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PLANNING FOR THE CREATION OF A METROPOLITAN FORM WITH  
URBAN OPEN SPACES

A Master's Thesis  
Presented by  
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to  
the Graduate School of Natural and Applied Sciences  
of Middle East Technical University  
in Partial Fulfillment for the Degree of

MASTER OF SCIENCE

in

REGIONAL PLANNING

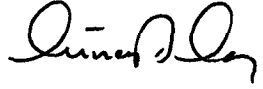
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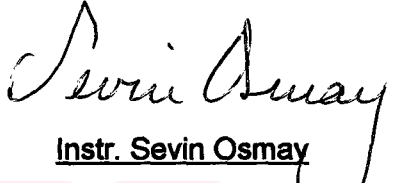
MIDDLE EAST TECHNICAL UNIVERSITY  
ANKARA

February, 1994

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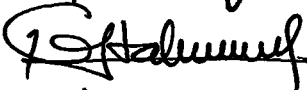
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## ABSTRACT

### PLANNING FOR THE CREATION OF A METROPOLITAN FORM WITH URBAN OPEN SPACES

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M.S. in Regional Planning

Supervisor: Prof.Dr. İlhan TEKELİ

February, 1993, 151 pages

The metropolitan cities in Turkey grew in the rapid urbanization era that started in the 1950's into a compact form, by expansion around the edges of the city, and intensification of the inner city. This growth pattern was the result of the low development levels of urban functions not enabling their decentralization, and development actualized on all land motivated by the acquisition of land rent.

After 1980's, transformations in the macro-economic choices of the nation, legal and institutional framework related to urbanization, and developments in the organization of transportation enabled the decentralization of certain functions. With the leapfrog settlement of industrial districts and mass housing areas, unbuilt land was left between the central city and these settlements. This land presented opportunities for the creation of an urban form involving open spaces. However, the persistence of the development processes that had acted to form the compact form in the previous era caused these areas to be filled up. As a

result the city reached its compact form once more in spite of the decentralization tendencies, this time spreaded on a larger area.

The aim of this thesis is to propose planning strategies for the creation of urban open spaces between the decentralized settlements and central city. These strategies are basically oriented towards prevention of unplanned development in these areas, and the transformation of them into urban open spaces with different functions.

Keywords: Urban Planning, Urban Open Spaces, Urban Form, Unplanned Development, Istanbul

Science Code: 601.06.01

ÖZ

**METROPOLİTAN FORMUN İÇİNDE KENTSEL AÇIK ALANLAR BULUNDURACAK  
ŞEKİLDE YÖNLENDİRİLMESİ İÇİN PLANLAMA**

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**Tez Yöneticisi: Prof.Dr. İlhan TEKELİ**

**Şubat, 1994, 151 sayfa**

Türkiye'deki büyük şehirler, 1950'lerde başlayan hızlı kentleşme döneminde, şehrin çevresine doğru boşluk bırakmadan yağ lekeli şeklinde yayılması ve eski yerleşim alanlarının yık-yap süreciyle yoğunlaşması ile büyüdüler. Bu büyümede kentsel işlevlerin birbirinden kopacak derecede büyümesi ile birlikte kentsel rantı ele geçirme güdüsü ile yapılaşma etken olmuştur. Bu yapılaşma, toplumun sınırlı kapital birikimi içinde ihtiyaçlarını karşılamasını örgütleyen çeşitli yapılaşma süreçleri aracılığıyla gerçekleşti.

1980'lerden sonra ülkenin makro-ekonomik seçimlerindeki dönüşümler, kentleşme ile ilgili yasal ve kurumsal çerçevedeki yeni düzenlemeler, ve ulaşımın organizasyonundaki gelişmeler bazı kentsel işlevlerin şehirden uzakta yer seçebilmelerine olanak tanıdı. Büyük sanayi kuruluşları, sanayi siteleri ve toplu konut alanlarının desantralizasyonu ile merkezi şehir ile bu yerleşmeler arasında boşluklar oluştu. Bu boşluklar, içinde açık alanlar bulunan desantralize şehir

formunun oluşturulması için olarak oluşturdu. Fakat hızlı kentleşme döneminde etkin olan süreçler bu boşlukların hızla yapılaşmasına yol açtı. Bunun sonucunda, desantralizasyon eğilimlerine rağmen, şehir yine yağ lekeli formuna, bu kez daha geniş bir alana yayılarak ulaştı.

Bu tezin amacı, merkezi şehir ile desantralize yerleşmeler arasındaki boşlukların kentsel açık alanlara dönüştürülmesi doğrultusunda planlama müdahalesi önerilmesidir. Bu öneri temel olarak bahsedilen alanlarda plansız yapılaşmanın engellenmesi için bu süreçlere müdahale ve çeşitli mülkiyet türleri üzerinde değişik işlevler barındıran açık alanların oluşturulması çerçevesinde geliştirildi.

Anahtar Kelimeler: Kent Planlama, Kentsel Açık Alanlar, Kent Formu, Plansız Yapılaşma, İstanbul.

Bilim Dalı Sayısal Kodu: 601.06.01

## ACKNOWLEDGEMENTS

Several people have contributed to the completion of this thesis. First and foremost, I would like to express my gratitude to my supervisor Prof. Dr. İlhan Tekeli whose guidance enabled me to formulate and complete this thesis.

I am thankful to Murat Güvenç for his explanations, as well as his help in providing and processing numerical data. My thanks go to the examining committee for their valuable comments. I would also like to thank Ömer Kiral whose comments have contributed to this thesis.

My thanks also go to Mehmet Yıldız, the Director of Reconstruction Department of Istanbul Greater City Municipality, Perihan Bulduk from the same department and the planning staff of Istanbul municipalities who have provided access to the necessary documents.

My warm thanks go to Suat Orgun for her valuable discussions and Tülin Özbiçer for her friendship and encouragements at times of intensive work.

I heartily thank my mother Güven Gülöksüz and sister Aslı for their encouraging approach throughout the study. Lastly, I am grateful to my father and colleague Yiğit Gülöksüz whose attitude and deeds as a planner and a father have inspired me in my steps in the planning profession.

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## LIST OF NOMENCLATURE

<b>Metropolitan Master Plan</b>	<b>Metropoliten Nazım Plan (1/50.000)</b>
<b>Zonal Master Plan</b>	<b>Çevre Düzeni Nazım İmar Planı (1/25 000)</b>
<b>Master Development Plan</b>	<b>Nazım İmar Planı (1/5.000)</b>
<b>Development Plan</b>	<b>Uygulama İmar Planı (1/1.000)</b>
<b>Local Development Plan</b>	<b>Mevzi İmar Planı ( 1/1.000)</b>

<b>Greater City Municipality</b>	<b>Büyük Şehir Belediyesi</b>
<b>District Municipality</b>	<b>İlçe Belediyesi</b>
<b>Local Municipality</b>	<b>Belde Belediyesi</b>

## CHAPTER I

### INTRODUCTION

This thesis aims at proposing planning strategies for the creation of a decentralized city form with urban open spaces. The starting point in the choice of the task has been an observation on the recent transformations in the growth pattern of metropolitan cities in Turkey. The metropolitan cities which had grown in a compact form until the 1980's have recently started to grow by leapfrog developments located away from the central city. Such a growth pattern has caused the emergence of open spaces within the city, on the unbuilt land left between the leapfrog settlements and the central city. From the point of view of planning these areas present opportunities for the creation of urban open spaces lacking in the compact central cities. However, this opportunity can be made use of only if effective planning strategies can be implemented to direct land use in these areas.

The development of effective planning strategies aiming at creating urban open spaces on the land between the newly emerging leapfrog settlements and the central city necessitates a systematic framework. The approach that will be followed in this thesis for the development of such planning strategies is based on the assumption that although a particular city form is highly determined by social processes, such a form is not inevitable. It can be changed if people are not content with it. In this thesis it is suggested that this change can be achieved by

intervening in the processes that determine the city form. Therefore, influencing of the city form requires a full comprehension of the processes that determine that form. This brings with it another problematic issue in the framework of the thesis; that is, the approach to the determinants of the city form. The city form is conceived as an outcome of the processes generated by the interaction of structural and behavioral determinants. The processes determining the city form are defined as the actions of behaving units under the constraints imposed by the macro processes. The full comprehension of the processes acting in the determination of the city form casts light upon the planning strategies that may intervene in this process, and influence its outcome. In order to get into the details of the framework used in this thesis, it may be useful to overview the developments in the theories on city form.

In response to the increase in the importance of cities in the socio-economic lives of societies, the field of urban studies separated from other academic disciplines to form a distinct research field. During the development of this field, research programs approaching the city form with different problem statements and assumptions were developed. The basic area of differentiation among these approaches from the point of view of the problematic of the thesis, was related to the power of man, (planning) in the determination of the city form. The main lines of theories were the "normative" and "predictive" theories that will be briefly described below.

The normative approach assumes that man is totally capable of achieving his designs on the city form. The socio-economic determinants of the city form are not taken into consideration. Instead, the research area is the description "good" city form. This is a problem area introducing subjectivity and difficulties in

implementation, as no suggestions are made as to how the designs will be implemented.

In this research field two types of attitudes have been taken. One deals with the design of utopias, and hence, seeks basic changes in city form. The other is concerned with formulating a basis for normative choices of the planner on the city form. The latter can be regarded as a gradualist approach.

Utopias are initially consistent designs based on what good city form should be. They are designed by a few planners with subjective values and experiences. The outcomes of this approach are not implementable. In fact they are usually not meant to be implemented because of their weak relations with facts, their fundamentalism, concreteness and subjectivity. They are useful, however, in expanding the horizons for the creation of alternative city forms.

The other type of studies search for a normative proposal for the good city form, trying to present a set of universal urban social-spatial patterns for the evaluation of the city form. However, they do not propose a particular, concrete physical form. The criteria developed may be displayed in different physical forms. The form which reflects these patterns is accepted to be the good form for that city. In this perspective the patterns are drawn by the analysis of real facts (general patterns). However, as stated in the criticism of the normative theory, this perspective disregards the power of the determining forces on the city form, and as a result faces problems of implementation.

In contrast to the normative perspective described above, the predictive theories are concerned only with the description and explanation of the city form

and its determinants, and the prediction of the future form in case these determinants persist in the same pattern. It assumes that the determinants of the city form are inevitable, except for the transformations that may occur in these due to inner dynamics. This is a deterministic approach, leaving no place to human choice.

The predictive theories vary among themselves with respect to their assumptions on the dominant determinants of the city form. Two paths of theories have influenced this perspective until the 1970's. These were the behavioral and structural theories.

The behavioral theories regard the city form as a consequence of actions of the individuals in the society. The determination of the city form is explained with regards to the locational behavior of individuals -as a total of these-, without considering the constraints imposed on these behaviors by the structure. Therefore, the task set by these theories is the analysis of behavioral patterns of individuals in the city space. The discovery of the patterns of behavior supposedly helps them to predict the future form of the city.

The structural theories see the city form as the consequence of the macro processes i.e. the economic and social structure. The spatial organization of urban functions is assumed to be determined by larger structural processes and the city form is assumed to be shaped by such determinants. Individual behavior is considered to be totally determined by the structure, and is not taken into account in the research task. The transformations in the growth pattern of the city are regarded as extensions of transformations at the national or international level. The research task of these theories is the analysis of macro processes and of how they

determine the city form. The problem with this approach is that it cannot explain the existence of different outcomes from similar structures in time and space.

The common problem of the predictive theories is in their attitudes to the determination of the city form. These theories implicitly regard the determinants of the city form and their outcome in space as unchangeable, and this attitude leaves no space to human choice. This problem has led to the development of critical approaches to the deterministic perspective.

The origins of these attempts lie in the developments that took place in social theory. These developments occurred as criticisms to the empiricist methodology adapted from natural science. The empiricist science, was criticized of carrying deterministic features associated with its assumptions of a hidden order of unchanging structures. The critical theory developed as an evaluative approach to the theories through which knowledge is produced, on the basis of explanation of the changeability of lasting structures. (Pratt, 1989) This approach of the critical theory was relevant to the approach of "planning" which is based on the idea that man can design his own future.

Critical realism that was in line with the critical theory developed a useful approach to the comprehension of determinants of the real events; the city form in our case. This approach merged the different perspectives of the structural and behavioral theories on the dominant determinants of the city form. This should not, however, be taken as an acceptance of the deterministic feature of these theories. Critical realism introduced the concept of "causal processes" that involved the process of mutual interaction of structural and behavioral determinants, instead of regarding any of the two as the dominant determinant of the city form.

The perception of the city form as an outcome of causal processes enabled the explanation of the emergence of different city forms under the same macro processes, or the unexpected outcomes of transformed macro processes on the city form. This was because of the diverse reactions developed by the behaving units under the constraints defined by the same macro processes in time and space. The determinants of the city form may be understood by the observation of particularities of reactions of behaving units within the transforming macro processes. The comprehension of these mechanisms feed planning, that aims to intervene in the process of determination of the city form effectively, with important information. This has led to the criticism of the strategies of prevalent planning styles that have been based on intervention in the macro processes. Such efforts have attempted to direct the actions of the behaving units through constraining them. However, the effects of the transformations in the macro processes on the actions of the behaving units, and therefore on the city form have not been as predicted.

The approach in this thesis is based on critical realism. It is oriented towards changing the city form determined by social processes. The city form emerging as an outcome of such processes is criticized and proposals on a better form are made. However, the thesis also claims that the changes aimed in the city form can be achieved by generating changes in the determinants of the city form. So, the proposals on the city form are accompanied by proposals of intervention in the processes determining the city form. In the analysis of these processes the complementary approaches of structural and behavioral theories on the determination of the city form are merged under the critical realist methodology. The city form is seen to be shaped by the interaction of socio-economic processes,

i.e., the macro determinants, and the actions of individuals, i.e., the micro determinants.

In the analysis, the macro and micro determinants, the way they interact and the outcomes of this interaction on the city form is examined. The interaction of these processes generate a certain growth pattern. Changes take place in this pattern when transformations in the macro determinants bring about changes in the behavior of individuals. In fact, the transformations that take place in the macro determinants do not have a direct impact on the city form. Instead, the way individuals are able to react to these determinants influence the outcome. It is retained that it is the actions of the individuals within the constraints put by the socio-economic processes that determine the city form.

In the era of rapid urbanization from 1950's up to the 1980's, the socio-economic processes in Turkey have presented a continuity, creating a certain pattern of urbanization organized by the behaving units in the society. In this era, various modes of organization of urbanization developed and reached maturity. These modes were oriented towards urbanization influenced by limited savings in the society and a low level of development of urban functions. The city form that emerged as the outcome of these processes was a compact form, rapidly spreading around the edges, and continuously getting denser in the inner districts. This growth pattern was determined by the constraints on urban functions determining their locations in and around the central city, and the motives of acquirement of urban land rent.

The macro determinants started to change after the 1970's and these changes gained momentum after 1980, enabling the introduction of new modes of



organization of urbanization by the behaving units in the society. Transformations in the macro-economic choices of the nation, reorganization of the legal and institutional framework on urbanization, and developments in the organization of transportation enabled certain functions to change their locational strategies and be located far from the central city and its near periphery. This interaction of macro processes and individual actions gave rise to a change in the growth pattern of the city. With the location of large industrial plants, organized industrial districts, and mass housing areas in the fringe, decentralization took place to a certain extent. However, the transformations in the macro determinants did not have all of the expected reflections on the actions of the behaving units. Side by side with the emerging processes, the actions of the behaving units that had characterized the era of rapid urbanization persisted, gaining new dimensions. This resulted in the filling up of the land between the decentralized settlements and the central city. The concomitant existence of these two processes of growth, caused the city to regain its compact form.

The transformations in the growth pattern of Istanbul between 1950 and 1990 will be analyzed in Chapter II. This analysis will start with the empirical illustration of the pattern of spatial distribution of population growth between 1970 and 1990. Then, the factors that determine the growth pattern will be analyzed with respect to the transformations that took place in the macro processes and the response of the behaving units to these transformations. The outcomes of the interaction of these two processes on the city form will be described. Afterwards, the city form that emerged as a consequence of these processes will be evaluated from a normative point of view. The criticism of the city form will shape the proposals on change.

In Chapter III, the contextual analysis of the micro mechanisms that act in the current growth pattern, that are on the way of regenerating a compact city form will be made. In this analysis, the mechanisms developed by behaving units driven by various motives, against constraints imposed on these units will be described. This description will be made in accordance with the motives of different behaving units behind unplanned development. The classification of such mechanisms, will be followed by the elaboration of these through case studies chosen from different parts of Istanbul. The strategy behind the choice of the case studies will be based on the classifications utilized in the description of different mechanisms.

A planning strategy for influencing the city form in the proposed direction will be developed in Chapter IV. The proposal will be on the creation of urban open spaces within the city, in the spaces between the decentralized settlements and the central city. This strategy will involve possible solutions for two problems; namely the prevention of unplanned developments and the creation of urban open spaces in the areas which constitute the focus of the thesis. Strategies on prevention of unplanned development will be counteractions to the mechanisms of unplanned development actualized by the behaving units in the society. Proposals on the means of creating urban open spaces on vacant land will aim at overcoming the constraints imposed on the implementation of such projects by the land ownership pattern, bottlenecks in finance, and the inconvenience of the planning organization.

## CHAPTER II

### THE GROWTH PATTERN OF ISTANBUL IN THE 1950-1990 PERIOD

The observation of the macroform of Istanbul in the 1990's reveal that, there are breaches from the compact central city in the peripheries, which leave open spaces within the city. These breaches have been generated by the recent location of certain urban functions far from the central city or by the growth of the city towards the older decentralized settlements. This form presents opportunities for planning in the way of criticizing the compactness of the huge central city, for lacking open spaces. The vacant land that remains between the central city and the decentralized settlements allows space for the creation of open areas within the city. However, the present form of the city, which inheres these vacant areas, should not be interpreted as a permanent form resulting from the decentralization tendencies of the urban functions. Rather, as will be claimed in this chapter, it is a temporary form that emerges at one time within the city's growth process. The growth pattern of the city may cause prevalence of different forms for different time periods. Also, a similar city form may emerge with the operation of different growth patterns. Likewise, the growth pattern of Istanbul, that displayed a contiguous expansion of the city towards the periphery in the 1950-60's, has gained new dimensions after the 1970's. The city has started to grow, through two processes, which are the decentralization process of certain urban functions and the process of development between the decentralized settlements and the central city. The growth pattern that worked in the 1950-60's formed the compact form of the city.

The present growth pattern, leads to the formation of the same form, although through different processes. From the point of view of planning that seeks to utilize the opportunity created by the existence of vacant land in the peripheries of the city, there is a necessity for intervention in the growth pattern. For such an intervention, the prerequisite is a full comprehension of the processes that determine this growth pattern.

The transformations in the growth pattern of the city are generated by the changes in the locational behavior of urban functions, due to the transformations in the macro processes in the society. The city form is determined by the actions of the behaving units in the society, within the constraints defined by broader social processes. The actions of behaving units are constrained by the macro-economic condition in the country, the legal-institutional framework for urbanization, and large scale infrastructural investments that affect the overall spatial organization of the city. These constraints may be named as the macro determinants of the city form. However, the macro determinants do not have direct effect on the development of the city. Rather, they define the domain in which the behaving units can act. Within this domain there are many alternative actions that the behaving units can actualize. In fact, the behaving units can present different modes of behavior under the same macro processes. For this reason, different city forms may emerge under the constraining effect of the same macro determinants. The direct determinants of the city form are the processes that act within these constraints. These may be named as the micro determinants of the city form.

The transformations that took place in the socio-economic structure, and the legal, institutional framework related to urbanization after 1980, enabled the emergence of new modes of organization of urbanization. Under the

transformed macro processes, behaving units could develop new behavioral patterns. These new patterns were in the direction of decentralization of certain urban functions. However, the transformations in the macro determinants giving grounds for decentralization did not bring about a decentralized city form. The reason was the persistence of the processes that had created the compact form until the 1970's, along with the new locational patterns.

In this chapter, the growth pattern of Istanbul between 1950 and 1990 will be analyzed. The analysis will start with the empirical illustration of the pattern of spatial distribution of population growth between 1970 and 1990. After delineating the growth pattern of the city through such an empirical observation, the factors that determine this pattern will be analyzed. This analysis, will be made in two levels, as fits the framework described above. First, the transformations in the macro processes in the society and how they act in determining the city form, will be analyzed. Then, the transformations in the general patterns of locational behavior, actualized by the behaving units will be examined. This examination will indirectly illustrate the degree in which the macro processes have determined the locational pattern, in other words, the actions of the behaving units.

There are two intentions behind the analysis of the growth pattern of Istanbul and its determinants. One is the prediction of the city form that Istanbul will reach if the present processes persist. This will enable a criticism of the predicted city form. Such a criticism will form the basis of the proposals for planning on the city form. The second intention of the analysis is providing inputs for developing a *planning strategy for the actualization of its proposals*. The proposed city form can be achieved by intervention in the processes that determine its emergence. Therefore, the analysis of the determinants of the city form will be made in terms of

the potentials and limitations they offer for planning. This analysis will be followed in the third chapter by the detailed analysis of the micro processes that determined the compact growth pattern of Istanbul in the last few years.

## 2.1. The Spatial Distribution of Population Growth in the 1970-1990 Period

The spatial distribution of population growth empirically illustrates the growth pattern of a city in a certain time period. The decline or rise that is observed in the population growth rate of each district in given time periods identifies the different zones in the city such as the central business district or the developing residential zones of the city. The growth pattern of the city in the process of expansion can be observed through such an empirical analysis.

In the analysis of the spatial distribution of population growth of Istanbul, the European and Anatolian Sections which present diversified patterns of growth have been taken separately. In each of these sections, zones involving settlements which present homogeneity with regards to the fluctuations in their population growth rates in the 1970-90 period have been identified. The zones identified with this respect have however, coincided with those that could have been identified with regards to their distances from the city center. Actually, the identified zones have also coincided with the zones which have been generated through leapfrog developments or through the development process between the decentralized settlements and the central city. The population zones are illustrated in Figure 2.1. The list of settlements involved in these zones and the detailed illustration of population growth rates of settlements are given in Appendix A, Table A.1., A2 and Figure A.1., A2.

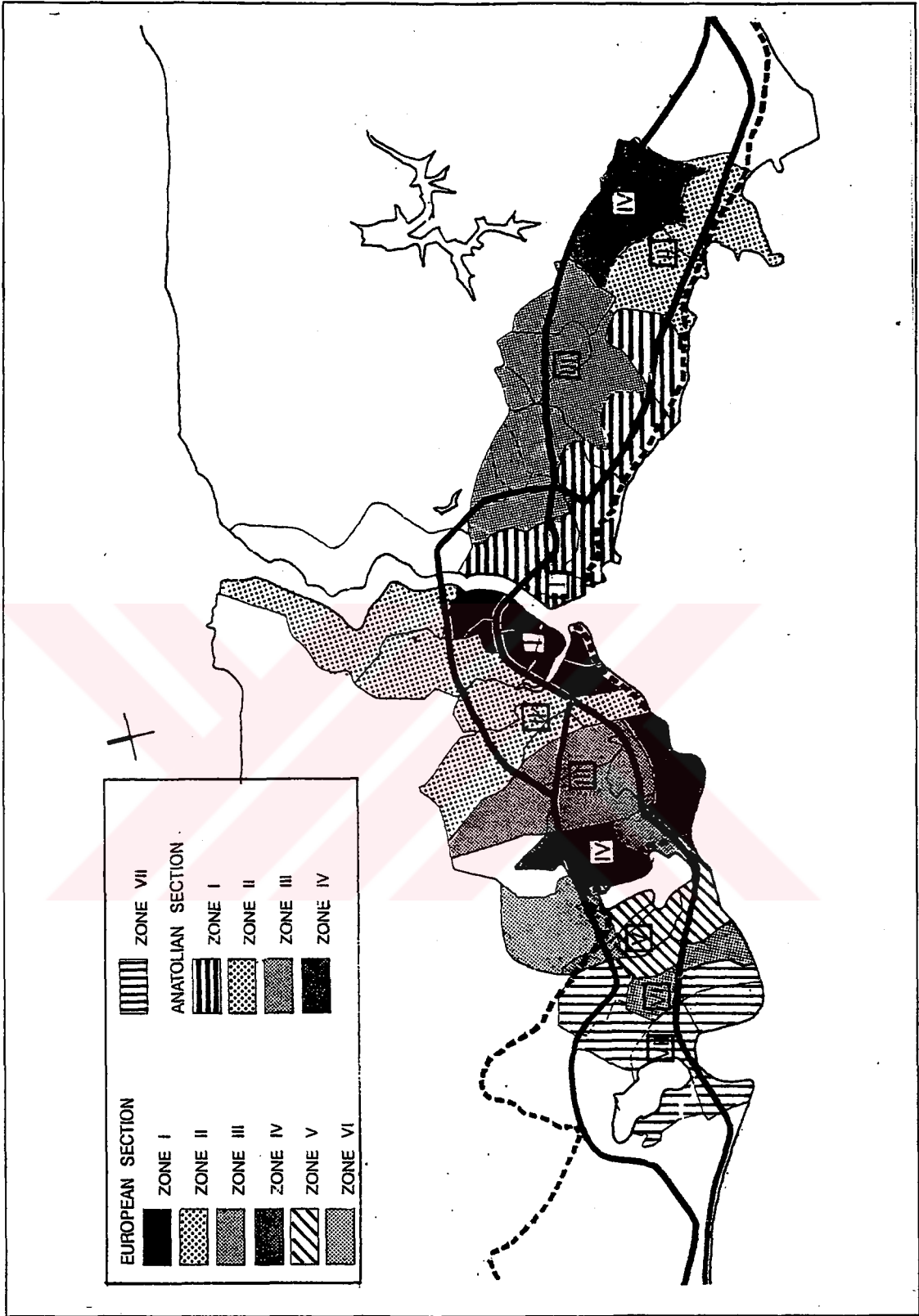


Figure 2.1. Population Zones

After the identification of population zones, the populations of these zones at intervals of five years.(1970-75-80-85-90) have been illustrated, indexed on 100 in the year 1970. The output of this analysis has enabled us to observe the growth pattern of the city in the process of expansion towards the peripheries. However, the information provided by the population statistics has to be coupled with observations in the city. This is because large scale construction activities are on their way in the fringes of Istanbul; a development which cannot be taken into consideration in the population statistics. The changes in the populations of zones in the European and Anatolian Sections in the 1970-90 period are illustrated in Figures 2.2 and 2.3.

In both the European and Anatolian sections, the populations in the inner zones that had developed in a compact form before 1970, have grown at low rates. After 1980, the emergence of decentralized settlements and development on land between these settlements and the central city have succeeded one another. The highest rates of population growth have been observed in these zones, presenting a sharp increase after 1980. However, the population growth patterns of the two sections are differentiated in the outer zones. The population growth in the farthest zones of the European section has not reached impetus yet, whereas the highest rates of growth in the Anatolian section take place in the farthest zones.

The spatial organization of growth has also been different in the two sections of the city. This difference stems from the difference between the forms into which the two sections had developed before the 1970's. Before this date, the European section had grown in a compact form, in the shape of concentric rings expanding at similar distances from the city center. The Anatolian section had grown in a different form. It had expanded along the E5 Highway and had taken a



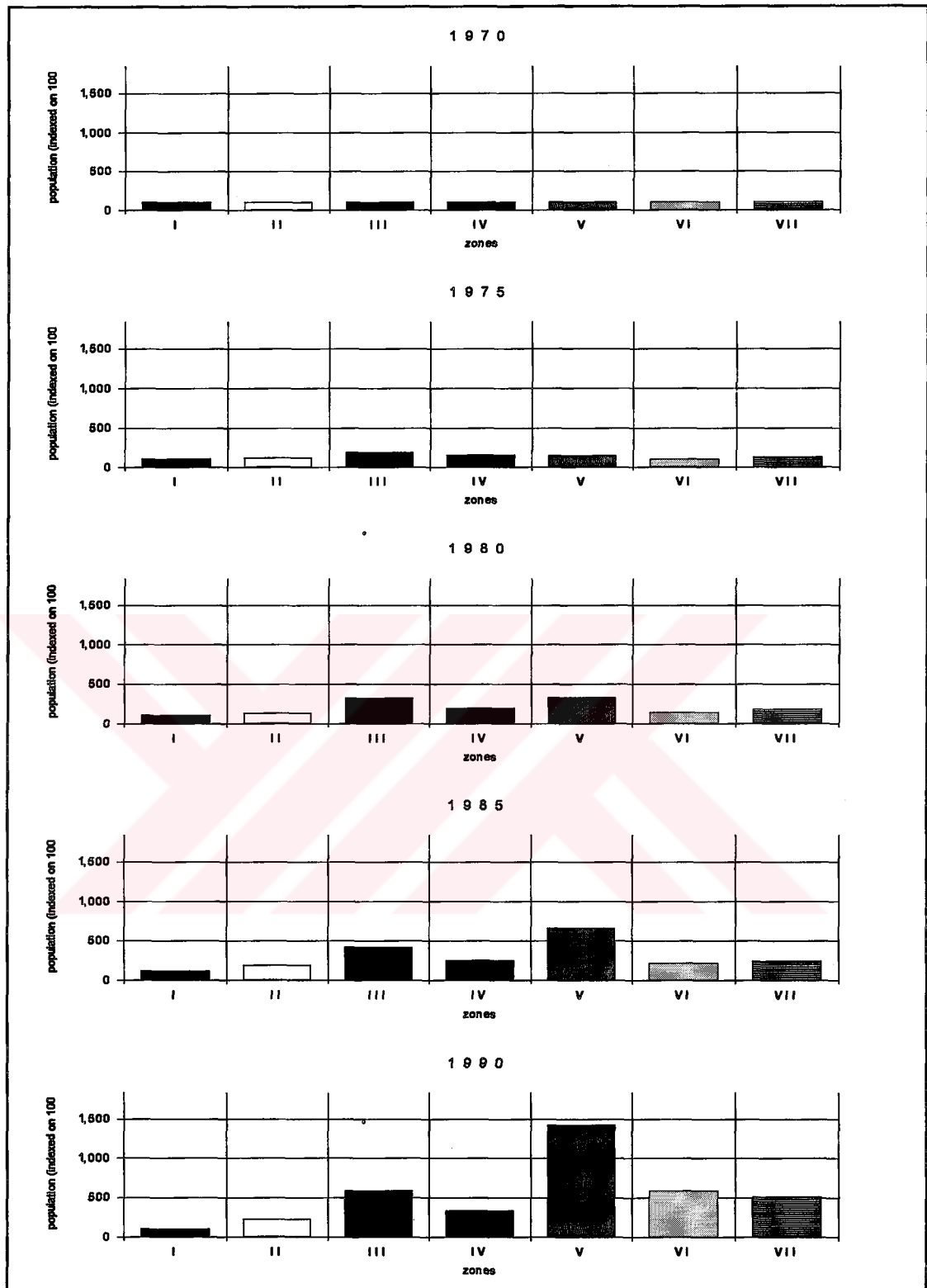


Figure 2.2. Population Growth of Zones in the European Section (1970-1990)

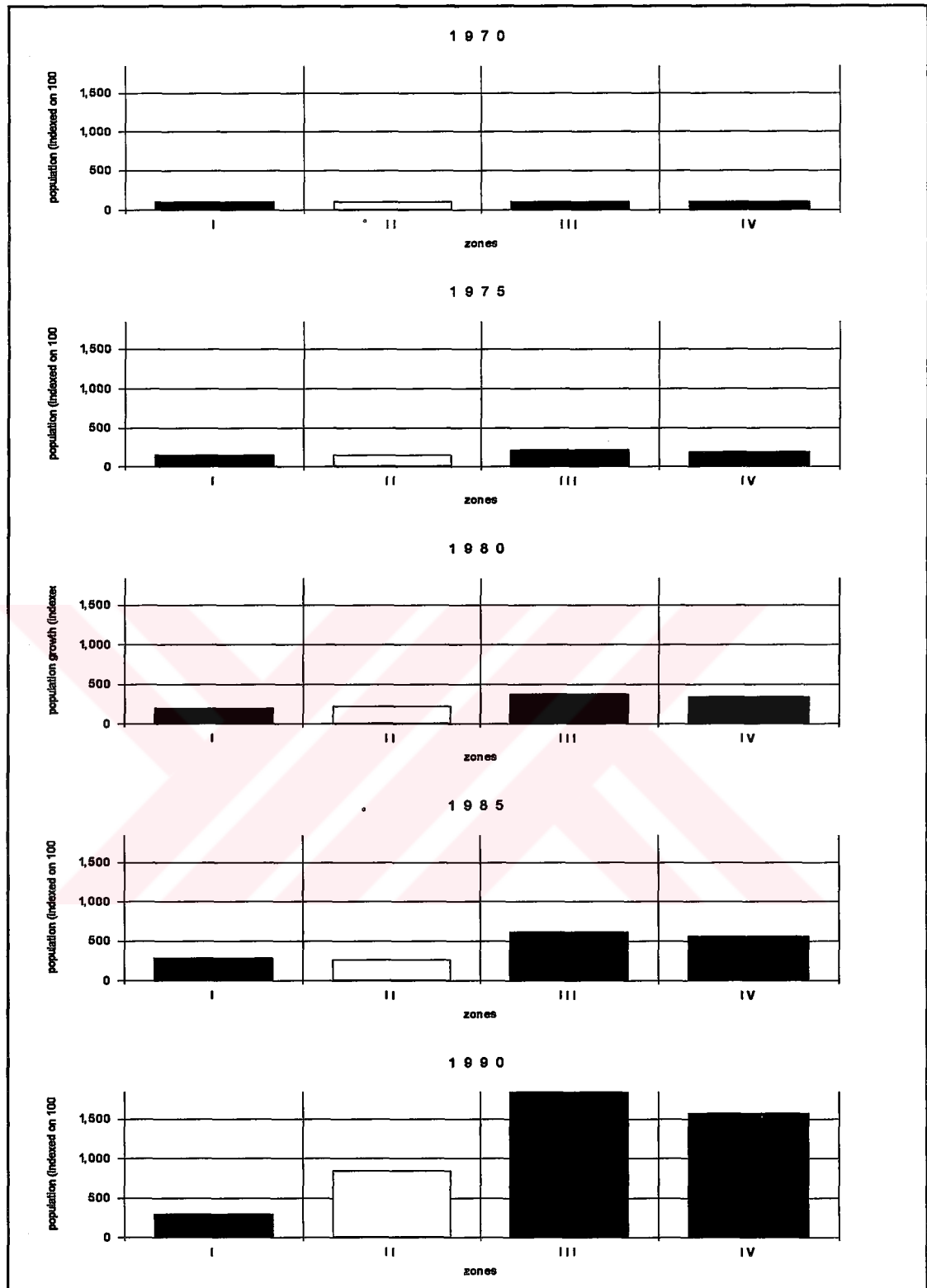


Figure 2.3. Population Growth of Zones in the Anatolian Section (1970-1990)

linear form. The differences in the former shapes of the developed areas in the European and Anatolian sections caused the differentiation of spatial organization of growth in these two sections after 1970. In the European section the city grew towards the west through the dual processes of decentralization and development on the land between these settlements and the central city; these processes taking place along south-north axes within similar distances from the city center. In the Anatolian section the city grew towards inlands through the same dual processes, taking place along the E6 Highway.

## 2.2. Transformations in the Processes Determining the City Form

Transformations that took place in the determinants of the city form will be analyzed with respect to the transformations that took place in the macro processes and the response of the micro processes to these transformations.

### 2.2.1. Developments in the Macro Determinants of the City Form

The macro processes that indirectly determine the city form, through their constraining impact on the actions of the behaving units, may be classified into three aspects. These are; the macro economic choices of the nation, the legal-institutional framework related to urbanization, and the macro decisions that determine the overall spatial organization in the metropolitan area. The macro economic choices of the nation put constraints on the actions of the behaving units, through determining the scales and inner organizations of urban functions. The legal-institutional framework defines the limits in which the urban functions can

actualize development on urban land. The macro decisions on the infrastructural system of the city direct the locational choices of urban functions by the utilities such system provides for them, and by the transformations they create on the land rent surface of the city.

Starting in the 1970's, especially after 1980, important transformations took place in these phenomena. The economic policies giving prominence to industrial development were abandoned to shift the weight to international commerce and monetary sector. Such policies were accompanied by others channeling large investments to urban areas. This shift caused the investments in the private sector which were formerly acting in the industrial sector, to enter the urban development sector. Through these transformations, the increase in the overall resources got transferred to the urban area. The transformations in the macro economic choices were accompanied by significant reorganizations in urban administration and planning legislation. Administration of metropolitan cities went through a reform and a new Development Law was issued. In this era, the construction of the Bosphorus Bridges and their related highways also effected the spatial organization of the city to a large extent.

In the following sections, the developments in the macro determinants and how they affected the city form will be examined. This analysis will cover two periods, approximated as the 1950-80 period and the period after 1980.

### 2.2.1.1. Macro Economic Choices of the Nation

The macro-economic choices of the nation can be described with respect to two factors. One is the "choices of the nation in the allocation of resources among sectors" and the second is the "capital accumulation through urban land rent".

In the 1950-93 period the macro-economic choices of the nation went through significant transformations. The protective, import substitution policies of the nation that prevailed before 1980 coupled with the allocation of most part of resources to the industrial sector were mostly abandoned after 1980. The abandonment of these policies together with other aspects of the stabilization policies implemented after 1980, brought about transformations in the private sector. The advantages of the industrial sector that existed within the import substitution policies disappeared, and the center of weight of new investments shifted to the other sectors of the economy which took state support. Urban development sector was one of these latter sectors.

The state policies of the 1950-80 period upon urban development, which had the objective of limiting public and private investments made in this area (overall resources were directed to the industrial sector) were changed after 1980. The transformations in the choices of the nation in the allocation of resources among sectors were accompanied by new policies channeling public and private investments into the urban development sector. These policies were reflected in the large increase in the amount of public investments made on the urban development area. The increase in resources transferred to the urban area, after 1980, were accomplished in two ways. These were, by the increase in resources

directly transferred from the center, and by the increase in resources of the municipalities.

The direct transfer of resources from the center was achieved through the establishment of the Public Housing Fund and the Mass Housing Administration with the Mass Housing Laws issued in 1981 and 1984. (Law No.2487 and 2985). This institution was responsible for the production or subsidization of mass housing, and the organization of national and foreign resources involving large private investments for the solution of problems of the housing sector. With this institution large amounts of resources were transferred into the urban development sector.

The increase in the resources of the municipalities was achieved by the enlargement of their tax shares in the national tax system. This reorganization consisted of both improvements in the resources transferred from the center and in the incomes of the municipalities themselves.

The increase in the resources of municipalities transferred from the center started with the cancellation of the municipal shares from some of the national taxes and the assignment of 5 % of the total national taxes to the municipalities in 1981. (1) This ratio was increased to 10.3 after 1984. Along with the improvements achieved nationwide, special attention was given to the largest city, Istanbul. The Law of the Bosphorus and the Law of Istanbul Water and Sewerage Administration enabled part of the resources accumulated in the center for use in urban areas to be used in these areas. These transfers financed substantial investments in Istanbul, directed to infrastructure and environmental improvement.

The own incomes of municipalities were improved through the increase in efficiency of the municipal taxes. (2) The more efficient taxes were assigned to municipalities and their base and rates were improved. The Real Estate Tax was given to the municipalities in 1986, (3) and new local taxes were added.

With these reorganizations made on the legal-institutional framework on urbanization, overall public investments directed to Istanbul increased substantially. Investments on large infrastructural projects such as transportation and sewerage and water expanded. In addition, the public supply of housing and urban services advanced significantly.

The transformations in the macro-economic choices of the nation and their concrete reflections in the amount of resources transferred to the urban area, had important impacts on the mode of organization of urbanization. In the 1950-80 period, the policies towards the limitation of resources directed to the urban development sector (direction of large investments to the industrial sector), had ended in the organization of urbanization by small investors. After 1980, the substantial increase in public investments and the policies channeling private investments to the urban area, ended in the emergence of new modes of urbanization directed by large investments. The spatial patterns organized by small and large investors differentiated. The small investors organized development in small scales, located in and around the central city, and the large ones organized development in large scales, located in the fringes of the city. The modes of organization of urbanization that has emerged under the constraining effect of the state policies, and their reflections on the growth pattern of the city will be analyzed in detail in the second section of this chapter.

A second significant aspect that had significant outcomes on the city form has been the importance of capital accumulation through urban land rent in the economy. In Turkey, acquisition of urban land rent makes up an important means of capital accumulation for all income groups in the society. This fact increases pressure on urban land and causes both intensification in central cities and growth of the city towards its peripheries without leaving open spaces. The reasons why land rent makes up an important sector of the economy are several.

The first reason, concerns the obstacles ahead of profitability in the productive sectors. Until the 1980's, the industrial sector which was protected by the import substitution policies of the state, provided opportunities for large investors. However, industrial investments carried risks resulting from the fluctuations of demand caused by the periodically changing income policies and the deficiencies in the credit mechanisms to compensate such risks. After 1980, opportunities in the industrial sector diminished even more, due to the policies of the liberal government of the time, oriented towards the abandonment of import substitution policies. By contrast, investment in land carried no risks. Real returns received from investment in land remained stable or increased except for the recession periods in which incomes fell to such an extent that demand on real estate decreased. This phenomenon is attributable to several characteristics of urban land as a commodity.

Urban land is defined by Tekeli (1988:10) as land having a location in the city, with infrastructure installed, and decisions given related to its use by the development plans. It is a commodity which is produced by the society through a series of processes. It is produced by the expansion of the city through the increase in population, the installation of infrastructure and planning by the public.



Each of these stages act to cause a rise in land rent of land in the process of the transformation of rural land into urban land. In the process of rise of land rent the land owner has no contribution. Consequently, investment on land generates returns without additional investments on it. The land rent rises with the costs paid by the society, in different ways. This results in the stability of returns received from investment on land, although returns from the other sectors of the economy fail sharply during certain periods.

The characteristics of land ownership institution in the society is another factor strengthening the tendency to invest in land. Land rent in Turkey is totally transferred to individuals without any effective intervention in it. So, the rate in which land rent can be acquired tempt many individuals to choose this alternative in their investments. The legitimacy of transfer of land rent to individuals will be discussed in the section about the characteristics of land ownership institution in the society.

The second reason, for the land rent sector to make up an important sector in the economy is its being the only area of investment for the majority of people in the society. The unbalanced distribution of income, in other words, the concentration of capital in the hands of a small part of the society, leaves a large part out of access to capital. In fact, the only way of access is supplied by the land rent sector. The low, middle, and even upper middle income groups in the society can invest in land through the different modes of supply of land and housing. The positive role played by land rent in the distribution of capital to different income groups in the society spreads the activity to the whole society and increases the importance of the sector in the economy.

The importance of land rent as an important means of capital accumulation in the society, has crucial consequences on the city form. The functioning of urban land ownership as a means of investment increases the demand on land by adding a new dimension to the basic function of land that is to involve urban functions. This new dimension is the acquirement of land rent, a fact that drives the behaving units to actualize development on each single plot of land in the city, utilizing the maximum possible building rights. This kind of motivation behind development on land, creates additional difficulties for planning that aims to guide land use. Planning intervention for the prevention of developments (not in conformity with open space decisions in plans) that are motivated by the acquisition of land rent, necessitates effective planning tools oriented towards the restriction of land rent transfer to individuals.

#### 2.2.1.2. Decision-Making Processes in Istanbul

The decision-making processes in Istanbul can be described with respect to three factors. These are the "organization of urban administration", the "political decision-making process in urban areas", and "planning".

In the 1950-90 period urban administrative structure went through two major re-organizations. The first was between 1956 and 63 when the joint administration of urban areas was abolished, (4) and provincial and municipal administrations were separated. After the separation of municipal administration from the central government local municipalities displaying a disconnected structure were established in Istanbul. Among these municipalities which were independent of each other in their decision making process no institution providing

coordination existed. In this era, planning authority was taken on by the central government (Ministry of Reconstruction and Resettlement). The second reorganization was made between 1981 and 84 in which the disconnected local municipalities were gathered under an institution which would provide coordination of their decisions. In this direction a two-tier system was established involving the greater city municipality and district municipalities. This reorganization was accompanied by the transfer of planning authority from the central government to the municipalities.

From the point of view of planning that aims to shape the metropolitan macroform, the disconnected structure of urban administration that prevailed in the years between 1963 and 1980 created the problem of controlling local decisions to be in conformity with metropolitan plan decisions. Within the disconnected structure of decision making, attempts to implement planning strategies related to the whole metropolitan area, remained ineffective. Planning activities of the planning agencies of the central government and the Istanbul Municipality which promoted the comprehensive planning of the metropolitan area did not have the grounds for implementation. The administrative structure directed the growth of the city through piecemeal decisions given at the local level.

From the point of view of planning that aims to guide the metropolitan macroform, the two-tier system created potentials for the solution of problems arising from the disconnected structure of the urban administration. The two-tier system aimed to achieve two principles. One was the integration of decision making authority on aspects related to the metropolitan area, within a single institution (greater city municipality). The other was the provision of a democratic decision making process through localized institutions (district municipalities).

Through these principles, the two-tier structure of organization of urban administration prepared the grounds for the direction of the metropolitan macroform. However, another arrangement in the institutional framework made in this period handicapped this goal. That was the abolishment of the Istanbul Planning Office. In the previous era, the disconnected administrative structure presented an obstacle to the implementation of the planning activities of the Metropolitan Planning Office. In the current era, upon the removal of the planning agency, the planning activities themselves are halted in spite of the improvements made in the administrative structure.

The two-tier system provided improvements in the control and coordination of local decisions. However, these improvements were evaded in some parts of the city through mechanisms of escaping this control. The legislation made possible the establishment of local municipalities outside the adjacent areas of the Greater City Municipality as well as in settlements within the neighboring area of the Greater City Municipality under certain conditions. These municipalities were out of the jurisdiction area of the greater city municipality in plan approval authority, as they had the master planning authority independent of the control of the Greater City Municipality. Through this mechanism, the newly developing settlements in the peripheries of the city were able to escape the control on local decisions, the control that the two-tier administrative structure had aimed at.

Decisions on urban land are made through a political process. The actors in this process are the various interest groups in the society. These groups may be classified as consumers of urban functions, land owners-developers who act to fulfill their interests on urban land, and urban administrators who want to use their decision making authorities in the direction of gaining political power. In the

process of determination of the use on land, these groups influence the decisions through their political power reflected in different modes.

Local politicians are interested in maintaining their political power by the transfer of capital to the interest groups in the society. However, the scarcity of direct resources handicaps such a transfer. Thus, the scarcity of direct resources to be transferred, urges urban administrators to transfer capital to the interest groups, through the distribution of building rights on land, in other words, through providing them with land rent. In this direction, urban administrators develop mechanisms to disregard the planning regulations that they themselves are responsible for administering. This goes on under the constant pressure exerted by local interest groups.

The structure of urban administration has a crucial importance in determining the extent to which land use decisions are influenced by pressures exerted by interest groups. As decision making institutions are centralized, the influence of local groups on decisions decrease, however, the scope of populist decisions by administrators increase (as in the case of general amnesties directed by the central government). As the decision making institutions are localized, the influence of local groups and the involvement of the bargaining process in decision making increase, however, their impact becomes confined to a limited area. In the 1950-80 period, the centralized decision making authority (planning authority taken on by the central institutions), however, has not prevented the influence of local mechanisms on decisions, as routes were held open for development through local plans, approved by the spread autonomous municipalities. After the transfer of the planning authority to the municipalities, and the reorganization of the urban administrative structure in two levels, improvements have taken place in the way of

a balance between the two contradicting goals, which are democratization and isolation of decisions from local interests.

There are two general modes in which planning can be involved in the political decision making process. The first mode is involvement in the process as an external factor. In this mode, planning decisions constrain the actions of the behaving units by putting regulations in accordance with the objective urban planning principles. The efficiency of this planning approach relies on the power of the planning institution in the society. The second mode is participation of planning itself in the political decision making process. In this mode planning can play several roles. It may act as a negotiator among the interest groups may advocate the interests of a certain group, or the like.

Within the present development planning approach, planning is involved in the decision making process in two ways. Development planning either, constrains the actions of behaving units, or it functions as a tool for the legalization of decisions made within the political process. The first involvement proves to be inefficient, faced with the interests of different groups in the society. In fact, planning is eliminated from the decision making process by mechanisms of unplanned development permitted by urban administrators or utilized citizens. In the second type of involvement planning is not an active agent of the decision making process, but only functions to transfer decisions into legal documents.

Planning that is involved in the decision making process through such modes, is effective in determining land use patterns. However, its effect is not direct in terms of getting its decisions accepted. Rather, planning effects the use on land indirectly by constraining the actions of the behaving units within a domain of

alternatives. Thus planning decisions are reflected in space after getting distorted in the interaction between planning and the actions of the behaving units.

The way planning constrains the actions of the behaving units can be evaluated according to its approach to new developments, and to the unplanned developments that has already taken place.

The approach of planning to new developments in the 1950-90 period has been characterized by a passive mode of intervention based on imposing restrictions on the actions of the behaving units themselves. Within this mode of intervention, the developments have been directed by two mechanisms. One is planning that puts limits to the actions of behaving units, the other is the actions of the behaving units. Development has been actualized by the behaving units under the limits put by development planning.

The 1950-90 period can be separated into two periods with regards to the urban planning legislation. In the first period planning authority was taken on by the central government, directed by the Development Law No.6785. In the second period that may be approximated as after 1980, the planning authority was transferred to municipalities, and the development law was replaced with a new one (Law No. 3194).

In the first period, planning activities were carried out by the Ministry of Reconstruction and Resettlement, under the jurisdiction of Development Law No.6785. This period was characterized by the formulation of the "planning" concept, under the influence of the "planned development" and "centralization" trends of especially the 1960's. The planning legislation gradually evolved, with the

introduction of concepts as the master plan, (5) and metropolitan planning, (6) and with continuous modifications aiming to broaden the areas under the control of the planning agencies, (7) or the authority area of plans. (8) However, these efforts proved to be only partially efficient, under the problems rooted in the structure of urban administration and in the development planning approach to intervention in actual developments. Also, the centralized decision making process presented problems, arising from the inability of a single institution to produce plans which were rapid enough to keep up with the actual developments, and which were relevant to the peculiarities of local areas.

In the second period, planning activities were led by the municipalities, under the jurisdiction of Development Law No.3194 which replaced the former law. This period was characterized by the decentralization trends in decision making. The transfer of planning authority from the central government to municipalities and the establishment of the two-tier system involving municipalities in two levels were changes in this direction. Within the reorganization of urban administration, the organization of planning activities also got transformed. The law related to the administration of the municipalities of greater cities (No.3030), and the development law, created a hierarchy in the preparation and approval of plans in different scales, going from metropolitan planning, down to local planning scale. Within this hierarchy greater city municipalities were authorized to make and approve of city master plans, and they had the authority to approve of the local plans made by district municipalities. Through this hierarchy, local peculiarities were expected to be maintained in local plans made by district municipalities while the metropolitan form was expected to be controlled by greater city municipalities. However, the goals of such a reorganization were achieved only partially, because of the persistence of problems in the approach of development planning to



intervention in actual developments, except for some newly developing efforts promoting the active intervention of planning in the development process of the city. In this period, the efforts that had started in the former period, to broaden the areas under the control of planning agencies continued. (9)

All over the second period, planning approach to unplanned developments has been in the way of accepting them as accomplished facts. For many times in the period, the already constructed unauthorized buildings have been legalized and measures have been taken to prevent any future ones. However, this approach has been loaded with contradictions in itself, since legalization activities have accelerated unplanned developments by heightening such expectations. Because of this approach, little distinction has been left from the point of view of citizens between planned and unplanned development.

The legislation providing for such an approach has gradually broadened its scope, parallel to the diversification in the modes of unauthorized development. The first forms (until the 1980's) of the legislation related to unauthorized buildings involved the legalization of gecekondus situated on public lands, and the prevention of the future ones through taking measures for the supply of the housing needs of gecekondu dwellers. (10) In this period, special measures were taken for the areas around the Bosphorus Bridge and the related highways. Gecekondu demolition authority in these areas was given to Ministry of Public Works. (11)

Parallel to the diversification the modes of unauthorized development, building amnesties covering gecekondu areas were broadened after 1980, to include other housing areas (unauthorized buildings within the planned stock,

unauthorized buildings on shared-ownership, etc.) and industrial buildings as well. (12) In addition attempts were made to facilitate the bureaucratic process in the legalization activity. The legalization of unauthorized buildings in areas which had master plans was simplified and in areas where no plans existed the "Upgrading-Development Plans" were introduced. (13) In this period, special arrangements were made for the control and prevention of unauthorized developments in the Bosphorus. (14)

The permissive approach of planning to illegal developments, was one of the factors responsible for the sprawl of the city around the edges. The attempts for the prevention and demolition activities that were provided in the legislation became ineffective owing to the political decision making process and economic and the technical constraints on such activity.

#### 2.2.1.3. Urban Land Ownership

The characteristics of urban land ownership as a means of capital accumulation and the repercussions the urban form were discussed in the section related to capital accumulation through urban land rent (2.1.1.3.). The fact that urban land ownership is a secure means of investment, increases pressures on urban land, and causes a continuous intensification in the already settled areas and the sprawl of the city around the edges.

The expectation of land rent acquisition is totally met within the land ownership system in Turkey. This system enables the total transfer of land rent to individuals. In this section, the legitimacy of transfer of land rent created by the

society to land owners, and the existing legal framework to restrict this transfer will be discussed briefly.

Urban land is produced by the society through a series of processes (Tekeli,1988:10). These are; the expansion of the city through population growth, and the installation of infrastructure and planning by the public. Each of these processes create a rise in land rent, to which the land owner has no contribution. However, the land rent is totally received by the land owner. This fact contradicts with the basis of any ownership system, defined by Tekeli (1988:10) as, "an ownership system should distribute rights among individuals in the society in such a way that each individual should have just reasons for those that they own". The illegitimacy of the transfer of land rent to land owners lies in this fact.

In Turkey, the existing mechanism for the limitation of land rent transferred to land owners is the Real Estate Tax. However, this tax is totally inadequate with regards to the goal of transferring part of the land rent to the public. The first reason why the tax is inadequate is its rate. The small rate of the tax within the value of land, ends in the minimization of the cost of land ownership. Consequently, the tax becomes ineffective in preventing the acquisition of absolute rent. The second reason why the real estate tax is ineffective is its basis. (15) The inefficiency of the basis taken in determining tax rates in different locations, ends in a deficiency of covering the changes in value due to transformations in the relative locations of land, in other words, the differential rent.

The ineffectiveness of the Real Estate Tax, which is the only means of transferring land rent to the public, shows that in Turkey, land rent created by the society is totally transferred to land owners, in spite of its illegitimacy. This

characteristic of the land ownership system ends in the total ineffectiveness of any state intervention on the earnings created from the manipulation of land. Within this inefficiency, a large real estate sector operates on land in cities, channeling the rapid growth of the cities towards the periphery. Rapid development on the land between the decentralized settlements and the central city, are organized by the agents in this sector. Serious measures have to be taken towards the prevention of such actions. These measures will be discussed in the fourth chapter, in which a planning strategy is proposed for the creation of urban open spaces.

#### 2.2.1.4. Large Infrastructural Investments Effecting the Overall Spatial Organization in the City

The main infrastructural investment that has affected the overall spatial organization of Istanbul is the construction of the Bosphorus Bridges and the E5 and E6 Highways. These roads make up the backbone of the transportation network in Istanbul, and highly determine the city form. The transportation network has been an important determinant of the compact growth of the city, although during some periods, it has enabled decentralization of the city. Two aspects of the backbone are significant with regards to their impact on the city form.

The first aspect that effects the city form, concerning the main arteries of the transportation network, is related to the mode of transportation. The fact that this backbone provides transportation with motor vehicles, causes the city to grow into a compact form. Highways facilitate such growth due to several reasons. The first reason is connected with their impact on the land rent in areas along them. Land rent in these areas rises rapidly, and the high pressure on land entails their

immediate development. The second reason is tied to the modes of service they provide. Highways allow uninterrupted urban functions along them. The spatial organization that such a system tends to create is a contiguous one. As has been experienced in the first highway (E5), highways are converted into inner city roads, bringing about the rapid expansion of the city along them, soon after their construction. However, the highways in Istanbul have also worked to enable decentralization of certain urban functions. The consumers of urban functions who want to be in close proximity to the city and additionally to the national market also seek to benefit from the low land rent in the fringe of the city. Highways have enabled these consumers to settle with leapfrog developments away from the central city. The increase in private car ownership which is parallel to the dominant mode of transportation in the country has supported such a trend. However, decentralization generated by the contribution of the highways, has soon been transformed into a compact form. The highways have also contributed to the regeneration of the compact form, through the effects of their formerly described characteristics.

The second aspect concerning the backbone of the transportation network in Istanbul, whose impact on the city form is significant, is related to its shape. The backbone consists of two parallel highways, extending parallel to the shoreline in the Anatolian and European sections. This shape of the main transportation arteries tend to generate a compact form if effective measures are not taken to create green belts in the city. The settlements that are situated along the highways extend inlands towards the next highway. In Istanbul, such a phenomenon has already been experienced, with the expansion of the newly developing areas mostly along the roads connecting the two highways.

The characteristics of the transportation network have been a mainly determining factor behind the growth pattern of Istanbul. They have contributed to the generation of the dual processes already described. On the one hand they have contributed to the decentralization process, through the crucial utilities the highways provide for the functions that tend to locate far from the central city. On the other hand, the highways have contributed to the regeneration of the compact form, by pushing up the land rent levels in the surrounding areas, and by their uninterrupted mode of serving the functions along them.

#### 2.2.2. Developments in the Micro Determinants of the City Form

In the 1950-90 period, the locational behavior of urban functions got transformed parallel to the transformations in the macro processes in the society. However, transformations in the macro processes did not reflect in the locational behavior of behaving units totally as expected. The reactions of the behaving units to the new constraints put by the transformed macro processes produces unexpected results. The changes in the urbanization policies of the state, urban administrative structure and the planning legislation after 1980, took steps in presenting a convenient framework for the decentralization of cities. However, such reorganizations made in the macro level, were not total determinants of the growth pattern. In spite of such policies, signs for the growth of the city into a compact form were already seen. This was attributable to the fact that, the growth pattern is not directly determined by the macro processes. The micro processes that act within the constraints put by the former determine the growth pattern of the city. The mutual interaction of these processes led to diversified growth patterns in the 1950-90 period. In this section, these patterns and the city form that they gave rise

to will be analyzed. Figure 2.4. schematically illustrates the growth pattern of Istanbul in the 1950-90 period.

#### 2.2.2.1. Location of Urban Functions in and Around the Central City - Contiguous Growth of the City in the 1950-80 Period

Urban functions tended to locate in and around the central city in the 1950-80 period. This tendency was manipulated by the constraints put by the macro processes in the society. The limited share assigned to urbanization in the allocation of national resources, the disconnected nature of the administrative structure and the characteristics of the planning practice all acted as such constraints on the locational behavior of urban functions. Within these constraints original modes of organization of urbanization emerged and directed the growth pattern of the city. In this period, with the absence of large investors in the urban area, urbanization was actualized by small investors. These small entrepreneurs were driven by the motive of acquiring land rent, finding a suitable ground for their actions in the piecemeal decision making process directed by the administrative structure and the planning practice.

Two main factors constrained the locational behavior of developments organized by small investors. One factor was related to the scale of development that took place at one time. The small investment capacity of these entrepreneurs enabled them to organize development only in small scales (a few buildings). Such developments were highly dependent on the infrastructure and services provided by the public in the central city as they themselves could not provide such facilities. This fact restricted the locational behavior of urban functions in and around the

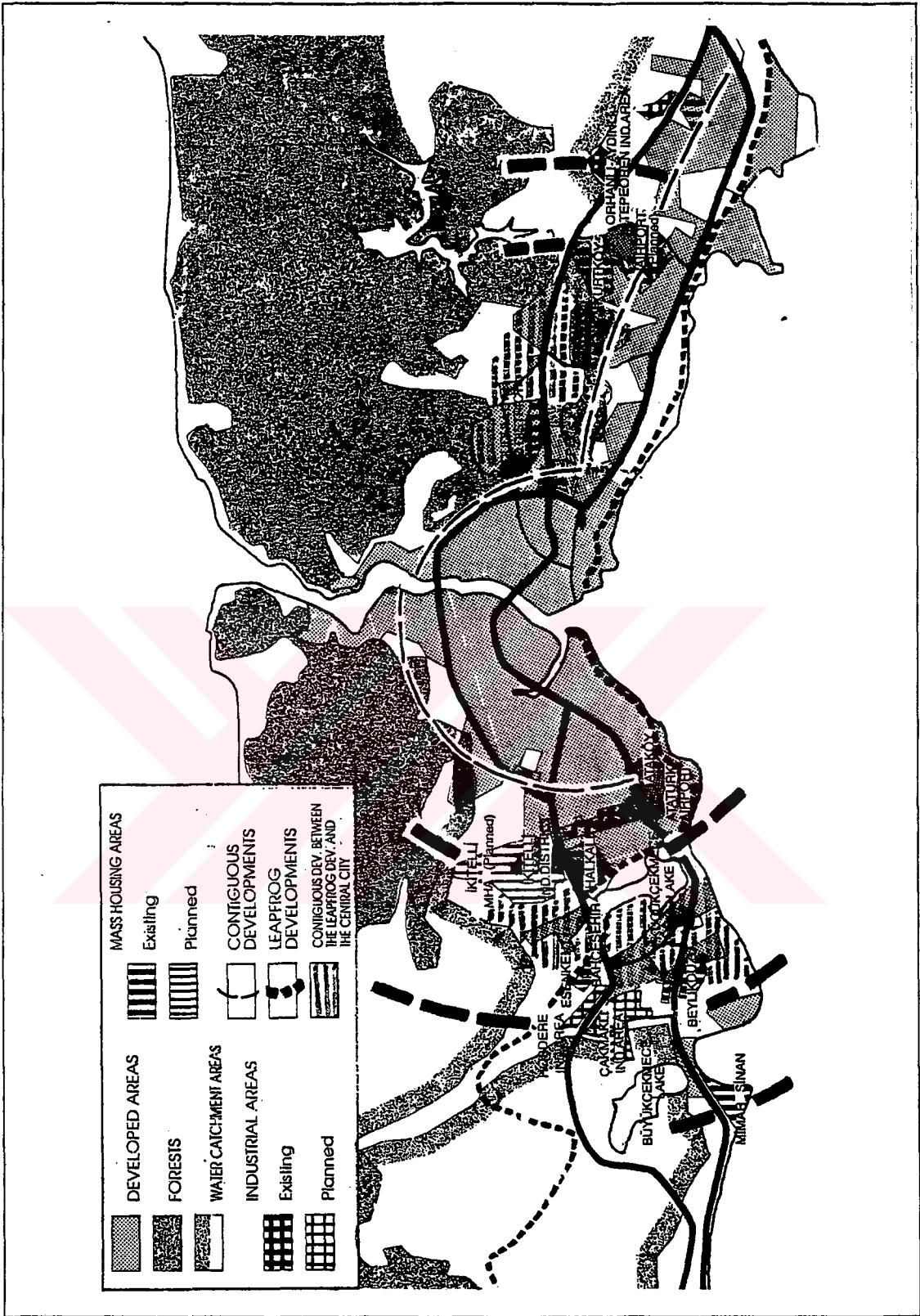


Figure 2.4. Growth Pattern of Istanbul in the 1950-93 Period



central city. The other factor was related to the mode of subsistence of small entrepreneurs. The subsistence of small entrepreneurs was based on acquiring land rent, after sharing it with land owners. This fact confined their actions in and around the central city, where land rent was high enough to rationalize their action.

The actualization of development by small investors produced a contiguous growth pattern. In other words, the city grew by the addition at a time of only a few blocks attached closely to the central city. Through this pattern, the city grew into a compact form, expanding towards the peripheries and intensifying in the inner districts.

Istanbul grew through such a pattern until the 1970's. It expanded around the edges by the extension of the industries and housing areas towards the periphery, following each other. In the European section, the gecekondu zones around the oldest districts in the inner zone, developed in this period, following the relocation patterns of industries. In the Anatolian section, settlements around the inner zones, and along the E5 Highway developed in the same manner.

#### 2.2.2.2. Location of Certain Urban Functions in the Fringe of the City - Discontiguous Growth of the City After 1980

Certain urban functions tended to locate in the fringe of the city after the 1970's. This new tendency appeared as an outcome of the transformations that took place in the macro processes in the society. The abolition of the policies supporting the industrial sector, the consequent increase in the resources allocated to urbanization, the reorganization of the urban administrative structure together

with the planning legislation and the improvements in the transportation network all acted to generate new modes of organization of urbanization. After such transformations, new modes organized by large investors, both in the public or the private sector (large firms, cooperative organizations), entered the urban development area.

The locational behavior of developments organized by large investors was constrained by a factor related to the large areas required by such developments. Lack of space and high land prices in and around the central city put barriers to the location of large scale developments in these areas. The same requirement imposed their location in the fringe of the city where large areas existed and the land prices were low. This constraint was indicative of the basic motive behind decentralization, which was the avoidance of land rent.

The constraint on locational behavior of small investors put by the attachment to the utilities provided in the central city did not exist for large investors. Large investors were capable of organizing development involving the simultaneous construction of infrastructure and urban service areas. Such developments were in the form of self-sufficient new settlements whose dependency on the existing urban infrastructure and services was less than those organized by small investors.

The transformations that took place in the macro processes offered several opportunities for the location of urban functions in the fringe of the city. One opportunity was offered by the large amount of public subsidies directed to such developments. Such subsidies introduced feasibility for large scale developments organized by cooperative organizations or large firms. Another

opportunity was offered by the improvements in the transportation network of the city. The construction of the first and second highways connecting the decentralized settlements with the central city or the national/international markets, and the increase in private car ownership provided for the changes in the space-time matrix, and therefore improved the ability of functions to settle far from the central city.

The organization of development by large investors gave rise to a discontinuous growth pattern, that is to say, to the growth of the city by the addition of new portions in the fringe, with leapfrog developments. So, decentralization was achieved to some extent through this pattern.

One fact needs to be mentioned at this point. This is related to the decisive influence of public investments in the process of decentralization. Since the 1970's, public investments have been predominantly responsible for the development of organized industrial districts or mass housing areas in the fringe. In fact, public resources have mostly financed such developments through land expropriations, and effective crediting mechanisms. The urban development sector has not yet constituted a profitable sector for the large private firms in cases when such measures have not been taken by the state institutions. Consequently, the patterns of decentralization that took place in Istanbul closely corresponds to the development of planned industrial districts and mass housing areas, dating back to the 1970's.

The above described decentralization process reflected in the city space, in various forms. Three types of urban functions shifted to the fringe. These

were, large industrial establishments, organized industrial districts, and mass housing areas.

In the European section which formerly grew with the expansion of the city towards the periphery in all directions, two leapfrog developments took place after the 1980's, having roots in the 1970's. The first zone involved the Ikitelli Organized Industrial District and the Halkali Mass Housing Area located on both sides of the TransEuropean Motorway. This zone was established by the state through the expropriation of land, installation of infrastructure, and subvention of constructions. Both the industrial district and parts of the housing area are still under construction. The initiation of these developments caused the extension of the zone towards the south, along the road connecting the TEM with the E5, and ended in the establishment of another industrial district. The zone is also planned to extend towards the north by the establishment of the Ikitelli Mass Housing Area, on the land which has been abandoned by the military. The second zone involved the Çakmakli and Hosdere Industrial Districts and the Beylikdüzü Mass Housing Area located on both sides of the E5 Highway, and between the two highways, along the road connecting them. The development of these areas were also directed by the state institutions. Development of the Çakmakli district has already started whereas, that of the Hosdere district shows little such signs. The Beylikdüzü housing area is for the most part under construction.

In the Anatolian section a leapfrog development took place after the 1980's. This zone involved the Orhanli, Aydinli, Tepeören Industrial Districts, and the Kurtköy Mass Housing Areas. The planned airport may be conceived within this zone. The zone is located on both sides of the TEM, and between the two

highways, along the road connecting them. The industrial districts are almost completed whereas most part of the mass housing area is still under construction.

The decentralization process made up one of the processes that characterized the growth pattern of Istanbul after the 1970's. However, another process also acted during the same years. This process was development of the land between the decentralized settlements and the central city.

### 2.2.2.3. Location of Certain Urban Functions Between the Decentralized Settlements and the Central City - Return to the Compact Form

Concomitant with the process of decentralization, urban functions tended to locate between the decentralized settlements and the central city. This tendency was shaped by the motive of acquiring land rent, that had risen with the development of the decentralized settlements. Development in these areas were organized by both small and large investors which had different modes of modes of organizing development. In contrast with the developments in the fringe, developments that took place in these areas were mostly unplanned.

Developments on the vacant land between the decentralized zones and the central city are under way.. This process is recognized on the land both in the European and the Anatolian sections of the city. In the European section, developments in the large vacant areas in the Haramidere Valley, falling within the Kiraç, Kavakli, Yakuplu Village borders have started, through unplanned developments organized by land owners, developers and the municipalities

themselves. In the Anatolian section, the same sorts of developments have started, in the forest and water catchment areas of the Ömerli and Elmalı Dams, extending along the TEM. Development spreads in these areas towards the decentralized industrial and mass housing zones situated in the east.

In spite of the rapid development that takes place on the vacant land between the decentralized settlements and the central city, there still remains opportunities for the creation of urban open spaces in these areas. In order to utilize this opportunity effective planning strategies have to be developed. The development of these strategies necessitate the full comprehension of mechanisms of unplanned development on these lands. In the following chapter, these mechanisms will be analyzed in detail. However, before going on with the analysis of the micro mechanisms, at this point we should go into the evaluation of the city form that will be the result of the current growth pattern of Istanbul.

### 2.3. Normative Evaluation of the City Form

The city form that the current growth pattern of Istanbul will eventually generate is a compact form spread on a large area. As a matter of fact, this form has prevailed since the 1950's, taking different forms for certain time periods. The 1980's have been one of these time periods in which the city form has been transformed into a different shape. In this period, it has taken a decentralized form with breaches from the central city leaving unbuilt areas within. However, developments are going on in the unbuilt areas, and the processes generating these developments have started to show the signs of return to the former compact form spread on a larger area. This compact city will be extending on the natural

reserves of the city such as the water reserves and forest areas, leaving no open spaces within.

The predicted city form that is outlined above is not inevitable. It can be changed through planning intervention in it. However, any intervention in the city form firstly requires the criticism of the existing form. The criticism of the city form, accompanied by the evaluation of its alternatives will make the basis of the proposals of any planning intervention.

The evaluation of alternative city forms together with that of the existing one can be made with respect to certain criteria. These criteria can be classified as those related to the quality of urban life, and those related to its cost.

The quality of urban life that a certain city form creates can be evaluated according to the physical and mental health conditions, and the level of integration that it creates among the citizens. The physical and mental health conditions of citizens are related to the levels of air and water pollution, and the level of provision of recreational facilities in the city, which are all determined by the amount of open spaces within the city. So, the amount of open spaces that a city form allows is an important criterion for its evaluation according to the quality of urban life.

The city form affects the level of integration of citizens by the level of accessibility it provides among different parts of the city. Accessibility among different parts of the city is related to the areal size of the city together with the shape and efficiency of the transportation network.

The costs of urban life that are effected by the city form can be classified into two, namely, the costs of provision of infrastructure and services and the costs of daily transportation. The costs of provision of infrastructure and services are closely related to the city form. The costs of transportation are related to the commuting distances between residence and workplace. The commuting distances are determined by the areal size and the distribution of functions in the city.

The compact form of Istanbul which has prevailed until the 1980's, and is predicted to be regenerated through the current growth pattern of the city affects the quality and costs of life in the city.

The compact city which expands on the natural reserves of the city without leaving open spaces has created significant air and water pollution in the city, in addition to the low level of provision of recreational facilities. The leapfrog development of new settlements of the city after 1980 may be predicted to have decreased the burden on the central city in terms of air pollution. However, the rapid development that takes place between these settlements and the central city may soon remove this positive effect. In addition, such developments that take place on the water catchment areas of the main water reserves -Büyük Çekmece, Ömerli Drinking Water Reserve, pollute these to a large extent. The extension of developed areas of the city without leaving open spaces minimizes the access of citizens to the natural environment.

The large areal size of Istanbul, continuously expanding through the dual processes of decentralization and development between the decentralized settlements and the central city decreases the level of accessibility among different



parts of the city. The shape and degree of efficiency of the transportation network adds to the negative impacts of size. The linear form of the western and eastern peripheries of the city, extending along the E5 and E6 Highways increases further the distances between peripheral settlements and central city, in comparison to a radial form which would shorten such distances. As a matter of fact, distance may not be by itself an indicator of accessibility. An efficient transportation network and technology may decrease the effect of spatial distance on the time distances. However, in the case of Istanbul, the heavy traffic on the E5 and E6 Highways generated by excessive demand for transportation on these roads handicaps the positive effect of transportation technology on the time distances.

In the 1950-80 period, the compact form of Istanbul may have decreased the costs of provision of infrastructure and services in the city (not taking into consideration the supply processes of these, that have increased their costs). However, after 1980, with the decentralized locations of industrial plants, industrial districts and mass housing areas, such costs increased.

The large areal size of Istanbul increases costs of transportation for citizens. However, the pattern of distribution of functions in the city since the 1950's has modified the extent of this increase. In the 1950-80 period two factors related to the structure of the city have reduced the cost of transportation for the citizens. Firstly, in this period, industries and the residential areas of the industrial workers have settled in close proximity, having followed the extension of one another towards the periphery in the process of growth. This locational pattern has modified the transportation costs by decreasing the commuting distances between residence and workplace, and by blocking the two interlinked functions in the peripheries of the city. The second factor has been the relative self-containment of the European

and Anatolian sections until the construction of the Bosphorus Bridge in 1974. However, after the construction of the bridge, this advantage has disappeared, with the location of work places and residences in different sections of the city. After 1980 the emergence of self-contained sections in fringes of the city, through the leapfrog settlement of industrial (industrial districts) and residential (mass housing) areas in close proximity to each other have created the same advantage in terms of the transportation costs with that of the former period. As a result, although the large areal size of Istanbul has increasing the overall costs of transportation, the functional distribution in the city has manipulated this increase.

The result of the evaluation of the city form of Istanbul according to the defined criteria is that the compact form has affected the quality of urban life negatively, whereas it has decreased the costs of urban life in the overall perspective. The transformations that took place in the growth pattern of the city after 1980 towards decentralization have created opportunities for the improvement of the city form in terms of the qualitative criteria. However, these transformations may even worsen the negative effects, if the process of development between the decentralized settlements and the central city is not put under control. The same transformations that took place after 1980, have increased the costs of provision of infrastructure and services, whereas the emergent functional distribution in the city has decreased the transportation costs of citizens.

The evaluation of the existing and predicted city forms enlightens the transformations required in the city form according to normative criteria. These can be summarized as the necessity for the creation of open spaces for the purposes of protection of natural reserves, conservation of ecological balance, and providing recreational facilities for the citizens; the creation of self-contained sections in the

city for the purpose of decreasing demand for transportation and its costs, and the location of these settlements in optimal distances from the central city in order to decrease the costs of provision of infrastructure and maximize accessibility among the different parts of the city.

Success in the criteria defined above may be achieved in many alternative city forms, solutions of different problems gaining different levels of dominance in each of them. However, in proposing alternatives to the existing city form, opportunities and constraints presented by the current growth pattern has to be considered. Consideration of these would increase the possibility of achieving the proposed city form. One of the factors that has to be considered in the case of Istanbul is the linear form of the peripheral sections of the city in the west and east corridors, extending along the E5 and E6 Highways. This form is highly determined by the natural setting in the areas in which forest and water catchment areas surround the north of the settlements. Another factor that has to be considered in proposing alternatives to the existing city form is the opportunities to be created by the decentralization of certain urban functions leaving unbuilt land between themselves and the central city. The vacant land remaining among the two centers of development present opportunities for the creation of urban open spaces within the city.

Keeping in mind the problems of the existing city form and the constraints and opportunities presented by the current growth pattern of Istanbul towards transformation of the city form, the optimum proposal may be a decentralized form with self-contained settlements located along the linear corridors in the west and east, separated from the central city by urban open spaces. However, the degree of decentralization, in other words the distances

between the isolated settlements and the central city are proposed to be limited within certain extents. In fact, the areal size of the city that can be affected by internal spatial organization is proposed to be controlled within certain limits. The distances between the decentralized settlements and the central city are limited to a level in which accessibility is maximized and costs of infrastructure are minimized, while leaving urban open spaces in between.

The city form proposed above involves features improving the already criticized aspects of the existing and predicted city form of Istanbul. It will improve the quality of urban life in the city by taking steps for preventing air and water pollution, and providing recreational facilities for the citizens, through the open spaces created between the decentralized settlements and the central city. The widths of the belts of open spaces in these locations are limited to an extent in which highest level of accessibility is provided to direct maximum level of integration among the citizens that can be achieved through the organization of the city form. The limited widths of the open space belts also gain importance with regards to the minimization of infrastructural costs. The self-contained decentralized settlements are expected to minimize the transportation costs of citizens by shortening commuting distances.

The vacant land that remains between the already developed decentralized settlements and the central city makes up convenient areas for the creation of urban open spaces in the manner proposed. However, development has started to take place in these areas, manipulated by mechanisms of unplanned development organized by the interest groups in the society. In the following chapter these mechanisms will be analyzed in detail.

## NOTES

(1) "Municipal Income Law" No.2464 issued in 1981.

(2) "Municipal Income Law" No.2464 issued in 1981.

(3) Law No.3239 issued in 1986.

(4) "Joint administration" means the administration of urban areas (both in governmental and municipal aspects) by the central governmental institutions.

(5) "Development Law" No.6785 issued in 1956 replacing the Law of Buildings and Roads No.2290.

(6) "Development Law" No.1605 issued in 1972 bringing modifications to the Law No.6785.

(7) "Development Law" No.1605 issued in 1972.

(8) "Development Law" No.6785 issued in 1956 provided implementation of Development Plans in the adjacent areas of municipalities.

(9) The "Development By-Law for Areas in and Out of the Adjacent Areas of Municipalities Which Do Not Have Plans" provided control in areas whose plans were not prepared yet.

(10) Such efforts were brought with three Laws in the period. These were the "Law for Encouragement of Constructions and Related to Buildings Without Building Permits" No.6188 issued in 1953, "Law on Land That will be Transferred From Treasury to Municipalities" No.7367 issued in 1959, the "Transitory Article Annexed to the Development Law" issued in 1961, the "Gecekondu Law" No. 775 issued in 1966.

(11) "By-Law No.1516 issued in 1972, "Gecekondu Law" No.775.

(12) Amnesty on industrial buildings was first brought by a circular of the Ministry of Reconstruction and Resettlement No.16986 issued in May 1980.

(13) "Law on Procedures Related to Unlicensed Buildings and the Modification of an article of development Law No.6785", No.2085 issued 1983, and the "Law on Procedures to be Applied to Buildings Not Conforming to Development and Gecekondu Legislation and Modification of an Article of Development Law No.6785".

(14) "Decree of Council of Ministers" No.83/5760 issued in 1983 prepared for the prevention of the accomplished facts until master plan of Bosphorus was approved, and the Bosphorus Law No. 2960 issued in 1983.

(15) Between 1923 and 1972 the Real Estate Tax was based on current values fixed by the Tax Institution. However, after the the assessment of values in 1931, this activity was not repeated for 40 years. This fact left the tax totally inefficient till 1972. With the Real Estate Tax Law No.1319 issued in 1970, the declaration system was brought into implementation. This system failed due to false declarations. The norms taken in the declaration were related to the market equivalent of building or land distinguished by the economic condition of regions, the cost equivalent and norms like rent and yearly acquisition value. After 1980, improvements were made in the tax. In 1982, Principle of Minimum Declaration was established through the Law No.2586. After 1985, the minimum values for square meters fixed at the quarter basis, started to be fixed at the road/street basis and at the parcel basis, in zones carrying different values such as the commercial, industrial and touristic zones. This implementation improved the conception of differential rent in the fixation of the Real Estate Tax value.

CHAPTER III  
THE MICRO PROCESSES DETERMINING THE COMPACT GROWTH PATTERN  
OF ISTANBUL

The transformations in the growth pattern of Istanbul in the 1950-90 period have been outlined in the previous chapter. Until the 1970's, the locational behavior of urban functions under the constraining effects of the macro determinants, generated the contiguous growth of the city. The constraints on urban functions put by both the outer and inner factors restricted their locations into and around the central city. With the transformations in the macro determinants that took place in the 1970's and 1980's, however, the locational behavior of urban functions got diversified. Two types of locational behavior have been dominant since then. One is the decentralization of urban functions whose modes of organization and scale of investment enabled them to settle far from the central city. In locating in the fringe of the city, such functions are motivated by decreasing cost of land. The result of this locational behavior is the emergence of new settlements in the fringe. The emergence of new settlements added new dimensions to the prevalent modes of urbanization in the 1950-70 period. The rise in rent on the land between the decentralized settlements and the central city attracted speculative interests and started a rapid process of development in such areas.. The second locational behavior is settling on such land for the purpose of acquiring land rent. Parallel to such changes in locational behavior of urban functions, the growth pattern of the city has undergone transformations. The

changing growth pattern consists of two processes. One is the discontinuous growth process, which generates a certain level of decentralization. The other is the process of development on the vacant land between the decentralized settlements and the central city, which regenerates the compact form of the city. The final form that will be reached as a result of this growth pattern is the compact city form. This form had been reached in the 1970's, however, through a different growth pattern dominated by a contiguous growth process.

The present growth pattern of Istanbul and the final compact form, which were analyzed in the previous chapter, is not unchangeable. On the contrary, it presents opportunities for the manipulation of the growth pattern for the creation of a decentralized form with open spaces. This opportunity exists in the time period when the land between the decentralized settlements and the central city remains vacant. In fact, this land offers an opportunity for the creation of open spaces. Therefore, a planning strategy aiming to create a decentralized form with open spaces has to intervene in the process of development of this land. The prerequisite of such an intervention is a full comprehension of the relevant processes.

The process of development of the land between the decentralized settlements and the central city is actualized by various mechanisms of unplanned development. These mechanisms are generated by different behaving units in the society, which are driven by different motives. In this chapter, the mechanisms of unplanned development on the land between the central city and the decentralized settlements will be analyzed. The identification of these mechanisms can enable us to develop related planning strategies to deal with them. In the analysis, the first section will focus upon the motivations of different behaving units behind



actualizing unplanned development on this land. The analysis of such motivations will give inputs to the planning strategy in which the eradication of the rationale behind the unplanned development constitutes an important part. In the second section, the mechanisms of unplanned development themselves will be outlined. The planning tools will be developed counter to these mechanisms. In the third section, the modes of organization of unplanned development will be summarized. Through this analysis planning tools that may be used to orientate different modes of organization will be identified. In the last section, the development process and the mechanisms of unplanned development will be shown by means of the case studies selected from different sections of Istanbul.

### 3.1. The Motives of Different Behaving Units Behind Actualizing Development on the Land Between the Decentralized Settlements and the Central City

The behaving units actualizing unplanned development on the land between the central city and the decentralized settlements can be separated into two groups differentiated by their basic motivations. These are; the consumers of urban functions and the groups gaining different types of power from manipulation of urban land. The basic motivation of the first group is utility maximization with minimum costs, whereas that of the second group is profit maximization. Behaving units acting with either of these motivations generate unplanned development. However, from the point of view of a planning strategy aiming to prevent unplanned development, measures based on the two types of motivations differentiate. In other words, there are different planning tools which may work to prevent the actions stemming from the two types of motivations. The actions of the utility maximizers can be prevented within areas where no development is planned. This

can be achieved by channeling them into restricted spaces and meeting their needs in planned areas. However, this tool may not be workable for profit maximizers whose aim is to acquire the land rent created by the society. Against the actions of this group planning tools that restrict or cease the transfer of land rent to individuals have to be developed.

The consumers like industrial entrepreneurs and the housing dwellers, etc. are motivated by settling in proximity to the functions with which they are interlinked, (such as the location of industries and housing areas of the industrial workers in proximity to each other), utilizing infrastructure and other urban services, reducing the costs of development, meeting the costs of development in programs keeping with their level and character of incomes.

The groups gaining power from urban land can be divided into two. These are the land owners-developers, and the political decision makers. The first group is motivated by the acquirement of land rent created by the society. The second group is motivated by gaining political power through the use of their decision making authority in the distribution of land rent among the interest groups in the society.

The comments made on the two types of motivations behind unplanned development do not reflect all the facts. A simplification is made in these comments to the effect that consumers and manipulators of land are totally distinct in their motivations. However, this does not correspond with reality. The consumers are also motivated by the acquirement of land rent. This happens, because of the bottlenecks in the other sectors of the economy in which savings can be transferred. As is mentioned in the second chapter, land rent sector makes up a

major channel of investment of savings for the most strata of the society. The spreading of the activity of earning from land rent to such a large part of the society has been a determining factor in the rapid development on land.

After differentiating the two basic motivations behind unplanned development, in accordance with the means of intervening in them, the mechanisms developed by the behaving units driven by these motivations may be analyzed.

### 3.2. The Mechanisms Developed by Behaving Units for Actualizing Unplanned Development on the Land Between the Decentralized Settlements and the Central City

The behaving units motivated by maximizing utility or by gaining power from land rent, are constrained by inner and outer factors. In keeping with their motives, they have to act within a limited range of alternatives, defined by these constraints. However, the behaving units try to widen the range of alternatives by developing mechanisms that can overcome these constraints. Mechanisms of unplanned development are developed in this direction. Each of these mechanisms is an effort to carry their actions beyond the framework defined by these constraints. It may be necessary to start the analysis of these mechanisms in the light of their relevancy to different types of land ownership. Land ownership pattern is likely to be one of the main determinants of the type of development on land.

### 3.2.1. Mechanisms of Unplanned Development With Regards To Different Types of Land Ownership

The mechanisms of unplanned development are basically determined by the ownership pattern on land. Different mechanisms have been developed by the behaving units for the actualization of unplanned development through different types of land ownership. The types of land ownership underlying these mechanisms may be classified into the "public" and "private" lands in the broadest sense. Unplanned development on public land occurs through invasion. That, on private land takes place through unauthorized development or development according to plans that are not in conformity with larger scale plans. A second meaningful classification can be made within the public lands, according to the level of availability of their transfer to other types of ownership. In this classification, there exist the "lands under the disposal and authority of the state", "common lands" and the "private lands of the state". The legal framework differentiating different types of land ownership which underline different mechanisms of unplanned development are summarized below. The mechanisms themselves will be described in detail in the following section (3.2.2.).

#### 3.2.1.1. Public Lands

The public lands involve the "lands under the disposal and authority of the state", the "common lands outside the municipal boundaries" and the "private lands of the state". These different types of land ownership will be analyzed separately.

The "Lands Under the Disposal and Authority of the State" include the dormant lands, sea shores, natural resources, and forests. They cannot be sold. Ownership of these lands can be transferred in cases where there are no reasons for their being kept under the disposal and authority of the state. Development on these lands takes place through unauthorized development on invaded land. Among the types of public lands, these lands present the greatest difficulty in terms of the state control against invasion. This difficulty arises from their scale and from the fact that no economic function is loaded on them. In Istanbul, large lands on the sea shore, water catchment areas, and forest areas have been developed through this mechanism.

The "Common Lands Outside the Municipal Boundaries" include the lands assigned to public use such as rural uses. They are owned by villages, provincial administrations, or the treasury. Ownership of these lands can be transferred in cases where their rural use is abandoned by the expansion of the city. In such cases they are allocated to public institutions as private lands of the state. After their allocation to these institutions they can be sold or assigned to urban functions. Unplanned development on these lands occurs through unauthorized development on invaded land. However, the lands that are under the control of the users do not go through as a rapid process of invasion, as the other types of public land do. This is attributable to the fact that, they are loaded with functions. However, with the growth of the city pressure on such lands accelerate the transformation of the rural functions. In Istanbul, these lands offer a potential for a possible control, if effective strategies can be developed in this direction before the lands are assigned as private lands of the state or absorbed within the growing city.

"Private Lands of the State" include the lands of the treasury, lands of institutions outside the general budget and municipal lands. They can be sold or assigned to urban functions (industrial districts, mass housing areas) by the owner institutions. This fact differentiates the private lands of the state from the lands under the disposal and authority of the state. These lands can be opened to development by the public or can be transferred to private ownership. Unplanned development on these lands takes place through invasion, or their assignment to certain functions by public institutions, through decisions not in conformity with larger scale land use decisions.

#### 3.2.1.2. Private Lands

Unplanned development on private lands takes place through unauthorized construction or development according to plans that are not in conformity with larger scale plans.

The mechanisms of unplanned development that are shown within their relationship to the type of land ownership, will be examined in detail in the following section.

#### 3.2.2. Mechanisms of Unplanned Development

Unplanned development is organized by different behaving units in the society. These behaving units act with different motives. In the first section these motivations were analyzed under the broad classification of "consumers" and "the

groups gaining power from manipulation of urban land". This analysis enabled us to understand the commercial nature of development on urban land beyond that of the functional. In the second section, a second classification was made, showing the differentiation of mechanisms of unplanned development in accordance with the types of land ownership. However, a further classification is needed in the examination of the mechanisms of unplanned development for the purpose of putting forth planning strategies to deal with them. Here, the mechanisms will be classified as those developed by the users, land owners-developers, and those developed by the decision makers on urban land. This will enable us to approach the two types of actions separately. The need for such a classification arises from the fact that, the actions of users, land owners-developers make up the outer constraints for planning. Planning faces the constraints put by the actions of these behaving units and has to develop counter strategies against them. However, strategies of the decision makers constitute the inner constraints for planning. There are twofold reasons for this. Planning legislation itself is defined by decision makers on the one hand, and it is used (or ignored) by the decision makers on the other. Unplanned development directed by agents, who themselves both make and implement the plans, necessitates additional planning tools. The mechanisms of unplanned development developed by these two groups of behaving units will be examined below.

#### **3.2.2.1. Mechanisms Developed by Users, Land Owners-Developers:**

##### **Unauthorized Development**

Unauthorized development takes place both on public and private land. Mechanisms of unauthorized development and therefore, the means of their

prevention differentiate according to these types of land ownership. Unplanned development on public land is based on the ignorance of land ownership rights and the planning legislation, whereas that on private land is based on the ignorance of the planning legislation on legal ownership. The two types of mechanisms that are "unauthorized development on invaded land" and "unauthorized development on owned land" will be analyzed separately.

A mechanism of unplanned development "Unauthorized Development on Invaded Land" with the invasion of public or private land and unauthorized development on it. This is called the gecekondu process. The process is based on the avoidance of cost of land by settling or trading on unowned land. In this type of development both the rights of ownership and the planning legislation are ignored. The gecekondu process should be analyzed to uncover the mechanisms acting in this process, for the purpose of developing planning strategies to counteract them.

The process starts with the invasion of land directly by users or real estate agents acting in the informal market. Invaded land is subdivided illegally, and the plots are directly possessed by or sold to gecekondu dwellers. Unauthorized development takes place on these plots. Such development lacks legal status and infrastructure or other public services. To obtain these, the gecekondu population goes into the expectation of legalization. As the number of units in the gecekondu area increases, so do the power of dwellers to exert political pressure on decision makers for the legalization of the development. In the meanwhile, in some cases the area gains municipal or district status. Through the political decision making process, the development is legalized. This is followed by the installation of infrastructure and the provision of public services. As time passes, the gecekondu area does not stay in its original density or settlement form.



Densities increase after the act of legalization through unauthorized developments or through the new density codes given in the "Upgrading-Local Development Plans". The one-two storey buildings gradually transform into four-storey apartments and the number of buildings increases.

In some of the cases, another factor is introduced into the process by governmental or municipal intervention. This involves the demolition of gecekondu areas. In almost all of the demolition activities in Istanbul, this has been followed by the re-subdivision and re-selling of plots in the gecekondu area by the real estate agents in the informal market. Re-construction has taken place immediately in these areas.

One of the mechanisms of unplanned development is "Unauthorized Development on Owned Land. In this type of development the planning legislation is ignored. The process is based on decreasing cost of land, by development on unplanned and unserviced land. The process should also be analyzed to uncover the mechanisms acting in this process, for the purpose of developing planning strategies to counteract them.

The development process starts with the illegal subdivision of large lands. The large lands are originally large ownerships like farms, or land collected by real estate agents for the purpose of speculation. Then, the plots are sold. The sale is done in the form of shared ownership. Unauthorized development takes place on these plots. (1) The development is followed by the same processes as those in the gecekondu process. As the settlement grows, the political power of the dwellers increases. Through the political process the settlement is legalized and infrastructure and public services are provided. Legalization of the settlement is

followed by an increase in the density of these areas owing to unauthorized development or upgrading development plans.

### 3.2.2.2. Mechanisms Developed by Urban Administrators

#### Development According to Plans That are Not in Conformity With Metropolitan Master Plans

Planned development is the tool for directing the growth of the metropolitan area in accordance with objective principles. However, in Istanbul, plans have frequently been used as a tool for opening up rentable land to development, and its distribution among the interest groups. To this end, local administrators have developed mechanisms to ignore the metropolitan plans prepared according to objective principles. After the introduction of new legislation on the administration of large cities in two levels between 1983-85, such mechanisms have been made use of by local municipalities for avoiding the control and intervention of the Greater City Municipality. Before analyzing these mechanisms, the legislation may be reviewed briefly.

Law No.3030 on the Administration of Greater City Municipalities, sets a hierarchy in the duties and authorities of greater city and district municipalities in plan approvals. According to this hierarchy, the greater city municipalities are authorized to make and approve of city master plans (Metropolitan Master Plans in scale 1/50000, Zonal Master Plans in scale 1/25000, and Master Development Plans in scale 1/5000), and they have the authority to approve of the Development Plans (in scale 1/1 000) made by the district municipalities. Through this hierarchy, local peculiarities are expected to be maintained in Local Development Plans made

by district municipalities while the direction of the metropolitan form is expected to be provided by the greater city municipalities.

Within such an organization, in which the control of the metropolitan form is directed by comprehensive plans approved by the greater city municipality, the transformation of "vacant" lands into urban open spaces which make up the subject matter of this thesis seems possible. However, for the purpose of directing unplanned development, a series of mechanisms have been developed by the second level municipalities to avoid the control and intervention of the greater city municipality. Two mechanisms have been active in avoiding the control of the greater city municipality. One such mechanism involves going out of the jurisdictional area of the greater city municipality by receiving the status of "local municipality". Through this mechanism land is opened up to development through local plans. Another is going out of the authority domain of the greater city municipality by making "upgrading development plans". These two mechanisms will be taken up below respectively.

The first mechanisms that will be taken up is "Development According to Master and Local Development Plans Not in Conformity With the City Master Plans, directed by Local Municipalities"

The local municipalities are those outside the borders of the adjacent areas of the greater city municipality. The settlements out of the neighboring area may receive the local municipality status in cases they reach the population of 2000 and apply for such status. The legislation also enables the settlements within the adjacent areas of the Greater City Municipality to receive the local municipality status. This is possible for settlements that have attained the conditions for

receiving the district status, in case application is made before they are given such status. These municipalities have the authority to make and approve of the 1/5000 Master Development Plans and 1/1000 Local Development Plans, on the condition that, they are in conformity with the city master plans. The Greater City Municipality has no authority of approval or cancellation of these plans. So, the control of the Greater City Municipality on these municipalities in the direction of the implementation of the metropolitan plans does not exist except for its authority of suing. However, the slowness of the suing mechanism in comparison to the rapidity of the developments on land, results in the compulsory acceptance of these developments as accomplished facts.

14 settlements that had been within the adjacent areas of the Istanbul Greater City Municipality for some time, achieved the local municipality status between the years 1985-1993 (Figure 3.1.). These municipalities directed development within their boundaries independent of the control and intervention of the greater city municipality. Land in these municipalities was opened up to development through local development plans in 1/1000 scale, and master development plans in 1/5000 scale, both of which are not in conformity with the city master plans.

The second mechanism that will be taken up is "Development According to Upgrading Development Plans, directed by District Municipalities".

While some of the administrative units of Istanbul go out of the jurisdictional area of the greater city municipality as local municipalities, the district municipalities remain under the control of the greater city municipality. The plan-making authorities of district municipalities are confined to the approval of

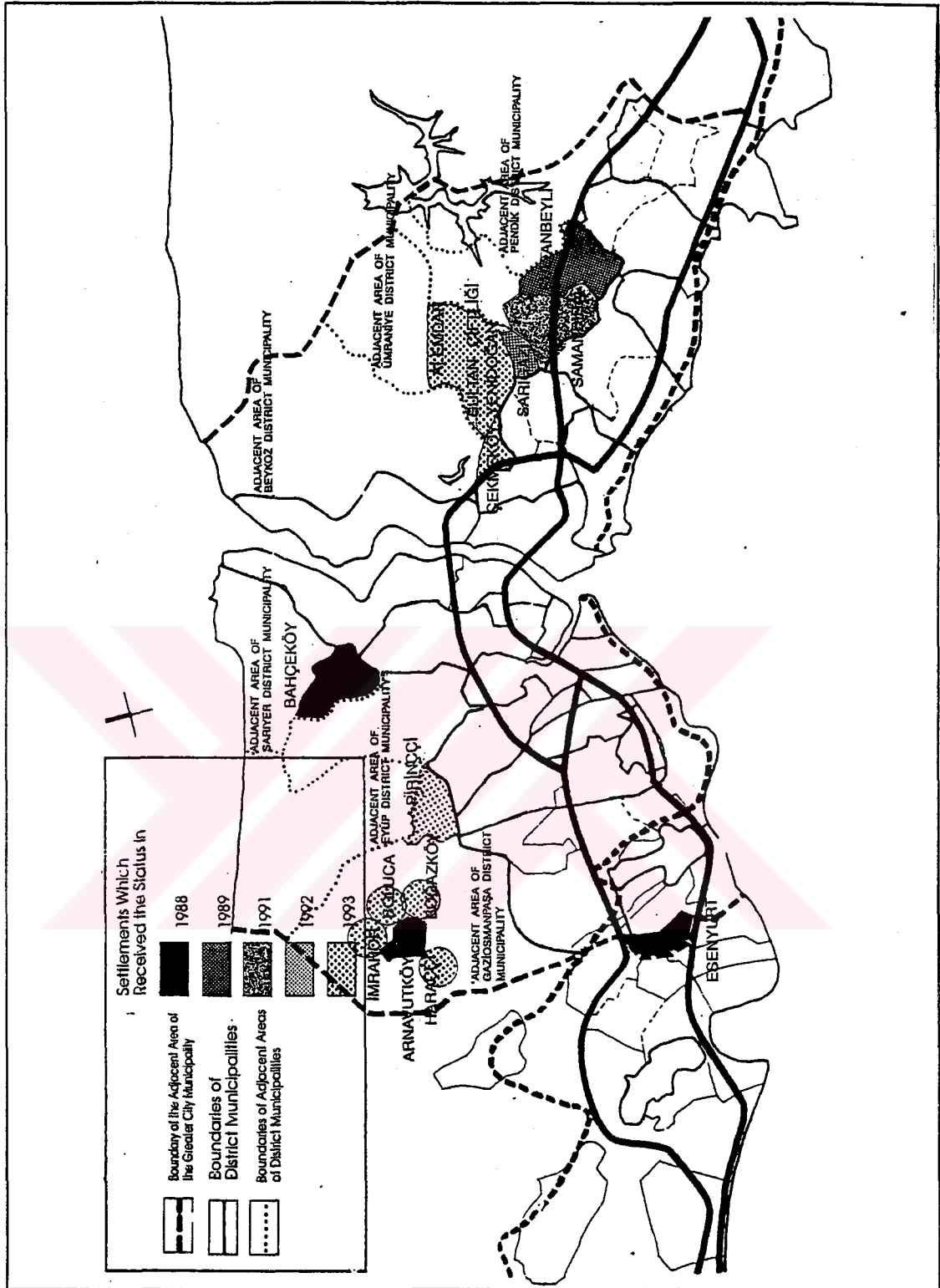


Figure 3.1. Local Municipalities Established Within the Adjacent Areas of the Greater City Municipality

Development Plans in 1/1000 scale which cannot be implemented without the approval of the greater city municipality. The administrators of the district municipalities who aim at strengthening their political power through the distribution of land rent among the interest groups, have developed mechanisms of going out of the authority domain of the greater city municipality. This has been obtained by the abuse of legislation related to unauthorized developments (Laws No.2981/3290/3366). This legislation introduces plans called "upgrading development plans" for the gecekondü and unauthorized building areas. The approval of these plans are tied only to the authority of the district municipalities. They are not approved of and cannot be canceled by the greater city municipality. The greater city municipality has no authority of control and intervention on these plans except for the authority of opening a case against these plans in the Provincial Administrative Court.

The Upgrading Development Plans that are made according to Laws No. 2981/3290/3366 aim to legalize the unauthorized buildings constructed till 1985, and to provide planning and infrastructure to such developments. With such an aim plans are made in areas where a gecekondü or an unauthorized building settlement exists. In these plans the planning standards and bureaucratic procedures (the process of the display of the plan and the reception of objections) demanded in the Local Development Plans done according to the redevelopment law (No.3194) are not taken into consideration. For the purpose of preventing unauthorized development beyond the scope of the Law, an additional concept to that of the Upgrading Development Plan is brought up. That is the concept of "Plans in the Position of Upgrading Development Plans". These plans can be made in vacant areas carrying the potential of rapid gecekondü or unauthorized development, loaded with the housing function as an important part. Even though

the Upgrading Development Plans are made for vacant areas like the Local Development Plans, they differentiate from the latter plans, as they do not have to be in conformity with the larger scale plans, and as the planning standards and procedures need not to be adopted. The second type of Upgrading Development Plans have to be approved of by the greater city municipality.

In Istanbul, this legislation has been distorted and used as a tool for avoiding the control of the greater city municipality. The Upgrading Development Plans have been made in vacant lands to open up these lands to development. They have been implemented in forests, water catchment areas, and in vacant lands carrying the potential for the creation of urban open spaces.

The third mechanism that will be taken up is "Development According to Zonal Master Plans, directed by the Greater City Municipality".

While the district municipalities develop mechanisms to avoid the control and intervention of the greater city municipality, the greater city municipality may also promote developments not in conformity with the metropolitan master plan. This is done through the preparation and revision of zonal master plans, whose land use decisions are not in conformity with those of the metropolitan master plan. Such cases have been witnessed in Istanbul, in forests and water catchment areas, in the way of directing development of secondary (luxury) housing areas for the most part.

The fourth mechanism that will be taken up is "Development of Forest Areas According to the Law for Private Property Forests, directed by the Ministry of Forestry and the Greater City Municipality".

Law for Private Property Forests has provided a tool for opening up forest areas to development. According to this law, after the prerequisite permissions are taken, construction can be carried out in these areas, under the principles of development planning on an area not exceeding 6% of the horizontal area of the ownership. In the law no building regulations like density codes have been brought other than that on the area limitation. Therefore, the building permissions to be given in private forests have not been tied to any law, but has rather been left to the authority of the Forest Administration of the Forestry Ministry and of the municipalities. In İstanbul, through the implementation of this Law large forest lands have been opened up to development.

### 3.3. The Modes of Organization of Unplanned Development

The process of unplanned development on the land between the central city and the decentralized settlements have been characterized by different modes of organization of development. These modes can be classified into those organized by small investors (individuals), and those organized by large investors (individual firms or collective behavior of small investors.) (2) The mechanisms of unplanned development developed by these two modes of organization differentiate according to several factors. They differentiate according to the size of the area to be developed in the same time period, the power of sanction exerted on the political decision makers, the amount of investment that has to be supplied by the public for infrastructure and other public services, the characteristics of the physical environment created in the end, and the nature of difficulties in the control of the developments by planning institutions. Planning strategies that will be



developed for the prevention or manipulation of these developments have to be also diverse in accordance to the specific nature of each mechanism.

### **3.3.1. Unplanned Development Organized by Small Investors**

Small individual investments bring about unplanned development through unauthorized development on singular small plots. With the agglomeration of such individual actions in space, large unauthorized housing settlements and industrial sites of small industries emerge. The legalization and upgrading of these unauthorized agglomerations occur after they reach a certain size. Individuals acting independently have no power of sanction on the political decision makers. However, as the number of such actions increase to make up large settlements, they gain such power. After this point, the public is loaded with the responsibility of provision of infrastructure and services. The burden on the public increases, as these settlements which emerge organically through individual actions, lack any investments made on such services. The total amount of investments needed for the provision of them has to be supplied by the public.

The physical environment created in the end is a scattered and disintegrated environment, with low standards. The control of such developments by planning is more difficult compared to those organized by the large investors in some respects. The difficulties arise from the scattered and numerous nature of such developments in time and space.

### **3.3.2. Unplanned Development Organized by Large Investors**

Unplanned development actualized by large investments takes place on wide areas developed in the same time period. By means of such investments mass housing areas and industrial districts organized by the state, cooperative organizations and private firms are developed. Large unauthorized developments are often directed by the decisions of urban administrators, that are not in conformity with larger scale decisions. This fact arises from the power of sanction of the large investors on the political decision makers. In many cases in Istanbul, land use decisions have been influenced by such a sanction. In the settlements developed by large investments, infrastructure and public services serving the settlement are supplied by the developers themselves for the most part. This lessens the amount of investments needed to be provided by the public in these areas.

The physical environment created in the end is an integrated environment, its quality being tied to the nature of the development. The control of such developments by planning is easier in some respects, in comparison to those organized by small investments. Such ease relates to the fact that they are large in scale and small in number. However, their power of influencing the decisions of political decision makers puts obstacles to their control by planning.

#### **3.4. Case Studies on the Process of Unplanned Development on the Land Between the Decentralized Settlements and the Central City**

The case studies aim to enlighten the mechanisms acting in the process of development on the land between the central city and the decentralized settlements through samples. The strategy of the selection of the case studies is

based on the framework put forward in the description of the mechanisms (3.2.), and the different modes of organization of unplanned development (3.3.). According to this framework, case studies have been collected to show the different mechanisms of unplanned development, actualized by the users, land owners-developers, and those developed by the decision makers (urban administrators). The second classification in the strategy of the collection of case studies is the classification according to the modes of organization of unplanned development. Here, development organized by large and small investors are differentiated. The framework used in the strategy of the collection of case studies is as in Table 3.1.

Table 3.1. Strategy of Collection of Case Studies

Mechanisms of Unplanned Development	Modes of Organization of Unplanned Development
developed by users, land owners-developers unauthorized building on invaded land unauthorized building on owned land	small investors large investors
decision makers (urban administrators) development according to plans that are not in conformity with metropolitan master plans	

The case study locations are shown in Figure 3.2.

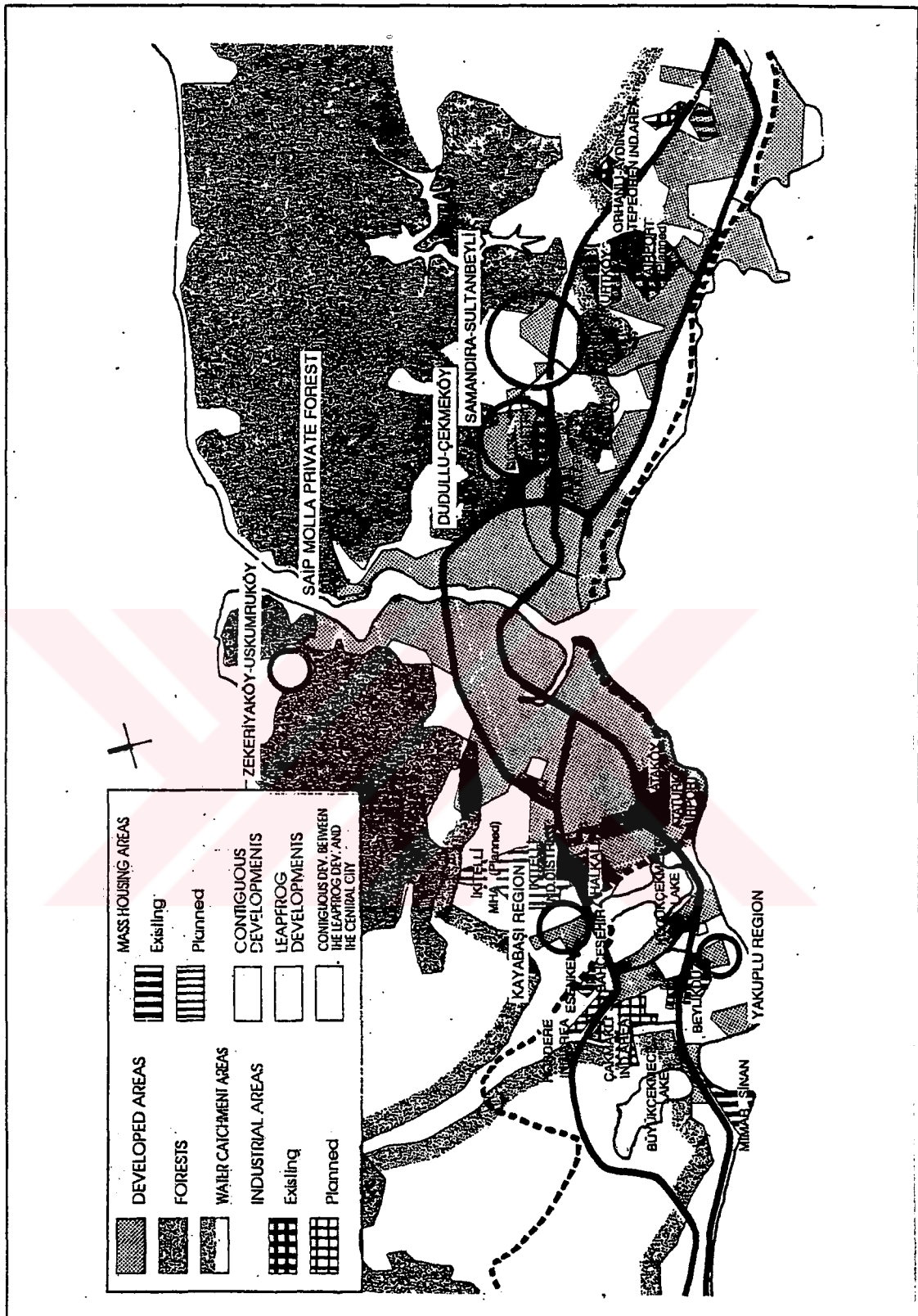


Figure 3.2. Case Study Locations

### **3.4.1. Mechanisms of Unplanned Development Developed by Users, Land Owners-Developers**

#### **3.4.1.1. Unauthorized Development on Invaded Land**

In Istanbul, the gecekondu districts are located predominantly in the secondary zones surrounding the first zone of the city, and in the Bosphorus area in both the European and Anatolian Sections. The emergence of the gecekondu districts surrounding the first zones dates back to the 1950's. Since then these districts have expanded towards the peripheries, coupled with their transformation into dense apartment areas, with the effect of the rise in land rent in these areas. Gecekondu development in these areas, however, still persist. Presently such developments are taking place most extensively in the Bosphorus area where the land is owned by the public. However, on the lands between the decentralized settlements and the central city that have been delimited and analyzed in this thesis, gecekondu agglomerations have not yet been discernible. This may be due to the fact that employment opportunities, and public utilities in the newly developing areas in the fringe have not yet increased to the level in which extensive gecekondu agglomerations are attracted. For this reason, no case studies enlightening this mechanism has been included in this thesis.

#### **3.4.1.2. Unauthorized Development on Owned Land**

**Developments Along the Highways: Dudullu, Çekmeköy Region**  
**Development Organized by a Mixture of Small and Large Investors: The Dudullu-Çekmeköy district covers an area to the north of the E6 Highway, along the Sile**

Road, extending on the Elmalı Dam Water Catchment Area and the absolute protection areas of Kemerdere and Çekmeköy Rivers. The district started to attract population with the establishment of the Dudullu Organized Industrial District according to the İstanbul Industrial Plan of 1966. (Plans of the industrial district were approved in 1968, and plots were sold to cooperatives in the same year. The construction was started without permissions and was finished around 1975.) Industrial development in the area gained impetus with the location of unauthorized small industrial sites around the Dudullu Organized Industrial District. In addition to the effect of employment opportunities created in the region on the demand for land, land rent in the region rose with the construction of the E6 Highway and the roads connecting it with the E5 Highway in the south. The development of Tepeören, Orhanlı-Aydinli industrial districts and mass housing areas in Kurtköy after 1980, along with the leapfrog developments along the highway accelerated the rise in land rent. The district has become one of the major regions settling rural immigrants to the city. All of these factors have increased the pressure on land in this district, which is located near on an important water reserve area.

The total area in Dudullu-Çekmeköy region is privately owned, and has developed with unauthorized developments. The modes of organization of unauthorized developments have been diversified in terms of the scale of investments and urban functions, overtime. The development process of the region has started with the agglomeration of unauthorized housing units around the Dudullu Organized Industrial District. At the same time, unauthorized industrial establishments have formed small industrial sites around the Organized Industrial District. (As a matter of fact, some parts of this industrial district are themselves unauthorized.) Through such developments the settlement has grown into a large settlement of about 40,000 population.

The unauthorized developments in the region has gained momentum with the introduction of the legislation on unauthorized developments. An upgrading development plan was made for the region, legalizing all the unauthorized buildings in the area. This plan contributed to the process of unauthorized development in two ways. Firstly, unauthorized constructions increased in number because of the expectation of being involved in the plan (the plan included the buildings which were constructed until the approval date of the plan that is 2.9.1988, although the legislation authorized only the buildings constructed before 1985). Secondly, the plan permitted new constructions within its boundaries (although such a permission contradicted with the conditions in the legislation). The new constructions which were added by the upgrading-development plan involved cooperative housing clusters, in other words developments organized by large investments. 25 cooperative constructions were authorized by the plan. A total of 30,000 title-deeds were given to land owners through the Upper-Lower Dudullu, Çekmeköy Upgrading Development Plan.

As a result of unauthorized developments, the population in this region increased rapidly. The population grew even more rapidly after 1985, with the expectation of legalization. Table 3.2. and Figure 3.1. illustrates the population growth trends of the settlements since the 1970's.

Table 3.2. Population Growth of Dudullu-Çekmeköy Region Between 1970-1990

	1970	1975	1980	1985	1990
Çekmeköy	381	1,850	1,938	3,789	13,523
A.Dudullu	1,076	2,659	12,742	20,515	36,887
Y.Dudullu	990	2,846	8,645	17,132	36,321
TOTAL	2,447	7,355	23,325	41,436	86,731

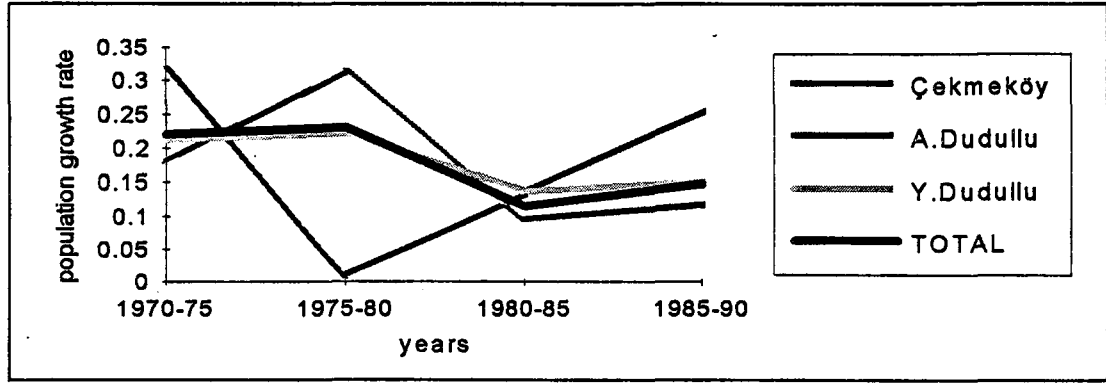


Figure 3.3. Population Growth Rate of Dudullu-Çekmeköy Region

The land use decisions inherent in the plans on the Dudullu-Çekmeköy region which experienced such a population growth, reveal the dimensions of the unplanned development that has taken place in an important area of water reserves. Table 3.3. shows the land use decisions of plans in different scales on the area.

Table 3.3. Land Use Decisions of Plans in Different Scales on the Dudullu-Çekmeköy Region

PLANS	LAND USE DECISIONS
PLANS APPROVED BY THE GREATER CITY MUNICIPALITY	
The Metropolitan Master Plan in 1/50000 scale, approved in 29.7.1980	"forest areas", "agricultural conservation areas", "organized industrial district", and "storage area".
The Zonal Master Plan For The Elmalı Drinking Water Catchment Area and Its Environs in 1/25000 scale, approved in 29.8.1988	"forest areas", "river absolute protection zones" (3), "housing area in low density: 50 persons/ha., intermediary density: 100-150persons/ha.", "organized industrial district", and "commercial area"



Table 3.3. (cont'd)

The Upper-Lower Dudullu, Çekmeköy Master Development Plan in 1/5000 scale, approved in 2.9.1988	"river absolute protection zones" (3), "short range protection zones", "low and intermediary density housing development areas"
PLANS APPROVED BY ÜMRANIYE DISTRICT MUNICIPALITY	
The Upper-Lower Dudullu, Çekmeköy Upgrading Development Plan in 1/1000 scale, approved in 16.4.1990	legalizes the unauthorized settlement and opens up new land to development

The illustration of developments in Dudullu Çekmeköy Region and the land use decisions of plans in different scales are done in Figure 3.4.

### 3.4.2. Mechanisms of Unplanned Development Developed by Urban Administrators

#### 3.4.2.1. Developments According to Local Development Plans

Developments Along the Highways: Sultanbeyli, Samandira, Sarigazi Region - Development Organized by Small Investors: The Sultanbeyli, Samandira region covers an area along the E6 Highway, extending to the north in the Ömerli Dam Water Catchment Area and into the forest area. Land rent in this region has risen with the construction of the E6 Highway and the roads connecting it with the E5 Highway in the south. The development of Tepeören, Orhanli-Aydinli industrial districts and mass housing areas in Kurtköy after 1980, together with the leapfrog developments along the highway has speeded up the rise in land rent. The district

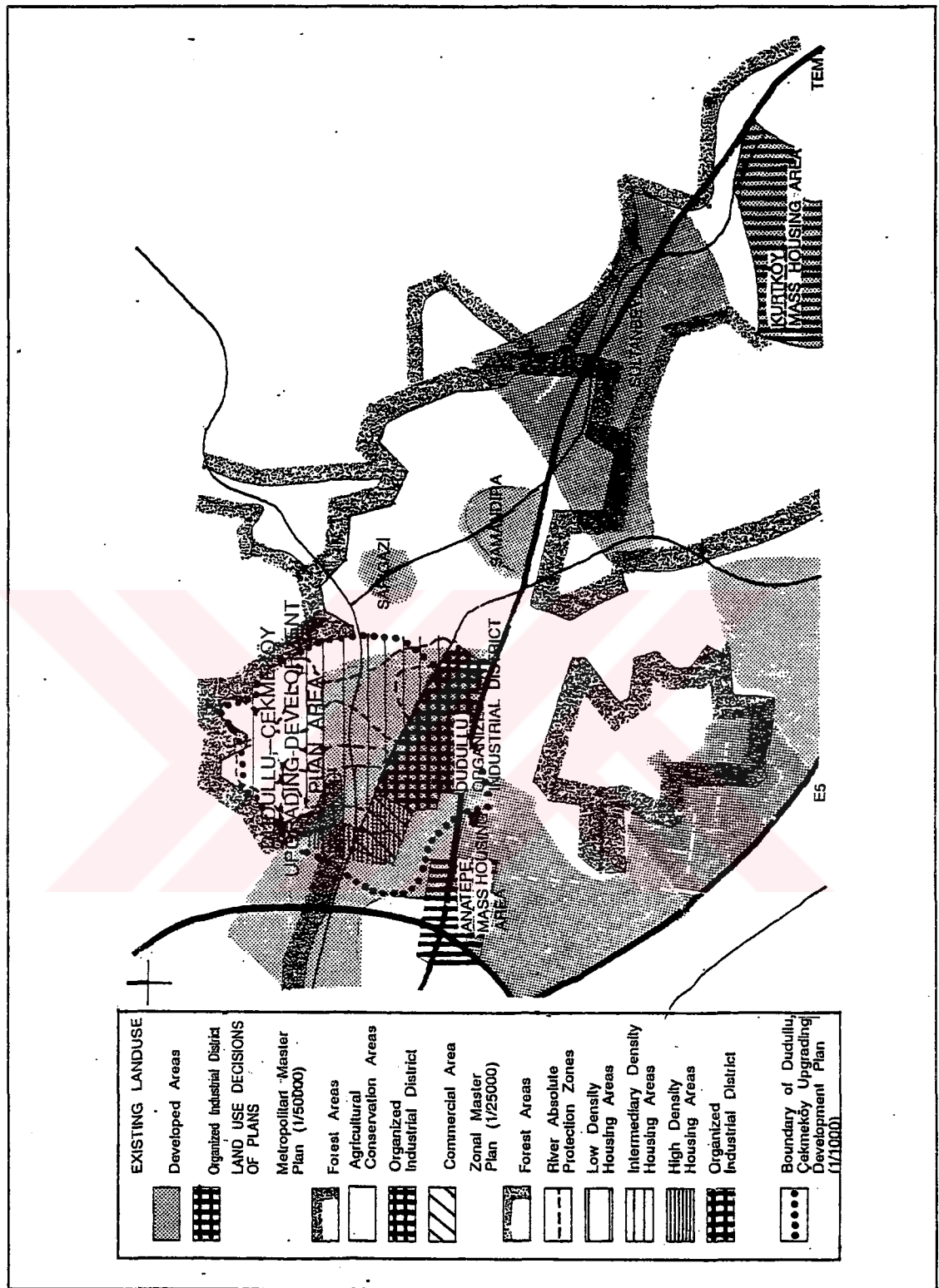


Figure 3.4. Map of Developments in Dudullu Çekmeköy Region and The Land Use Decisions of Plans in Different Scales



Figure 3.5. Dudullu-Çekmeköy Region

has become one of the most important regions settling the rural immigrants in the city. All of these factors have increased the pressure on land in this region, although it is not shown as a development zone in the metropolitan plan because of its location near the water reserves of Istanbul.

The development process in this region started with the unauthorized developments taking place around the Sultanbeyli and Samandira villages. In the 1980's with the expectations of rise in land rent, land ownership started to change hands in the area. In the transfer of land ownership in these areas, the "land mafia" (4) was highly active. The land was collected by the land mafia by the use of illegal methods such as invasion through violence, and it was sold. The history of the process of the land ownership transfers in Sultanbeyli (information taken from an interview with the director of the Development Department of Sultanbeyli Municipality) constitutes a good example for that in many other parts of Istanbul.

Land ownership in Sultanbeyli falls into two patterns, each displaying different characteristics. The southern and northern part of the settlement separated by the E6 Highway show differences in this respect. Land in the southern part was owned by 155 share-holders, in the 1950's. Throughout the same years the Forest Ministry claimed ownership on the land and sued the share-holders. The trial ended against the Ministry. However, during the 30 years period in which the trial lasted, the land was either invaded or sold by the owners through notary documents. The ownership of land changed hands through such an illegal process. At the end of this process the people claiming this land increased up to about 2,000. Presently, the individuals and institutions claiming rights on the land are the legal and illegal share-holders, the invaders, and the Pious Foundation. In the meanwhile, the land has been totally developed so as to include approximately

26,000 buildings. Planning intervention can hardly be done on the land due to the complexity of the ownership problems. The northern part of the settlement consists of land that has been collected by the real estate agents (land mafia) in the informal market, and owned by other individuals.

Land in Sultanbeyli, Samandira region that remained vacant after the unauthorized development process was opened to development through Local Development Plans in 1/1000 scale which are not in conformity with the land use decisions in the city master plans, totally lacking the intermediate step of Master plans in scale 1/5000. In this development the mechanism of avoiding the control and intervention of the greater city municipality through achieving the local municipality status have been active. The two settlements remained within the adjacent areas of the greater city municipality (within the adjacent areas of Kartal, District Municipality), until they received the local municipality status (Sultanbeyli 3.6.1989, Samandira 19.9.1991).

Table 3.4. Land Use Decisions of Plans in Different Scales on the Sultanbeyli, Samandira Region

PLANS	LAND USE DECISIONS
PLANS APPROVED BY THE GREATER CITY MUNICIPALITY	
The Metropolitan Master Plan in 1/50000 scale, approved in 29.7.1980	"forest areas", "agricultural conservation areas"
Zonal Master Plan For The Ömerli Drinking Water Catchment Area and Its Environs in 1/25000 scale, approved in 13.8.1984	"forest areas", "agricultural conservation areas", "dam short range protection zones", "river absolute protection zones (3)"
PLANS APPROVED BY SULTANBEYLİ LOCAL MUNICIPALITY	

Table 3.4. (cont'd)

Master Development Plan in 1/5000 scale	does not exist
Local Development Plans in 1/1000 scale	"housing area"
PLANS APPROVED BY SAMANDIRA LOCAL MUNICIPALITY	
Master Development Plan in 1/5000 scale	does not exist
Local Development Plans in 1/1000 scale	"housing area"
(There are also Upgrading Development Plans in the area)	

As a result of the action of these mechanisms population of these settlements have increased rapidly after 1985. Table 3.2. illustrates the population growth of the settlements since 1970's.

Table 3.5. Population Growth of Samandira and Sultanbeyli Between 1970-1990

	1970	1975	1980	1985	1990
Samandıra	549	4,974	4,779	5,817	19,524
Sultanbeyli	1,105	1,804	2,431	3,741	82,298
TOTAL	1,654	6,778	7,210	9,558	101,822

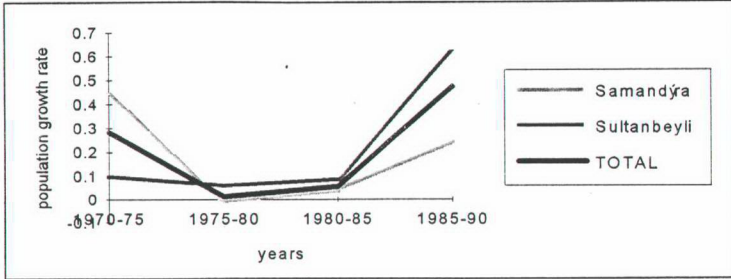


Figure 3.6. Population Growth Rate of Samandıra and Sultanbeyli

A population of 450000 is proposed to be settled in Sultanbeyli, in the Master development plan proposal being prepared by the Bank of Provinces whose contract has been done in January 1993.

In the Sultanbeyli, Samandıra region large settlements in the forest and water catchment area of the Ömerli Dam have developed. This development has been basically directed by local development plans which are not in conformity with the city master plans.

#### 3.4.2.2. Developments According to Master Development Plans

**Developments Along the Highways: Yakuplu Region:** The region is situated on the vacant land between the two zones of development in Küçük Çekmece and Büyük Çekmece. The vacant land has been left after the leapfrog development of the Hosdere-Çakmaklı (newly developing) industrial districts, and of the mass housing area in Beylikdüzü and Mimar Sinan the E5 Highway and the



Figure 3.7. Map of Developments in Samandira-Sultanbeyli Region and The Land Use Decisions of Plans in Different Scales





Figure 3.8. Samandira-Sultanbeyli Region

roads connecting it to the E6 Highway. The improvements in the transportation infrastructure of the area and the formation of the decentralized settlements have both caused a rise in land rent on the vacant land between the development zones, in which the Yakuplu region is located. This fact has increased pressure on the land in this area, entailing further development on it. However, the location of the area between the central city and the new development zones, assigns to it the characteristic of a green belt area, in terms of planning principles. With the transformation of the area into urban open space, integrated with the Firuzköy green zone, decentralization in this part of the city can be achieved to a certain extent. This is promoted by the fact that, most part of the region is already assigned as a green area in the city master plans.

The development process of the Yakuplu region started after it went out of the jurisdictional area of the greater city municipality. In this development the mechanism of avoiding the control and intervention of the greater city municipality through achieving the local municipality status played a major role. The area remained within the adjacent areas of the greater city municipality (within the adjacent areas of Avcilar District Municipality), until it went into the adjacent areas of the Büyük Çekmece Local Municipality in 1985, and then into the Gürpınar Local Municipality, when Gürpınar got separated from the Büyük Çekmece Municipality in 1992. Yakuplu village took the local municipality status in December 1993. Land in Yakuplu district and its environs have been opened to development through master development plans in 1/5000 scale not in conformity with the land use decisions in the metropolitan master plan.

Development Organized by Large Investors: Cooperative Mass Housing Area: A cooperative housing development of 2000 units was initiated in 1991, in

Yakuplu region. The housing area was authorized by the Yakuplu-Gürpınar Master Development Plan (1/5000) and Development Plan (1/1000). These plans were approved by the Büyük Çekmece Local Municipality in 1990. The land use decisions of the city master plans on the area on which the development is taking place are presented below.

Table 3.6. Land Use Decisions of Plans in Different Scales on the Yakuplu  
Cooperative Housing Area

PLANS	LAND USE DECISIONS
PLANS APPROVED BY THE GREATER CITY MUNICIPALITY	
The Metropolitan Master Plan in 1/50000 scale, approved in 29.7.1980	"area for tree planting"
Zonal Master Plan For the Area Between Küçük and Büyük Çekmece Lakes in 1/25000 scale, approved in 24.12.1987	"green area"
PLANS APPROVED BY BÜYÜK ÇEKMECE LOCAL MUNICIPALITY	
Master Development Plan in 1/5000 scale, approved in 6.6.1990	"low density housing area"
Development Plans in 1/1000 scale, approved in 6.6.1990	"housing area"

As can be seen in the review of the land use decisions of plans in different scales, the area has been opened up to development through plans that are not in conformity with the city master plans. The planning and development process of the area has begun with the claim of the municipality on the land ownership. Part of the land was owned by the treasury, and part of it was under shared-ownership. However, the rights of most of the share-owners on land whose

land registries were established in the Ottoman Period were not clear. Within such an ambiguity on the land ownership the municipality took possession of the land. Afterwards, cases were opened by the people claiming ownership of the land, against the transfer of land ownership to the municipality. These trials ended on behalf of the ownership of land by the municipality. The area was assigned as a Gecekondu Prevention Zone, by the authority of the Büyük Çekmece Local Municipality. Such an authority was given to the municipalities after 1990, by the Law No. 3815. After the simultaneous approval of the plans in 1/5000 and 1/1000 scales, the land was sold to cooperatives. The cooperative developments are still under construction.

**Development Organized by Large Investors: Private Mass Housing Area:** A mass housing development of a private firm (Ihlas Holding) of 2,000 units started in 1993 in Yakuplu region. The housing area was authorized by the Yakuplu-Gürpınar Master Development Plan (1/5000), approved by the Büyük Çekmece Municipality, and Development Plan (1/1000), and approved by the Gürpınar Municipality. The land use decisions of the city master plans on the area on which the development is taking place are listed below.

**Table 3.7. Land Use Decisions of Plans in Different Scales on the Yakuplu Private Mass Housing Area**

PLANS	LAND USE DECISIONS
PLANS APPROVED BY THE GREATER CITY MUNICIPALITY	
The Metropolitan Master Plan in 1/50000 scale, approved in 29.7.1980	"low density housing area"

Table 3.7. (cont'd)

Zonal Master Plan For the Area Between the Küçük and Büyük Çekmece Lakes in 1/25000 scale, approved in 24.12.1987	"intermediary density housing area"
PLANS APPROVED BY THE B.ÇEKMECE AND GÜRPINAR LOCAL MUNICIPALITIES	
The Master Development Plan in 1/5000 scale, approved in 6.6.1990	"intermediary density housing area"
The Local Development Plan for the Mass Housing Area in 1/1000 scale, approved in 11.1.1993	"Area In Which Implementation Will Be Done According to a Preliminary Site Plan"

The planning and development processes of the housing area started with the purchase of the land by a private firm (Ihlas Holding), form 21 individuals in 15.3.1993. The total area of the land is 31.3ha. After the application of the firm to the Gürpınar Municipality for a plan, a development plan in 1/1000 scale was prepared for the area, assigning the land owned by the firm into "area in which implementation will be made according to a preliminary site plan". In the local development plan the only planning code binding the site plan of the housing area was the gross density code (gross rate of construction area=1.5) given for the total of the local plan area. This code corresponds to a density of 300persons/ha. which may be seen as a high density for housing settlements. This density is not in conformity with the decisions of the master plans in which the area is assigned to intermediary density housing areas. Development according to the local plan entails a dense settlement, not approved of in the city master plans.

The illustration of developments in Yakuplu Region and the land use decisions of plans in different scales are done in Figure 3.9.





Figure 3.10. Yakuplu Region

### 3.4.2.3. Developments According to Upgrading Development Plans

Developments Along the Highways: Kayabasi Region -Development Organized by Large Investors: Kayabasi region is in the north of the E6 Highway, on the vacant land between the two zones of development near Küçük Çekmece and Büyük Çekmece. The vacant land was left after the leapfrog developments of the Hosdere, Çakmaklı (newly developing) industrial districts, and the mass housing area in Beylikdüzü and Mimar Sinan. Land rent in Kayabasi region rose with the construction of the E6 Highway and the development of the decentralized settlements in the west. This has increased pressure for development in this area.

Kayabasi area lies within the adjacent areas of the greater city municipality, within the Küçük Çekmece District Municipality.

The Küçük Çekmece municipality has attempted to open large land in the Kayabasi region to development. However, in this attempt the municipality is restricted with the control of the greater city municipality on the development plans. So, to actualize such an attempt, the district municipality has tried to avoid the control and intervention of the greater city municipality by preparing an upgrading development plan (according to laws no. 2981/3290/3366) in the area, instead of a development plan (according to Development Law No.3194). By opening the land to development through such a plan that cannot be approved or canceled by the greater city municipality, the district municipality has attempted to go out of the authority domain of the greater city municipality. However, aside from the abuse of the legislation for unauthorized buildings, the land use decisions of the plan are not in conformity with those of the city master plans. Land use decisions of plans made in the area are given below.



Table 3.8. Land Use Decisions of Plans in Different Scales on the Kayabasi Region

PLANS	LAND USE DECISIONS
PLANS APPROVED BY THE GREATER CITY MUNICIPALITY	
Metropolitan Master Plan in 1/50000 scale, approved in 29.7.1980	"area for tree planting", and "agricultural conservation area"
The Zonal Master Plan For the Area Between the Küçük and Büyük Çekmece Lakes in 1/25000 scale, approved in 24.12.1987	"green area serving the whole city", "special area of the vicinity of Küçük Çekmece Lake - natural SIT area: (Absolute prohibition of construction will be implemented, and it will be organized as parks, recreational areas.)", "housing area in 200 persons/ha. density", and "storage area for burning, explosive, flaring substances"
The Master Development Plan in 1/5000 scale	does not exist
PLANS APPROVED BY KÜÇÜK ÇEKMECE DISTRICT MUNICIPALITY	
The Upgrading Development Plan in 1/1000 scale, approved in 22.10.1990	"housing area"

The Kayabasi Upgrading Development Plan does not conform with the legislation on the Upgrading Development Plans. As already stated, such plans are prepared in areas covered by gecekondu or unauthorized building groups or settlements. However, only a small portion of the total area (1/5) of Kayabasi Upgrading Development Plan carries such a characteristic. According to the assertions of the greater city municipality in its report stating the reasons for the case opened against the plan in the Administrative Court, only 1 plot out of 31 carries the characteristics needed for the preparation of an Upgrading Development Plans. The remaining 30 plots may not even be involved in "plans in the position of Upgrading Development Plans", because of the fact that the area

presently carries no potential for rapid development of gecekondu or unauthorized building settlements. In fact, no parts of the Kayabasi Upgrading Development Plan is made as plans in the position of upgrading development plans. The reason for this is given by the K çük ekmece Municipality as the need to avoid the time spent in the approval procedure of the plan by the Greater City Municipality. The approach of the greater city municipality to the planning activities in the area is that development plans have to be made according to the Development Law No.3194.

The planning area is 946.4ha. in size. Within the planning process ,60% of the planned area has been transferred to the public, 35% through "planning share", and 25% through "donation". The amount of land transferred to the public through donation shows that there may have been a bargain between the land owners and the municipality before the plan was made. After the plan was finished, 15% of the land transferred to the public was sold to cooperatives by the K çük ekmece Municipality. As a result land rent acquired through the plan, was shared by the land owners and the public.

The case opened in the Administrative Court by the Greater City Municipality for the cancellation of the plan, was won. However, the execution has not been stopped yet by the K çük ekmece Municipality. In addition, a counter trial has been opened up by the district municipality in the Administrative Court. Although the cases opened up in the court on the plan continue, 15 cooperatives have applied for construction permissions in reference to the plan approved by the district municipality. However, construction in the area has not started yet except for a few cooperatives.

With the Kayabasi Upgrading Development Plan the district municipality has attempted to open up large land to development through using Upgrading Development Plans as a tool for avoiding the control and intervention of the greater city municipality. The fact that planning standards required in the development plans are not demanded in the Upgrading Development Plans has maximized the rent acquired from land.

The illustration of developments in Kayabasi Region and the land use decisions of plans in different scales are done in Figure 3.11.

#### 3.4.2.4. Developments According to Zonal Master Plans Not in Conformity With the Metropolitan Master Plan

Developments in the Inlands of the Bosphorus Zone: Zekeriyaköy-Uskumruköy Region - Development Organized By Large Investors: Zekeriyaköy-Uskumruköy area is in the inlands of the Bosphorus Zone, 10 km. away from the Sariyer Settlement. Since 1985, the area has attracted secondary housing development, organized by large construction firms. This development has made up one of the decentralized settlements in the west side of the Bosphorus, the others being Bahçeköy (which is the largest), Kilyos and Demirciköy. The leapfrog developments have been accompanied by developments on the land between them and the Sariyer settlement. Such land has been filled up with secondary housing developments.

The development process of the area started with the purchase of large lands by construction firms and individuals between the years 1985-1987. Both the

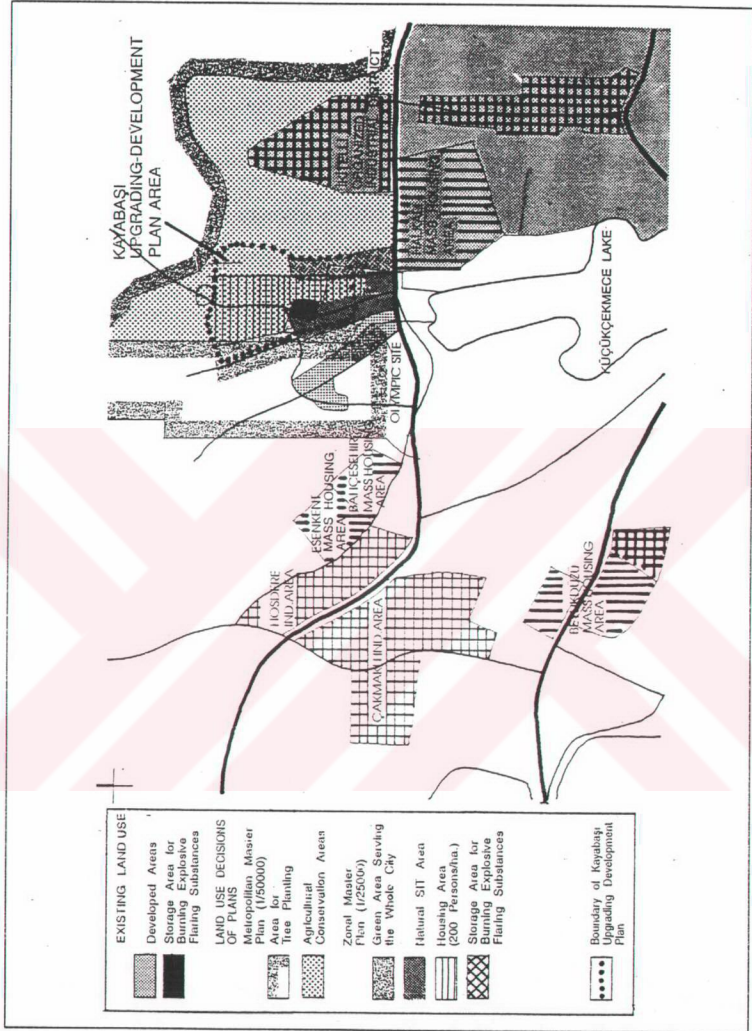


Figure 3.11. Map of Developments in Kayabasi Region and The Land Use Decisions of Plans in Different Scales



Figure 3.12. Kayabasi Region

construction firms and the individuals that purchased the land were influential firms and personalities in the political and business life of the country. The consolidation of land was followed by the preparation and approval of the Zonal Master Plan in 1/25000 scale, which assigns the land into secondary housing use. The ownership of land by individuals from the powerful segments of the society has had a determining effect in the land use decisions of this plan, which are not in conformity with the metropolitan master plan.

A review of the land use decisions of plans in different scales made on the area may be useful.

Table 3.9. Land Use Decisions of Plans in Different Scales on the Zekeriya köy-Uskumruköy Region

PLANS	LAND USE DECISIONS
PLANS APPROVED BY THE GREATER CITY MUNICIPALITY	
Metropolitan Master Plan in 1/50000 scale, approved in 29.7.1980	"forest areas", and "agricultural conservation areas"
Zonal Master Plan For Sariyer District and Its Villages in 1/25000 scale, approved in 24.12.1987	"tourism and secondary housing area", "military area", "low density existing housing area", and "river absolute protection zones". (3)
Master Development Plan in 1/5000 scale, approved in 2.9.1988	"secondary housing areas"
PLANS APPROVED BY SARIYER DISTRICT MUNICIPALITY	
Sariyer, Uskumruköy, and Zekeriya köy Local Development Plan in 1/1000 scale, approved in 2.2.1989	"secondary housing settlement with two-story buildings"

As can be seen in the land use decisions of different plans on the area, the metropolitan plan decisions' which aimed to conserve the area in its natural form, were changed in the zonal master plan in the way of opening up the land for development.

Construction is going on in the planning area that is 706ha. in total, subdivided into large ownerships of 20ha. on average. 400ha. of the planning area on which a development plan has been made is under shared ownership. The developments are organized by large construction firms.

This case provides us with an example of how powerful firms or personalities in the political and business spheres of the country can influence the planning decisions on land that they own. Through such a mechanism, the Zekeriyaköy-Uskumruköy region which is on the water catchment area, has been opened up to development, in spite of the fact that it contradicts with the metropolitan master plan decisions.

The illustration of developments in Kayabasi Region and the land use decisions of plans in different scales are done in Figure 3.13.

#### 3.4.2.5. Development of Forest Areas According to the Law for Private Property Forests

Developments in the inlands of the Bosphorus Zone: Saip Molla Private Forest - Development Organized by Large Investors: Saip Molla Private Forest is located in the back sight zone of the Bosphorus, 10 km away from Beykoz

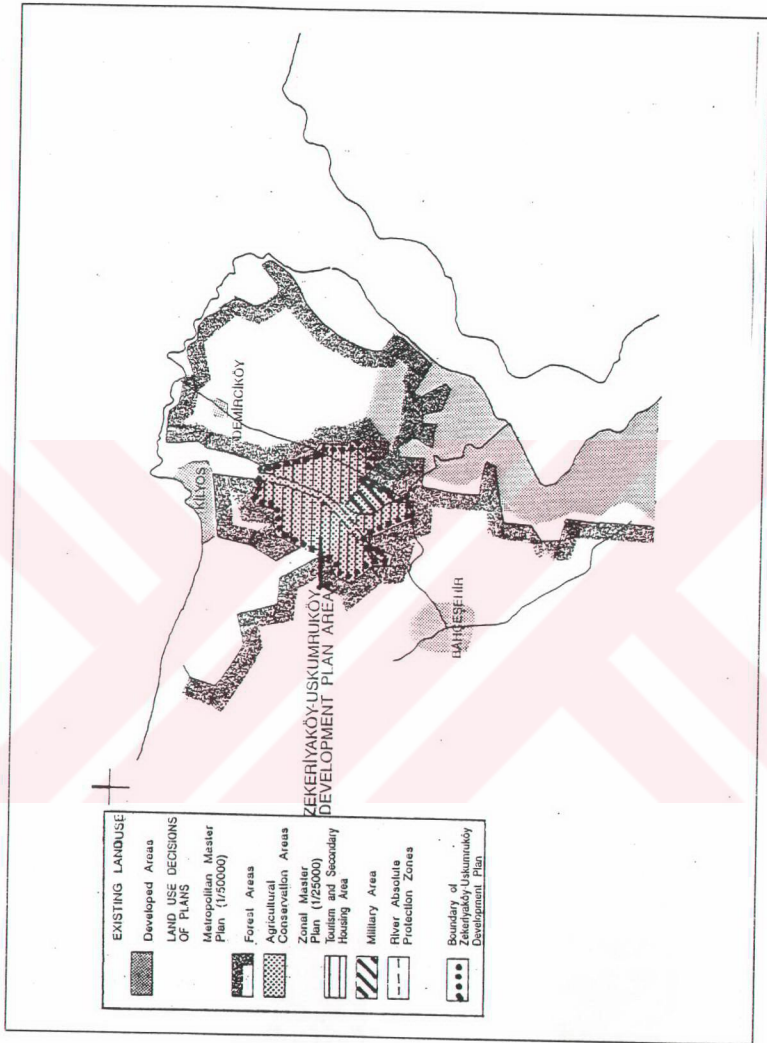


Figure 3.13. Map of Developments in Zekeriyağöl-Uskumruköl Region and The Land Use Decisions of Plans in Different Scales



settlement. After 1988, a secondary housing development organized by a single construction firm took place in the forest. This leapfrog development has been accompanied by unauthorized developments on the land between it and the Beykoz settlement. Thus, Beykoz settlement extends to the Saip Molla Forest, through such developments along the main road.

Developments in private forests are bound with the Law for Private Forests. This Law ties the permissions of development in these forests to the Ministry of Forests and the plans approved by the Greater City Municipality. The plans approved on the Saip Molla Private Forest until 1987 were the following.

Table 3.10. Land Use Decisions of Plans in Different Scales on the Saip Molla Forest

PLANS	LAND USE DECISIONS
PLANS APPROVED BY THE GREATER CITY MUNICIPALITY	
Metropolitan Master Plan in 1/50000 scale, approved in 29.7.1980	"forest area"
Zonal Master Plan For Beykoz District and Its Villages in 1/25000 scale, approved in 29.7.1980	"forest area"

In the planning notes of the Zonal Master Plan it is stated that, the forest can be opened up to development, according to a Master Development Plan in 1/5000 scale and Development Plan in 1/1000 scale, under the condition that plans are in conformity with the requirements put by the Law for Private Forests.

The process of development in Saip Molla Private forest started with the changes made in the plan articles of the Zonal Master Plan. The article designating the approval of the Master Development (1/5000) and Development (1/1000) plans to the council of the Greater City Municipality, was changed by amendments made on to the approved document. The new article bound implementation to the permission of the Ministry of Forests and to the 1/1000 scale Site Plan and Preliminary Project approved by the Presidency of the Greater City Municipality. With this article, the council of the Greater City Municipality and the Master Development Plan (1/5000) were canceled out of the process. Backed up with this article, the Saip Molla Forest Site Plan received the approval of the Advisory Council of the Greater City Municipality in 24.11.1987, and that of the Forest Administration in 26.11.1987. It was approved by the Mayor of Greater City Municipality in 12.4.1988, and by the Beykoz District Municipality in 18.4.1988.

The Plan that was approved of through such an illegal process ignored the requirements of the Law for Private Forests, upon development. According to this law, construction must not exceed 6 percent of the horizontal area. However, in the plan articles of the Saip Molla Forest Site Plan, it is stated that functions other than that of housing are excluded from the 6% horizontal area, and they will be settled according to the preliminary projects. In the legend of the plan there is the phrase "Percentage of Horizontal Building Area in the Total Area (TAKS)=6% (social and commercial buildings excluded). According to the legend of the plan, there are filling stations, areas for cultural, religious, health, sports activities, commercial storage areas, and areas for urban services within the planning area. If implementation is made according to the legend, development will go beyond the density codes stated in the law.

Another constraint put by the Law for Private Forests is that the forest area cannot be subdivided. The site plan of the Saip Molla Private Forest is in conflict with this article, as the forest area is subdivided into plots containing single houses. However, in implementation, this contradiction has been overcome by the mechanism of horizontal flat ownership. The plan area has been conserved as a single parcel, in which flat ownerships exist.

The illegally authorized development of the Saip Molla Private Forest was organized by a single construction firm. This firm purchased the land from the share-holders after the approval of the plan. The previous share-holders were mostly powerful personalities in the political and economic life of the country, like the Minister of Forests of the time (a share-holder with a 11% share) who played a major role in the approval of the plan.

The construction started in 1988 and 600 luxury houses out of a total of 1460 has been finished. 1000 of the houses has already been sold by the construction firm.

The illegal processes underlying the approval of the plans has urged the Greater City Municipality to appoint the District Municipality to take action and cancel the construction permissions. However, this appointment has not been accepted, except for not giving permissions for the service buildings that exceed the density codes of the Law for Private Forests. The construction and sale of the houses are still continuing.

The basic mechanism that has acted in the development of the forest is the influence of powerful personalities in the society on the planning decisions, in

the direction of their interests. The Saip Molla Private Forest has been opened up to development with regulations disregarding the requirements of the Law for Private Forests, and conflicting with the metropolitan master plan decisions.

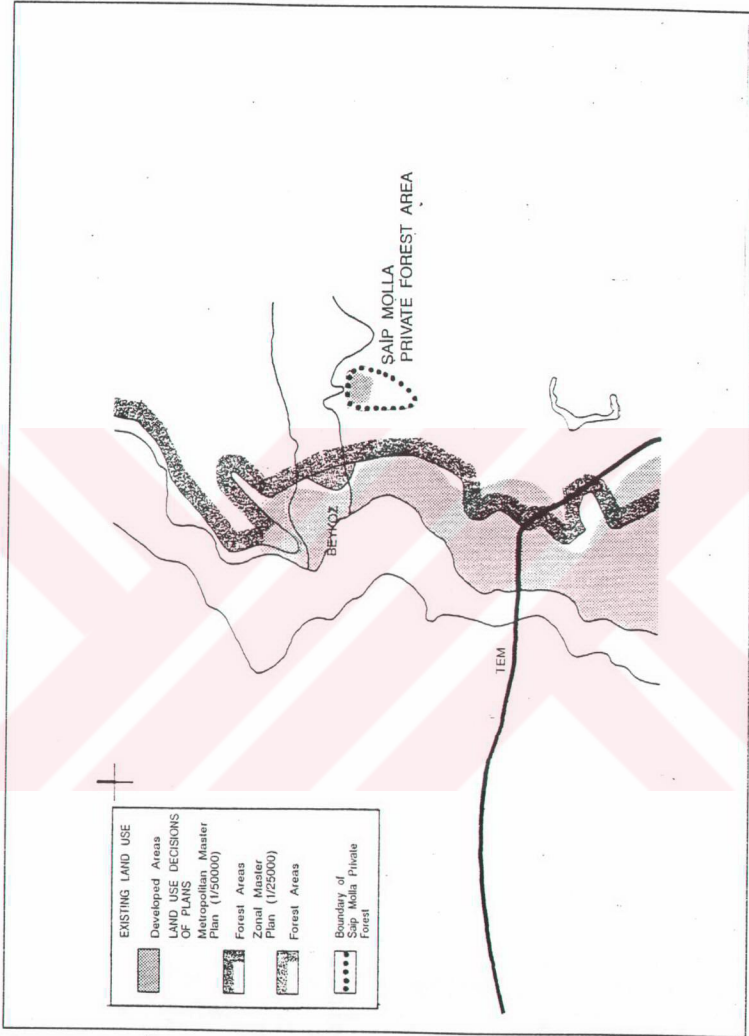


Figure 3.15. Map of Developments in Saip Molla Forest and The Land Use Decisions of Plans in Different Scales



Figure 3.16. Saip Molla Forest

## CHAPTER IV CONCLUSION

The city form that emerges as a result of the interaction of social processes is not inevitable. If the city form does not present the preferred in terms of normative criteria, it can be changed. To achieve this change, there are two steps that have to be taken. The first is the definition of the "wanted" city form, and the second is the development of a planning strategy to intervene in the formation of the city, so as to gear it towards the "wanted". The previous chapters, have attempted to define the wanted city form and to prepare the basis for a planning strategy to reach that target.

The growth pattern of Istanbul that shapes up the city form was described in the second chapter. In this description it has been shown that Istanbul grows through two processes. One is the decentralization process, directed by the location of certain urban functions with leapfrog developments. The other is the process of development on the land between the decentralized settlements and the central city. After the analysis of these processes, it has been concluded that the present growth pattern results in the compact city form. This form has been criticized of lacking open spaces for multi-purposes, such as the protection of natural resources, conservation of the ecological balance and the provision of recreational facilities for the citizens. This criticism has pointed to a need for the transformation of the city form into a decentralized form with urban open spaces.

The present growth pattern of Istanbul also presents opportunities for the transformation of the city form in the desirable direction. The vacant land remaining after the decentralization of certain functions carries the potential for the creation of open spaces as green belts within the city. However, the prevalent processes of development in these areas handicap such a goal. So, in the third chapter, the mechanisms that work to actualize such unwanted development have been analyzed. This analysis can establish the basis of a planning strategy, aiming at the creation of urban open spaces in these areas.

In this chapter, a "planning strategy aiming to transform the land between the decentralized settlements and the central city into urban open spaces" will be proposed. Such a goal can be reached through two measures taken simultaneously. These measures make up the two subgoals of the planning strategy that are; "prevention of unplanned developments" and "transformation of the vacant land into urban open spaces". The first subgoal is based on intervention in the processes that shape up development on the land between the decentralized settlements and the central city. However, the prevention of unplanned developments is not sufficient for the transformation of these areas into open spaces. So, the second subgoal is introduced.

The planning strategy developed with the goal of transforming the lands between the decentralized settlements and the central city into urban open spaces is faced with constraints put by the legal-institutional framework in the country. There are two alternative strategies (levels of intervention) which planning can utilize in the face of the constraints put by the legal-institutional framework. These are; "intervention within the scope of existing legal-institutional framework" and "intervention necessitating changes in the legal-institutional framework.



**PLANNING STRATEGY AIMING TO TRANSFORM THE LAND BETWEEN  
THE DECENTRALIZED SETTLEMENTS AND THE CENTRAL CITY INTO URBAN OPEN  
SPACES**

**Prevention of  
Unplanned  
Developments**

<u>Restricting the Activities of Behaving Units</u>			<u>Eliminating the Interests of Behaving Units Behind Unplanned Development</u>	
Putting Development Regulations	Control of Behaving Units That Actualize Development Ignoring the Regulations	Discouragement of Developments Ignoring Regulations	Eliminating the Interests of Consumers Behind Unplanned Development	Eliminating the Interests of Land Owner-Developers Behind Unplanned Development

**Transformation of Vacant Lands Into Urban Open Spaces**

Setting the Interrelation Between the Type of Land Ownership and Type of Urban Open Space

<u>Creation of Green Belts</u>	<u>Creation of Open Spaces for Public Services</u>	<u>Creation of Open Spaces Involving Rentable Functions</u>
Organization of Land Ownership Organization of Finance Transformations in the Planning Organization	Organization of Land Ownership Organization of Finance Transformations in the Planning Organization	Organization of Land Ownership Organization of Finance Transformations in the Planning Organization

Figure 4.1. Outline of the Major Features of the Planning Strategy

developed in this direction have to correspond to and counteract each mechanism developed by the behaving units. However, as long as unplanned development is rational, the behaving units will continuously develop new mechanisms of unplanned development. This makes the grounds for the second approach, which involves the prevention of unplanned development by removing its rationality. Unplanned development is the way of action stemming from the motivations of the behaving units. Therefore, it is the elimination of these motives that would work to remove the rationality of unplanned development. So, planning tools proposed within the second approach should respond to differentiated motives of different behaving units who actualize unplanned development.

#### 4.1.1. Restricting the Activities of Behaving Units

The basic approach in the prevention of unplanned developments is to make development regulations. However, putting regulations may not always be sufficient to achieve the aim of leaving these areas vacant. Unplanned development may still occur. So, the approach becomes workable only when measures are taken for the implementation of development regulations. This can be achieved by the utilization of planning tools to counteract each of the mechanisms of unplanned development. In Chapter 3, the mechanisms of unplanned development that have acted in Istanbul in the recent years have been analyzed, in relation with one of the major determinants, the ownership of land. In this section, a set of planning tools to counter attack these mechanisms will be proposed. This set will involve planning tools in different levels of intervention. The sets of planning tools developed within this approach are; "putting development regulations", "control of the behaving units that actualize development ignoring the

development regulations", "discouragement of developments ignoring the development regulations".

The attempt to prevent unplanned development, starts with the act of "putting development regulations". The planning tools for putting regulations are plans in different scales.

Making plans are not effective by themselves in directing the usage of land. Mechanisms have to be developed for the "control of the behaving units that actualize development ignoring the development regulations". The development regulations are ignored in general by two mechanisms. They are ignored through unauthorized development, and through plans that are not in conformity with the larger scale plans. Unauthorized development is actualized by citizens (consumers, and land owners-developers), whereas development by plans not in conformity with larger scale plans, is directed by decision makers on urban land (urban administrators). Control of these two types of behaving units that actualize unplanned development present different obstacles for planning.

This brings the necessity of development of two types of control mechanisms, which are; "control of citizens who actualize unauthorized development" and "control of urban administrators who direct unplanned development through plans that are not in conformity with larger scale plans".

"Control of Citizens Who Actualize Unauthorized Development" can be achieved by a two sided effort. They can be controlled by urban administrations and by citizens.

Control of citizens who actualize unauthorized development, by urban administrations, necessitates at the first step, a system instantly informing the related institutions about the unplanned developments all around the city. Such a "Land and Development Information System" would involve a computerized account of land and property values with the changes over time and of land transactions, in addition to the methods of comparison of actual developments with the plans.

A land and development information system that informs the related institutions about the unplanned developments immediately, has to be accompanied by modifications in the legislation on the process of restraining constructions. This process in its present form takes a longer time, than the construction itself. Often, the construction finishes before the municipalities take the authority to restrain it. When the building is brought into use after the construction is finished, the owners receive the "right of possession" of the building (zilyetlik hakki). From then on, new obstacles enter the process of demolishing the building. This process has to be shortened to enable the restraint of unauthorized constructions before the right of possession is received.

A more basic attitude to the restraint of unauthorized constructions is the establishment of a separate branch of the greater city municipality equipped with authorities of simultaneous intervention in unauthorized constructions. This branch may correspond to the police forces in the area of unauthorized constructions, taking the name of "Reconstruction Police".

Control of citizens who actualize unauthorized development, by citizens, can be achieved by giving citizens the right of opening cases against

unplanned developments in the Administrative Court. The activation of citizens against unplanned developments can be encouraged by several efforts. These are; providing their participation in the decision making process, expanding the accessibility to information, arousing citizens' interest in the plan by broadening the functions attributed to open spaces, and utilizing the media to attract citizens interest in the plan.

The "control of urban administrations who direct unplanned development through plans not in conformity with the larger scale plans" can be achieved through; control by other public institutions, namely, the central executive or judiciary institutions in the cases of breaking the laws, and control by citizens.

There are concrete measures that can be taken for achieving control on urban administrators who direct unplanned development through plans that are not in conformity with larger scale plans. In the last period, there have been two mechanisms through which the local municipalities have overcome the control of the greater city municipality and directed such developments. One is through going out of the authority area of the Greater City Municipality by achieving the "local municipality" status. This mechanism can be prevented by annexation of boundaries of the Greater City Municipality to the boundaries of the province, whereby putting local municipalities and settlements under the jurisdiction of the provincial government. Another measure has to be added to this, that involves abolishing the local municipality status within the Metropolitan Master Plan boundaries (boundaries of the province). The second mechanism developed by the local municipalities is going out of the authority domain of the Greater City Municipality through development by "upgrading development plans" in the District Municipalities. This mechanism can be prevented by giving the approval authority

of all plans made within the boundaries of the metropolitan master plan to the Greater City Municipality.

The control of unplanned developments generated by different behaving units has to be accompanied with measures taken for the discouragement of developments ignoring the development regulations. The first measure that can be taken to discourage unplanned developments is abolishing the legalization activity of unauthorized developments. In fact, the expectation of legalization of developments is a factor that accelerates unplanned development. The legalization of such developments within certain periods provides certainty of legalization of the unauthorized buildings in the future. This expectation takes away to a certain extent, the difference between actualizing planned and unplanned development in the eyes of the owners.

An effective planning tool that could help to discourage unplanned development is the demolition of unauthorized buildings. Presently the demolition authority rests with the state and the district municipalities. The greater city municipality does not have this authority except for the Special Bosphorus Region. This fact handicaps the demolition of such developments to a great extent, because of the different levels of sensitivity of the district municipalities and the greater city municipality to pressures exerted by the local interest groups. The greater city municipality is less sensitive to such pressures than the district municipalities. For this reason, the chances of the demolition of unauthorized buildings by the greater city municipality is higher compared to the district municipalities. Moreover, it is the greater city municipality that is responsible of guiding the macroform of the city. These facts bring to the fore the need to assign the demolition authority to the greater city municipality as well. Another measure to

discourage unauthorized developments may be the imposition of an important amount of penalty on such developments without demolition. However, penalization without the demolition of the building does not usually have a direct effect on fixing the land use decisions. Unplanned development in natural reserve areas like forests and water catchment areas of dams have an additional destructive effect on the city. In Istanbul, such areas, which are mostly under public ownership, have been the fastest in unplanned development. The demolition of unauthorized developments ruining the natural environment, plus additional penalization can generate a discouraging effect on such developments.

#### 4.1.2. Eliminating the Interests of Behaving Units Behind Unplanned Development

Putting development regulations and taking measures for their implementation can be effective in the prevention of unplanned developments only to a certain extent. As long as unplanned development is functional for the behaving units in the society, it is likely to persist. In fact, the behaving units will continuously develop new mechanisms of unplanned development, to resist the planning tools. A more effective approach to the prevention of unplanned developments is the elimination of interests underlying unplanned development. Unplanned development is rational as long as it satisfies the motives of the behaving units. So, to develop planning tools for eliminating the interests of behaving units behind unplanned development, the motivations of the behaving units behind it has to be taken into consideration. These motivations were analyzed in Chapter 3, and two significant motivations that of the "consumers" and the "groups gaining power from manipulation of land" were identified. The motives of

the consumers were seen as utility maximization with minimum costs, and those of the land owner-developers, as, profit maximization from the manipulation of urban land. The attempt to uproot the two types of motivations necessitate different sets of planning tools. The two sets of planning tools developed within this approach are; "Eliminating the Interests of Consumers Behind Unplanned Development" and "Eliminating the Interests of Land Owner-Developers Behind Unplanned Development". The elimination of the first motivation can be achieved by the planned supply of needs of the consumers. That of the second can be eliminated by the restriction or prevention of the transfer of land rent to individuals.

#### 4.1.2.1. Eliminating the Interests of Consumers Behind Unplanned Development

The consumers of urban functions are motivated by settling in proximity to the functions with which they are interlinked (work-place-housing), utilizing infrastructure and other urban services, decreasing the costs of development, extending the payment of development costs to a long period of time (adaptation of the organization of payments to small incomes), etc. Such motivations driving the behaving units to actualize unplanned development can be met by a set of planning tools, basically based on the strategy of supplying these needs through planned developments.

Each of the consumer motives behind unplanned development that are summarized above can be satisfied by the public. The first step in this direction involves the maximization of utility of consumers through planned development. This can be achieved by designing development zones which pay special attention



to the needs of the consumers. The planning of settlements which offer employment opportunities to the consumers who settle in them and the provision of adequate infrastructure in these zones may constitute effective planning tools to this end. Another step involves the minimization of costs for consumers. This may be achieved through the supply of cheap land in development zones by the public. The arrangement of payments in accordance with those of the incomes of consumers may be added to this. These may be accompanied by subsidies and the crediting of costs in these zones.

Additional measures can be taken to prevent the efforts of making profit out of such implementations. An example to such measures can be the prevention of action of the real estate agents in the development zones by taking back the land assigned to any function with low costs if construction is not made on it.

#### 4.1.2.2. Eliminating the Interests of Land Owner-Developers Behind Unplanned Development

The land owner-developers are motivated by acquiring land rent created by the society. This motivation can be removed by the limitation or prevention of transfer of land rent to individuals.

Land rent is created by the society through a series of processes. It is created by the expansion of the city due to the increase in population, the installation of infrastructure, and decision making on use of land (planning) by the public. Each of these processes entails a rise in land rent. The land owners-developers are motivated by the acquirement of this rent. The rent created by the

growth of the city, in other words, with a change in the relative location of a certain land, is called the differential rent. In the creation of this type of land rent, the land owners have no active role. However, there is another type of land rent, which is created by the land owners themselves deliberately. This is the "absolute rent", which emerges as a result of scarcity in the supply of urban land. This scarcity is largely created by the land owners who do not open up their land to use for the purpose of creating absolute rent. This activity of the land owners-developers increases costs of payed by the society. In addition to the transfer of land rent created by the society to individuals, the deliberate activity of land speculation raises the price level of land, and consequently increases the cost of living in the city. The motives of the land owner-developers behind land speculation can be eliminated by limiting the acquirement of absolute land. The existing legal-institutional framework allows certain planning tools in this direction. Two planning tools can be proposed for the prevention of acquirement of absolute rent by the land owners. One is the controlling urban land rent levels in the city through the supply of cheap land by the public. The supply of cheap land, prevents scarcity in urban land and decreases the overall price level of land in the city. In this way, acquirement of absolute rent is limited. Another tool is the effective taxation of real estate and transfer of land ownership. This can be achieved by the increase in the rates of real estate tax, and the land transactions tax. Through the effective taxation of land ownership, two objectives are achieved. First, part of the land is transferred to the public, second, absolute rent acquired by land owners is limited by an increase in the cost of land ownership.

"Handicapping the achievement of urban land rent by individuals" would totally remove the motives of land owner-developers behind unplanned development. This can be achieved by structural transformations in the ownership

system. The transformations that may be proposed are two-fold. One is the limitation of private ownership rights on land in two dimensions. In this case, the building rights on land are totally (the whole building) or partially (beyond a certain flat level) owned by the public. The public sells or rents the building to individuals for use. In this way, rise in land rent is totally transferred to the public. The second type of transformation in the ownership system is the public ownership of urban land. In this case, motives of acquirement of land rent is totally removed. When land is owned by the public, it may be rented to individuals for long periods of time.

#### 4.2. Transformation of the Vacant Lands Into Urban Open Spaces

The prevention of development in areas where open spaces are proposed, is the first step on the way to the creation of urban open spaces. However, it is not sufficient. Even in cases when the land between the decentralized settlements and the central city is kept vacant, the problem of transformation of these lands into urban open spaces remains.

##### 4.2.1. Planning Organization for the Transformation of Vacant Lands Into Urban Open Spaces

The first problem is presented by the ineffectiveness of the planning style in the creation of large open spaces. This problem is rooted in the approach of planning, to its role in the development process of the city (and therefore in the creation of urban open spaces). Within the current planning style, the tool utilized in the direction of the development of the city is "development planning".

Development planning is based on the subdivision of the plan area into subareas to which certain functions are attributed. To the subareas, functions such as, industry, commerce-services, housing, and the green are attributed. This kind of planning is based on imposing restrictions on the behavior of citizens. It does not comprise criteria on how land use decisions will be implemented. Within this mode of planning intervention, the actual developments are directed by two mechanisms. One is planning that puts limits to the actions of behaving units, the other is the actions of the behaving units. In other words, development is actualized by the behaving units under the limits put by development planning. This passive approach in the planning style is also reflected in its tools utilized for the creation of open spaces. The tool for the creation of open spaces within development planning is the allocation of certain areas to open spaces, in plans. After attributing the open space use to certain land, the only possible mode of transformation of the land into open space is the transfer of land into public ownership, and the finance of the development by the related public institutions. In this activity development planning has no active contribution either. It puts the implementation of its decisions under the control of behaving units (public institutions). In many cases, the public institutions are unable to expropriate the land and transform it into an open space because of the scarcity of direct financial resources. This approach of development planning makes up an obstacle for the creation of large open spaces on the land between the decentralized settlements and the central city. The creation of large open spaces needs to be guided by planning through complex organizations in the land ownership pattern and finance. The problem that the existing planning style presents on the way to the creation of large open spaces is, the passive approach of development planning to its role in the development process of the city.

This deficiency necessitates modifications in the approaches of the existing planning style. Such modifications should engender a more active role of planning in the organization of developments proposed in the plans. To this end, "large projects" which cover the whole process of the transformation of vacant land into urban open spaces can be proposed. Such projects may ensure public spaces such as large open spaces, whose creation cannot be achieved if its development is left to the actions of the behaving units within the market mechanism. The large projects made for this purpose, should be an extension of planning activities in more comprehensive scales, which themselves necessitate transformations. Presently, the "development planning approach" makes the basis of planning in all scales. Transformations in overall planning activity are needed so as to abolish the passive, static approach in land use planning, and to introduce an active role to it. This can be achieved by the introduction of a planning hierarchy, which involves differentiated activities at different scales. The proposed planning hierarchy in the direction of preparing the legal basis of implementation of large projects for the creation of urban open spaces are; "Strategic Planning in the Metropolitan Planning Scale", "Structural Planning in The Master Planning Scale" and "Large Projects in Which Plans-Programs-Projects Accompany Implementation in the Planning Scale Oriented Towards Implementation".

Strategic planning approach at the metropolitan scale can replace the static land use planning inherent in the Metropolitan Master Plans. In the strategic planning approach planning decisions given at the metropolitan level are oriented towards policies rather than towards the physical. Strategic planning can be directed by the Metropolitan Planning Department of the Greater City Municipality.

Structural planning approach at the master planning scale can replace the static land use planning inherent in the Master Development Plans. The structural planning is based on the definition of the main structure of the plan, so as to allow elasticity in land use decisions. Such elasticity is needed to enable the plan to adapt quickly to new developments and inputs given by specificities. In this approach, the margins in which the plan can be reinterpreted are delimited to prevent reinterpretations from effecting the main structure of the plan. Structural planning can be directed by the Metropolitan Planning Department of the Greater City Municipality.

The large projects at the planning scale oriented towards implementation can replace the Development Plans. This approach is based on guiding the process instead of putting restrictions on it. These projects cover the planning-programming-project stages which accompany implementation. Decisions made in each of the stages transform gradually parallel to transformations in others and actual developments in the process of implementation. Large projects can be directed by the Special Project Departments within the Metropolitan Planning Department of the Greater City Municipality.

Such a planning hierarchy prepares the legal basis of implementation of large projects for the creation of urban open spaces. However, by itself it does not guarantee the creation of open spaces.

#### 4.2.2. Interrelation Between Land Ownership Pattern and the Types of Urban Open Spaces

The basic step in the development of planning tools for the creation of urban open spaces is the definition of the concept of "urban open space". In this definition, the functions attached to urban open spaces are listed. In classifying the types of urban open spaces according to the functions they involve, a second purpose should be adopted. This purpose is identifying the different types of urban open spaces which can be created on different types of land ownership. Thus, the classification should be based on the interrelation between the types of open spaces and the land ownership pattern. Land ownership pattern is one of the basic determinants of the functions that take place on urban land. Consequently, it is also one of the basic obstacles ahead of the creation of urban open spaces. Planning aiming to create open spaces has to adjust its decisions to the inputs dictated by the land ownership pattern, though, as will be proposed later, it should not be taken as inevitable. This brings into view an important planning strategy, adopted in the allocation of uses on land, that is, allocation of types of urban open spaces in the city in accordance with the type of ownership on land. Following this strategy, the classification made upon the types of ownership on land and the types of open spaces which can be created on them are given in Table 4.1.

**Table 4.1. Interrelation Between Types of Open Spaces and Land Ownership**

TYPES OF URBAN OPEN SPACES	TYPES OF LAND OWNERSHIP
<p>GREEN BELTS - No Development</p> <p>Green Areas for the Protection of Natural Resources (Forest and Water Catchment Areas)</p> <p>Green Areas for the Conservation of Ecological Balance (Direction of the Macroform)</p>	<p>Lands Under the Disposal and Authority of the State</p> <p>Common Lands</p>

Table 4.1. (cont'd)

OPEN SPACES FOR PUBLIC SERVICES - Minimum Development	Private Lands of the State Common Lands
OPEN SPACES INVOLVING RENTABLE FUNCTIONS - Maximum Development Active Recreation Involving Rentable Functions (Commerce, Recreation, Sports) Low Density Housing Areas Campuses (University, etc.)	Private Lands

Green belts are defined as areas carrying natural character where no development can take place. They may be classified into two types. These are; the green areas for the protection of natural resources (forest and water catchment areas), and the green areas for the conservation of the ecological balance. The purpose of creating green belts of the first type is the protection of natural resources, such as forests and water reserves of a city. The exact locations of these areas are already delimited. The purpose of creating the second type is the direction of a decentralized form, with open spaces within. As this type of green belts are man-made, their locations are more flexible compared to those of the first type.

Green belts can be created only on public lands, on lands under the disposal and authority of the state. They cannot be created on private lands, as limited returns are received from functions that can take place in green belts (natural parks, etc.) and as high investments are needed. The private lands of the state are not easily transformed into green belts either. The uses that can take place on the private lands of the state are already fixed by the legislation on the responsibilities of the owner public institutions. Each institution such as the Mass



Housing Administration, Ministry of Industry and Commerce, etc., are inclined to manipulate land for their own purposes. Among the public institutions, however, it is the municipalities who are responsible for providing land for the creation of green belts. Nonetheless, the scarcity of resources of municipalities diminishes the likelihood of their making investments for such a function.

Open Spaces for Public Services involve social and technical infrastructural functions (that occupy large areas in our case), such as social and cultural activity complexes giving service to the whole city, storage areas for institutions providing technical services etc. Minimum development for functions used by the public takes place in these areas.

The public service functions can be located on private lands of the state. These functions can be developed on lands owned by the public institutions, such as the Ministry of Education and Sports, Ministry of Public Works and Resettlement, Municipalities, etc. Legislation on the lands under the disposal and authority of the state does not permit them to be opened up to development, unless they are assigned to public institutions, as the private lands of the state.

Open spaces involving rentable functions can be classified into several types. These are; the active recreation areas involving functions such as commerce, recreation, sports, etc., low density housing areas, campuses of universities, multi-function complexes, etc. This type of open space involves a more intensive development than the other types of open space.

Open spaces involving rentable functions can be created on private lands of the state and on the private lands. As a matter of fact, this type of open

space is the only type which can be created on private lands without any other kind of planning intervention. Legislation on the lands under the disposal and authority of the state does not permit them to be opened up to development, unless they are assigned to public institutions as the private lands of the state.

#### 4.2.3. Creation of Urban Open Spaces

In the previous section the strategy of making land use decisions (to allocate types of open spaces) in keeping with the type of ownership on land has been described. Within this strategy, the classification of the types of urban space has been done in accordance with the types of ownership of land. However, although this strategy facilitates the creation of proposed open spaces, it involves some misconceptions. Such a strategy by itself, displays a deterministic approach, as it accepts the land ownership pattern as an unintervenable determinant of the functions that can take place on land. This is ungrounded because, planning can intervene in the land ownership pattern for the purpose of creating public space.

In this section, the organization of "large projects" that were previously proposed as a tool for the creation of urban open spaces, will be outlined. As already stated, transformation of vacant land into urban open space can be achieved by the active guidance of planning to the process of development. The large projects carried out with such an objective. They are made to cover the whole process of creating urban open space, as local bodies in the organization of their budgets, and originality of their solutions to the problems they face. The process involves the planning-programming-project making stages accompanying the implementation. Throughout this process, they face several obstacles but they

gradually develop means for overcoming them. The obstacles that large projects face, in the creation of urban open spaces are; "The Diversified, Small Land Ownership Pattern", "Scarcity of Resources" and "Inadaptability of the Existing Planning Organization to Such Projects".

The list of obstacles ahead of the creation of an urban open space throws light onto the basic issues that planning has to deal with in its relevant efforts. The issues of the large projects on the way to create urban open spaces are; "The Organization of Ownership on Land", "The Organization of Finance" and "The Transformations in the Planning Organization".

A diversified, small ownership pattern exists extensively on the land between the decentralized settlements and the central city. However, the types of open space proposed for these lands necessitate large areas. This fact introduces the problem of organization of the diversified, small ownership pattern to form integrated wholes to which the functions can be attached.

The alternative modes of organization to the diversified, small ownership pattern are; "Unification of Land Ownership by Transfer of Land Into Public Ownership", "Unification of Land Ownership by Transfer of Land Into Large Private Ownership" and "Organization of Small Ownerships to Make Up An Integrated Whole"

The tools provided in the related legislation for the transfer of land into public ownership are; Expropriation (Expropriation Law No.2942) through the payment of expropriation equivalent, Compensation (Expropriation Law No.2942) through transfer from the other real estates of the municipalities, Planning Share

Taken in the Compulsory Replotting Process (Development Law No.3194, 18th Article) through the free of charge transfer of at most 35% of private property to the public for the provision of public service areas.

Transfer of land into a large private ownership is done through purchase.

The tool for the organization of small ownerships to make up an integrated whole is, The Compulsory Replotting Process (Development Law No.3194).

Problems in the finance of the creation of large open spaces arise from several factors based on the scarcity of resources. The scarcity of resources, are accompanied by several other difficulties related to the characteristics of the flow of capital. These are; the irregularity in the flow of capital and the instability in the costs of factors in the development of open spaces (material, labour:project preparation-construction). The irregularity in the flow of capital may disrupt the time-table envisioned in the initial program. The instability of costs may cause the costs in the project to exceed the predictions of the initial feasibility. With these problems, the efficient financial management of large projects gains crucial importance. In fact, these problems can be overcome by some basic principles in the organization of finance. The basic principle is the assignment of autonomous budgets for these projects. Within these budgets, the resources and investments can be balanced.

The resources utilized in the large projects differentiate according to the types of open space. This differentiation will be clarified in the sections about the

creation of open spaces in different types. However in total, the large projects utilize resources, transferred from (outside); the central government, municipalities, international organizations, and created within the project; by the returns from rentable functions taking place in the project area.

The planning legislation and institutions in the country are organized according to the existing planning style, which is "development planning". The legislation and institutions established for planning that have a passive role in the development of the city, do not offer a convenient set up for the active contribution of planning to developments. This makes up an obstacle ahead of the creation of urban open spaces. This facts bores the necessity of transformations in the planning legislation and institutions. First of all, special project-making branches are needed to carry out the large projects. These institutions may be the branches of the metropolitan planning department of the greater city municipality. The other transformations necessitated in this direction will be outlined in the following sections.

The development of a planning strategy for the subgoal of creating urban open space can proceed with proposals on the creation of each type of open space.

#### 4.2.3.1. Creation of Green Belts

Green belts can be created by the transfer of land into public ownership. Land ownership can be transferred to the institution directing the macroform of the city for the purpose of creating green belts. This institution is the

related department of the Greater City Municipality, that is the Land Office of the Metropolitan Planning Department. The tools for the transfer of land into public ownership are expropriation, compensation, and planning share taken in the compulsory replotting process.

There are two components of cost, that are; cost of land and cost of transforming vacant land into its new use.

Land makes up a component of cost in case it is expropriated or compensated. Land is not a component of cost, in case it is transferred to the public ownership through the planning share taken in the compulsory replotting process. So, the cost of land in green belts can be avoided by the utilization of this tool. Green belts can be created with no cost on the 35% of land on which a diversified, small ownership pattern exists. In such implementations, the project has to be designed as a multi-purpose (involving different urban functions along with the green belts) project, made for a certain district.

The cost of transformation of vacant land into its new use differentiate according to types of green belts. As before mentioned, there are two types of green belts -those oriented towards the protection of natural resources and those geared to the creation of a decentralized form with open spaces. In the first type, the areas are preserved in their existing natural character (forest, agricultural areas). In the second type, the vacant land has to be transformed into green belts, by means of man-made efforts. So, the cost of transformation of vacant land into its new use, is not valid in the first type of green belt, whereas it exists in the second type.

The types of functions that take place in open spaces determine the modes of resources utilized in the project. In this respect, the organization of the finance of green belts differs from that of other types of open spaces. This difference stems from the fact that, green belts are not resource generating investments. The resource generating functions that may take place in green belts are limited in scope (national parks, etc.) since development is not allowed on them. For this reason, green belts can be created only with resources that are transferred from outside -i.e. from the central public institutions, municipalities, and international organizations. However, if the creation of a green belt is conceived as part of a larger project, involving other urban functions, opportunities for its finance by the resources created within the project arise. In such projects, which can be named as projects of certain districts, the resource generating functions are activated to finance the creation of the green belts. In such cases, the resources created within the project are added to those transferred from outside.

The basic problem in the creation of green belts is the transfer of land into public ownership. Within the existing institutional framework, land is transferred into the municipal, or state (Land Office of the central government) ownership, which are separate institutions in their decision making set up. For the establishment of a systematic approach in the creation of a decentralized form with open spaces, urban land transferred into public ownership should be put under the control of the greater city municipality, which is responsible of directing the macroform of the city. For this reason, Land Office of the Greater City Municipality, can be proposed. The land office can be a branch of the Metropolitan Planning Department. It can work for the manipulation of land for the purposes of providing land for certain functions (green areas) in addition to its other functions as the manipulation of land rent levels by supplying cheap land in the city. This branch is

provided with resources allocated from the center, and equipped with the authority of resource creation within an autonomous budget.

#### 4.2.3.2. Creation of Open Spaces for Public Services

Open spaces for public services can be created by the transfer of land into public ownership. Land ownership can be transferred to different public institutions related to the public services, such as the Ministry of Education, Ministry of the Youth and Sports, Ministry of Public Works and Resettlement, municipalities, etc. The tools for the transfer of land into public ownership are expropriation, compensation, and planning share taken in the of compulsory replotting process.

Among the two components of cost that are cost of land and the cost of transforming vacant land into its new use, the first carries the same characteristics with that of creating green belts. However, the second differentiate, as the types of functions that take place in open spaces determine the nature of the resources utilized in the project.

As those in green belts, investments in public service areas are not resource generating investments. So, the finance of these areas can be supplied by the resources that are obtained from outside. However, in contrast to the green belts, the institutional framework for the finance of such functions is already established. The provision of public service functions remain within the scope of responsibility of certain public institutions, as the Ministry of Education being responsible for providing educational facilities, Ministry of the Youth and Sports, providing spaces sports and similar activities, and the like. Budget shares for the



provision of such services are already identified. So, the finance for such functions are taken into consideration as outer factors within the financial programs of the large projects. The organization of finance of these areas are left to the budgetary programs of the related public institutions.

The creation of open spaces for public services whose institutional framework is already established does not necessitate significant changes in the planning organization. The only aspect that has to be dealt with is the strengthening of the coordination between the public institutions which are responsible for directing a macroform with open spaces (municipalities) and those which are responsible for providing certain services (the ministries in charge of certain public works).

Another aspect that has to be dealt with is the coordination among the different public institutions financing the green belt. Experience has shown that, the separate public institutions which have different priorities in their locational choices and in the organization of their budgets act independently of each other. However, the creation of different types of open spaces involving public service areas, necessitates the collective action of different public institutions. Such a coordination can be achieved by the establishment of a committee on urban development affairs within the central government, which is authorized of imposing a certain level of resource transfer to urban areas, in accordance with the decisions of the metropolitan planning agency.

#### 4.2.3.3. Creation of Urban Open Spaces Involving Rentable Functions

Urban spaces involving rentable functions can be created on all types of land ownership, including private ownership by the organization of the diversified, small ownership pattern, or by the transfer of land to a single private owner.

A tool for the organization of small ownerships is compulsory replotting. This activity is based on the unification of plots within a certain area, and their redistribution afterwards. This activity makes it possible to rearrange plots that were formerly randomly distributed according to the principles of urban design.

Providing land for open spaces, however requires additional arrangements. Such arrangements involve the reallocation of building rights in vertical axes, which are given in horizontal axes in development plans. This is achieved by totaling building rights given to each of the land owners, and their redistribution at the flat ownership level. This activity provides the concentration of development in certain zones, and the consequent allocation of the remaining land to open spaces.

The proposed tools of compulsory replotting and the rearrangement of ownerships at the flat level are superior to the arrangements made within the development planning practice with regards to the chance of implementation. Such a chance is closely bound up with the equity of the distribution of development rights among land owners. In the development planning practice, functions as commercial and green areas are allocated to plots of separate land owners. The losses of land owners whose plots are situated within these public spaces are

almost never compensated by expropriation shares. This results in inequity among the land owners in the planning area, with regards to development rights. This fact suffocates the expectations of land owners on a rise in the development rights attributed to their land. As a result, the chance of implementation of the plans reduce.

In the proposed tools of compulsory replotting and the rearrangement of ownerships at the flat level, the land owners in the project area receive development rights in equal rates based on their areal share in the total. As a result, the amount of land allocated as open space is supplied by all of the land owners in equal rates. In other words, the loss and the gain are shared by all the land owners in the project area.

The finance of open spaces involving rentable functions can be provided privately, publicly, or by a mixture of these two modes.

This type of open space can be financed by private firms that are attracted by the rentability of the functions presented by in the project. In fact, this is the only type that can be financed by such investors. Such projects are made in accordance with the structural master plans.

The actualization of similar projects by the public is also possible. In this case, the creation of open spaces necessitates complex financial organizations. The crucial points in the financial organization of these projects are the activation of the resources and the programming of the balance and timing between the provision of resources and investments. The large public projects for the creation of open spaces involving rentable functions can utilize resources obtained from

outside, (from central public institutions, municipalities, international organizations), and through the resources created within the project, by the returns provided from rentable functions situated in the project area. The amount of capital flow from outside determines the amount that has to be created within the project, that is to say, the amount of returns that has to be generated from the rentable functions that take place in the project area.

In the creation of a balance between the resources and investments problems may arise due to the unpredicted irregularity in the flow of capital, and in the levels of cost factors. With such problems arising in the process of implementation, the project gradually has to adapt to the financial programs. The changes that take place in the financial programs are mostly in the direction of increasing the proportion of resources created within the project. This is reflected in land use decisions of the plan, as an increase in the density of rentable functions. Consequently, the project goes out of its initial targets in terms of land use during the process of implementation.

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**APPENDICES**

APPENDIX A

INFORMATION ON THE POPULATION ZONES

Table A.1. The List and Populations of Settlements Involved in the Population Zones  
in the European Section

	1970	1975	1980	1985	1990
EMINÖNÜ	136.997	122.885	93.324	93.383	83.444
FATİH	417.662	504.127	474.587	479.459	462.464
BEYOĞLU	225.850	230.532	223.360	245.999	229.000
SİSLİ *1	250.695	270.577	282.471	322.507	250.478
BESİKTAS	136.105	174.931	188.117	204.911	192.210
TOTAL	1.167.219	1.303.052	1.261.859	1.346.259	1.217.596
II					
ZEYTİNBURNU	117.905	123.548	124.543	147.849	165.679
BAYRAMPASA	124.085	157.367	165.723	187.690	212.570
KAĞITHANE	111.427	164.448	175.540	204.019	269.042
SARIYER (M)	62.957	79.329	110.469	138.416	160.075
EYÜP (M) *2	86.384	95.486	110.871	182.197	200.045
G.OSMANPASA (M)	89.778	97.118	101.810	279.127	354.186
TOTAL	592.536	717.296	788.956	1.139.298	1.361.597
III					
Güncören *3	22.160	48.593	74.761	102.827	71.141
Esenler *3	31.382	49.379	75.072	83.242	187.921
Koca Sinan *3	30.384	51.311	96.312	131.879	91.322
Yeni Bosna *3	8.775	26.424	40.786	57.987	120.975
Bağcılar *3	6.314	21.426	53.594	85.725	208.041
TOTAL	99.015	197.133	340.525	461.660	679.400
IV					
BAKIRKÖY	104.383	166.524	193.334	231.178	276.429
KÜÇÜK ÇEKMECE 1	54.892	95.450	153.609	185.462	220.819
KÜÇÜK ÇEKMECE 2	6.354	15.389	23.894	41.109	70.586
KÜÇÜK ÇEKMECE	43.385	58.709	81.503	113.146	170.565
TOTAL	209.014	336.072	452.340	570.895	738.399
V					
Avçılar *3	9.854	14.953	30.486	53.287	93.141
Esenyurt *4	923	1.631	6.636	21.290	70.280
Avçılar (Firuzköy)	1.349	1.581	3.060	5.367	9.413

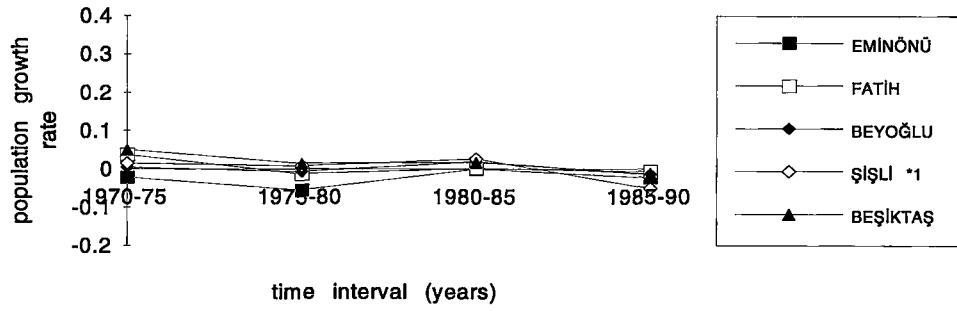
Table A.1. (cont'd)

TOTAL	12,126	18,165	40,182	79,944	172,834
VI					
KÜÇÜK ÇEKMECE 3	2,519	2,345	3,685	5,788	17,449
B.ÇEKMECE	974	1,045	1,252	1,664	2,841
B.ÇEKMECE (Kırac)	371	435	544	826	2,239
TOTAL	3,864	3,825	5,481	8,278	22,529
VII					
B.ÇEKMECE (Kavaklı)	501	628	866	1021	2,170
B.ÇEKMECE	1,305	1,578	2,812	3584	10,191
B.ÇEKMECE	613	802	864	924	1,538
B.ÇEKMECE	344	801	525	709	1,633
BÜYÜK ÇEKMECE	3,913	5,204	8,121	11,310	22,394
Mimar Sinan *4	2,296	2,232	3,138	4,083	7,690
TOTAL	8,972	11,245	16,326	21,631	45,616

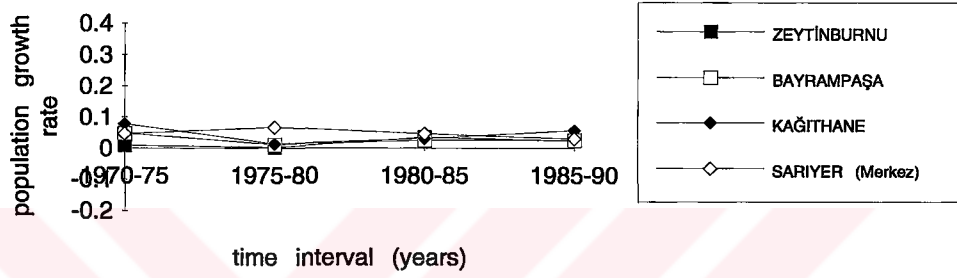
Table A.2. The List and Populations of Settlements Involved in the Population Zones  
in the Anatolian Section

I	1970	1975	1980	1985	1990
USKUDAR (Merkez) *5	120,558	164,227	189,187	379,497	395,623
KADIKÖY	241,593	362,578	468,217	577,863	648,282
KARTAL (Merkez) *7	123,103	221,809	327,125	456,158	446,411
BEYKÖZ (Merkez)	61,206	76,804	94,101	118,697	142,075
TOTAL	546,460	825,418	1,078,630	1,532,215	1,632,391
II					
UMRANIYE (Merkez)	22,969	38,730	71,954	87,715	242,091
PENDİK (Merkez) *8	27,494	38,193	48,219	58,081	249,210
TUZLA (Merkez)	9,905	11,163	16,440	14,152	21,874
TOTAL	60,368	88,086	136,613	159,948	513,175
III					
A.Dudullu	1,076	2,659	12,742	20,515	36,887
Y.Dudullu	990	2,846	8,645	17,132	36,321
Sarıoazi *9	710	1,300	2,775	8,701	22,125
Samandıra *10	549	4,974	4,779	5,817	19,524
Sultanbeyli *10	1,105	1,804	2,431	3,741	82,298
Çekmeköy	381	1,850	1,938	3,789	13,523
Büyükbakkalköy	374	420	500	595	1,789
TOTAL	14,564	31,373	55,365	88,763	268,744
IV					
Ormanlı	475	509	723	1,131	2,735
Yakacık	9,379	15,520	21,555	28,473	56,277
Kurköy	685	1,660	3,246	5,350	15,561
TOTAL	1,160	2,169	3,969	6,481	18,296

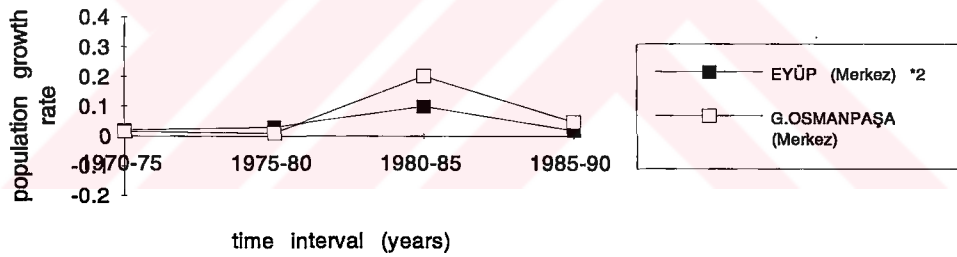
### ZONE I



### ZONE II



### ZONE II



### ZONE III

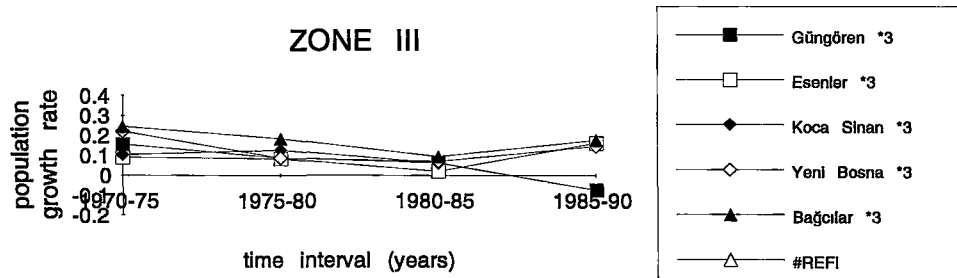
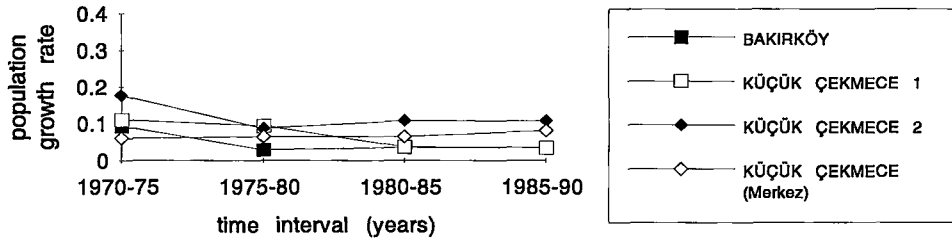
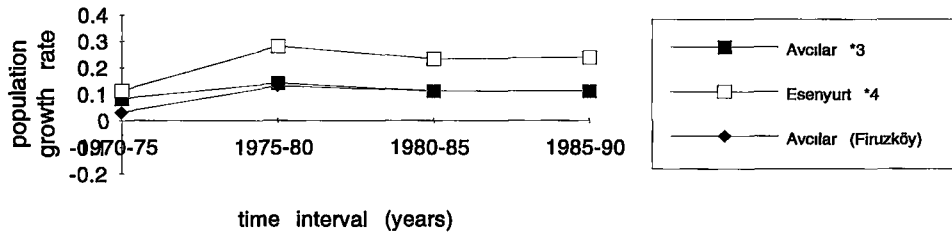


Figure A.1. Annual Population Growth Rate of Settlements in the Population Zones in the European Section

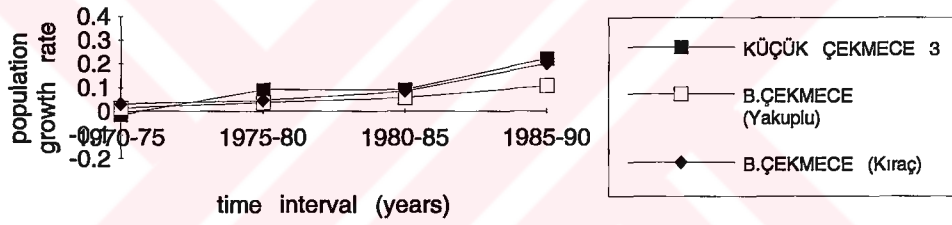
### ZONE IV



### ZONE V



### ZONE VI



### ZONE VII

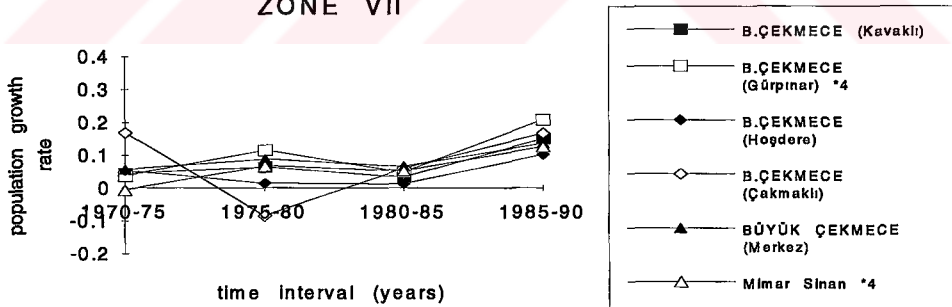
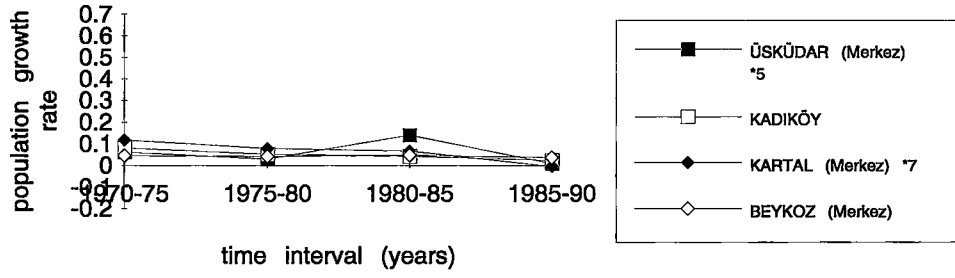
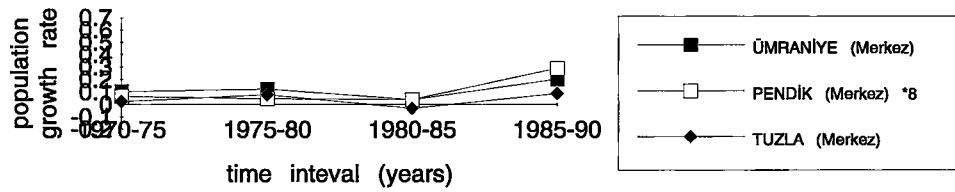


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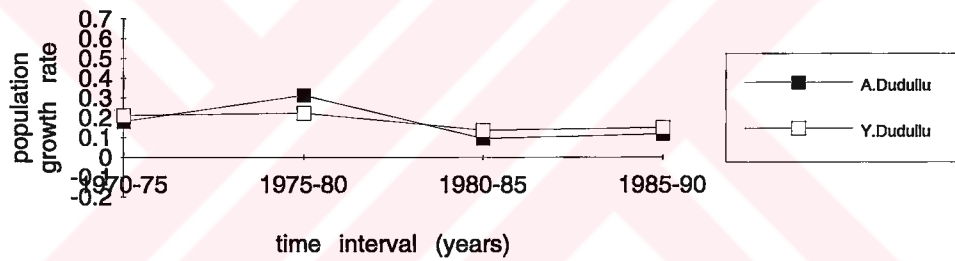
### ZONE I



### ZONE II



### ZONE III

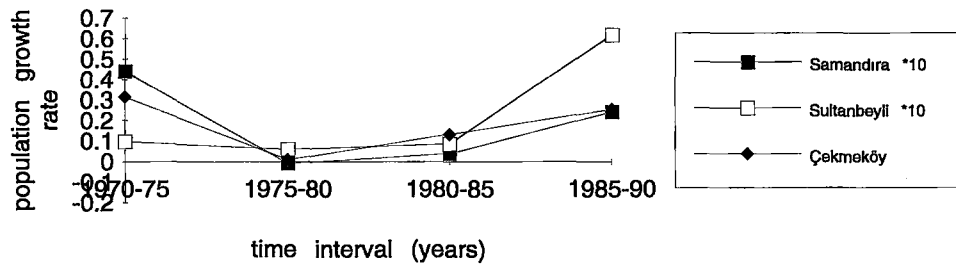


### ZONE III

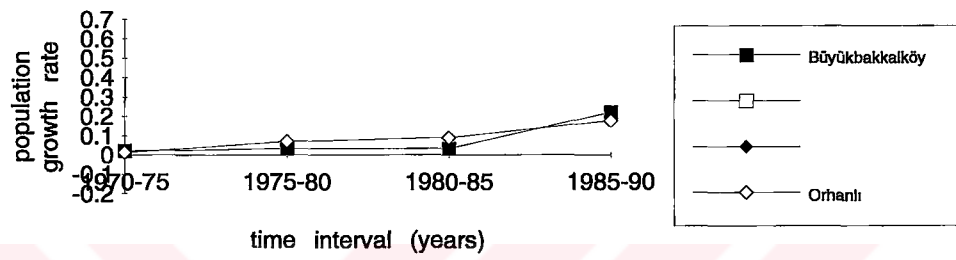


Figure A.2. Annual Population Growth Rate of Settlements in the Population Zones in the Anatolian Section

### ZONE III



### ZONE III-Orhanli



### ZONE IV

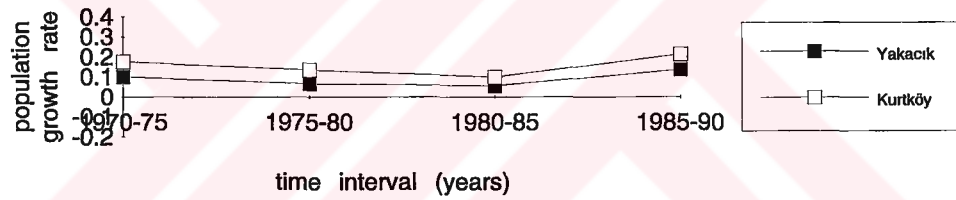


Figure A.2. (cont'd)