tr>
<td>Pikesville</td>
<td>20.0</td>
<td>1.0</td>
<td>48.4</td>
<td>6.2</td>
</tr>
<tr>
<td>Owings Mills</td>
<td>4.8</td>
<td>1.3</td>
<td>13.8</td>
<td>10.5</td>
</tr>
<tr>
<td>White Marsh</td>
<td>9.7</td>
<td>3.3</td>
<td>29.7</td>
<td>7.7</td>
</tr>
<tr>
<td>Bel Air</td>
<td>11.1</td>
<td>0.8</td>
<td>42.7</td>
<td>3.7</td>
</tr>
<tr>
<td>Columbia</td>
<td>13.6</td>
<td>11.2</td>
<td>57.4</td>
<td>34.8</td>
</tr>
</tbody>
</table>

Source: RPC, Building Permit File

(1) mean value per year, computed over the three years

The patterns of investment by sector are used as an indication for developments in the employment structure after 1980. These patterns indicate the sectors that are relatively emphasized. Moreover, the effects of the investments will influence the employment structure in the long term. Again, a distinction is made between the periods before and after 1983. All the suburbs experience an increase in relative share of investments in the office sector in the second period (1984-1986), while investments in industry relatively declined (table 6.9). It must be mentioned, however, that the amounts of investments differ considerably between the older and newer parts of the suburban area.

New developments in Glen Burnie are located at the west side, in the direction of the airport. In Pikesville and Towson, the offices tend to locate on the highly accessible sites near the beltway. These suburbs experienced a relatively high share of their office development before 1980. The office buildings on average are smaller there than in the newer developments. Howard County experienced the highest increase in office space in this period (213%), located in the Route 1 corridor and Columbia.

Table 6.9 Value of new Non-Residential investments by sector, 1981-1986*

<table>
<thead>
<tr>
<th></th>
<th>1981-1983 Ind.</th>
<th>Off.</th>
<th>Store</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glen Burnie</td>
<td>45</td>
<td>16</td>
<td>14</td>
<td>25</td>
</tr>
<tr>
<td>Catonsville</td>
<td>4</td>
<td>26</td>
<td>37</td>
<td>33</td>
</tr>
<tr>
<td>Dundalk</td>
<td>37</td>
<td>-</td>
<td>39</td>
<td>24</td>
</tr>
<tr>
<td>Pikesville</td>
<td>48</td>
<td>15</td>
<td>34</td>
<td>3</td>
</tr>
<tr>
<td>Owings Mills</td>
<td>34</td>
<td>27</td>
<td>39</td>
<td>-</td>
</tr>
<tr>
<td>White Marsh</td>
<td>1</td>
<td>49</td>
<td>49</td>
<td>1</td>
</tr>
<tr>
<td>Bel Air</td>
<td>10</td>
<td>14</td>
<td>71</td>
<td>5</td>
</tr>
<tr>
<td>Columbia</td>
<td>35</td>
<td>52</td>
<td>9</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>1984-1986 Ind.</th>
<th>Off.</th>
<th>Store</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glen Burnie</td>
<td>39</td>
<td>7</td>
<td>50</td>
<td>4</td>
</tr>
<tr>
<td>Catonsville</td>
<td>9</td>
<td>53</td>
<td>6</td>
<td>32</td>
</tr>
<tr>
<td>Dundalk</td>
<td>40</td>
<td>11</td>
<td>49</td>
<td>-</td>
</tr>
<tr>
<td>Pikesville</td>
<td>8</td>
<td>44</td>
<td>32</td>
<td>16</td>
</tr>
<tr>
<td>Owings Mills</td>
<td>6</td>
<td>51</td>
<td>43</td>
<td>-</td>
</tr>
<tr>
<td>White Marsh</td>
<td>3</td>
<td>91</td>
<td>6</td>
<td>-</td>
</tr>
<tr>
<td>Bel Air</td>
<td>18</td>
<td>60</td>
<td>18</td>
<td>4</td>
</tr>
<tr>
<td>Columbia</td>
<td>5</td>
<td>76</td>
<td>7</td>
<td>12</td>
</tr>
</tbody>
</table>

Source: RPC, Building Permit File

* three year mean, in % of total investments
Glen Burnie and Dundalk attract in both periods a large share in the industrial sector, although the total amount of investments in Dundalk is low. Especially in the older suburbs is the increase in employment strongly linked to the increase in population.

The number of office projects under construction is very low in White Marsh, especially when compared with Owings Mills. This likely has to do with the "image" of both suburbs, whereby Owings Mills, as a competitive investment opportunity, attracts most of the developments. The projects in Owings Mills start with the construction of two 12 story office buildings.

The perceived industrial character of White Marsh (especially in comparison to Owings Mills), which is contradicted by the employment structure in 1980, is, however, also not reflected in the pattern of investment after 1980. More than 90% of the investment in White Marsh in the most recent period is in the office sector.

Table 6.10 Office space (in 1000 square feet), number and age of buildings in a selected number of suburbs, 1987

<table>
<thead>
<tr>
<th>Suburb</th>
<th>1987 sq.ft</th>
<th>1987 #</th>
<th>Age &lt;1970</th>
<th>'70-'79</th>
<th>'80-'87</th>
<th>UC*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glen Burnie</td>
<td>482</td>
<td>9</td>
<td>-</td>
<td>13</td>
<td>38</td>
<td>50</td>
</tr>
<tr>
<td>Dundalk</td>
<td>174</td>
<td>2</td>
<td>-</td>
<td>100</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Pikesville</td>
<td>508</td>
<td>20</td>
<td>14</td>
<td>20</td>
<td>36</td>
<td>30</td>
</tr>
<tr>
<td>Catonsville</td>
<td>617</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>60</td>
<td>20</td>
</tr>
<tr>
<td>Towson</td>
<td>4,349</td>
<td>69</td>
<td>22</td>
<td>23</td>
<td>28</td>
<td>27</td>
</tr>
<tr>
<td>Owings Mills</td>
<td>1,115</td>
<td>21</td>
<td>-</td>
<td>-</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>White Marsh</td>
<td>382</td>
<td>12</td>
<td>-</td>
<td>-</td>
<td>91</td>
<td>9</td>
</tr>
<tr>
<td>Hunt Valley</td>
<td>2,310</td>
<td>30</td>
<td>10</td>
<td>10</td>
<td>63</td>
<td>17</td>
</tr>
</tbody>
</table>


The investments in the retail sector in Owings Mills (second period) and White Marsh (the first period) reflect the construction of the shopping malls in either period, thus emphasizing its importance.

Concluding remarks

The individual suburbs in general confirm to the trends recognized for the metropolitan level. A process of concentration of employment on the level of the individual counties takes place in the period 1970-1985. The increase in employment in the older suburbs is strongly linked to the increase in population. The distinction between 'older' and 'newer', and inner-ring and outer-ring suburbs does not fully account for differences in development among the suburbs and has to be worked out. Although patterns of development and underlying factors on a higher level (accessibility, location relative to high growth areas, period and scale of initial developments, government interference/attitude, and so on) provide an important general framework (and make it possible to delineate growth-corridors, that provide us with general patterns of specialization); local factors turn out to be of crucial importance for developments to occur on the level of the suburb itself.
General factors largely seem to determine trends towards specialization on the level of the corridor, while local factors also determine patterns of competition within the corridor. Factors such as availability of space, perceived image, strength and attitude of the local community, competition on a sub-regional scale and location relative to high-growth areas are almost as important and contribute to differences among, for example, inner-ring suburbs.

The market is the driving force behind the restructuring of the suburbs (such as, construction of multifamily dwellings). Within the regulations set by government (which may be based upon an estimation/interpretation of future market-forces), the market is looking for (safe) investment opportunities. Investment decisions are themselves based both upon general and very specific factors. The general factors in the Baltimore region are favorable, while, due to the restrictiveness of planning and zoning regulations the investment opportunities are scarce. Together this results in development pressure and a complex pattern of concentration of activities all over the suburban area. The development pressure increases the rate of processes such as infilling and restructuring.
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