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The Impact of Different Urban Housing Patterns on the Sustainable Urban Development of a Historic City, Bursa/Turkey

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1. Introduction

Throughout history, cities have been built to serve a variety of functions; as forts, market places, and as centres of administration or industry. All cities have experienced periods of growth and decline and all tend to raise contradictory views concerning the nature and purpose of the city as an urban system (Elliott, 1994). Over the last fifty years cities have been transformed from fairly concentrated and identifiable towns into amorphous urban areas, sprawling into their hinterlands without any visible borders between town and country. Transition from the industrial society to the information society as well as the globalization process led to changes in space and spatial organizations; thus, most of the cities around the different regions of the world have been subject to important social and cultural alterations. As a result of this urban transformation process around the world, different physical and social structures emerged in different regions.

The developments in political, economical and technological fields caused a very rapid urbanization in Turkey. However, providing sufficient number of residences that are available for people with average income as well as constructing the substructure necessary for these residences have not been succeeded; therefore, a lack of healthy accommodation problem, which is typical for underdeveloped or developing countries, has arisen. Besides the very high level of migration from rural to urban areas due to the rapid industrialization, Turkey has also been influenced by the migrations from abroad. Tekeli(1998), indicates that squatters, build - and -sell apartment blocks and cooperative housing societies as well as housing financed by the state have emerged as solution to these problems in this country. He also points out the fact that none of these presentation forms has been a form to enrich the life quality nor to create good quality environments. Moreover, "Pull down-rebuild" processes in the city centers led to the demolishing of historical and cultural values, to the permanent density increase, to the loss of green areas as well as to the insufficiency of the social substructure. The urban development in the cities caused a permanent decrease in quality of life, which is determined as the main indicator of sustainable urban development by many researchers (e.g.Redclift, Woodgate,1997;Mitchell,2000). In the report of WCED (1987), the concept of sustainable development has come to be associated with efforts to increase the quality of life without endangering the natural resource base of the society. In

another official report, the Strategy for the UK, "A Better Quality of Life" published by the UK Government in 1999, sustainability was defined as the simple idea of ensuring "a better quality of life for everyone, now and for generations to come". The quality of both the natural and the built environment, the perceptions of one's neighbourhood, the opportunities provided by the environment for self-betterment and community building, and the extent of real and perceived ownership, all influence quality of life. However, cities are no more sufficient to meet the psychological, social and cultural needs of their residents. In view of these circumstances; reasons of this insufficiency and alternative ways of solutions should be investigated.

In the light of these, the scope of this chapter is determined as examination of different housing patterns of Bursa in the context of sustainable urban development. Bursa is one of the most important Anatolian cities which comprises the oldest and most authentic examples of monumental and civil architecture and which combines rich tradition, culture, history and nature at the same time. It is a valuable city shaped by a rich cultural heritage and succeeds to reach our times without losing its importance. In the south of the Eastern Marmara, Bursa has been one of the oldest settlements in Anatolia and the first capital of the Ottoman Empire, due to its geographical location, agricultural convenience of its natural structure and its importance from military point of view. Today, being the fourth biggest city of Turkey, Bursa is economically very dynamic and has been undergoing a rapid industrialization and urbanization process. It has one of Turkey's highest population increase rate as a result of its being a focus of large inner and outer immigration. There has been a huge migration from other regions as well as from Balkanic countries since 1950s. For these reasons, unfortunately, the unique historic identity of Bursa has suffered a lot, however the city is still withstanding the onset of rapid urbanization. The author puts stress on the changes in urban housing patterns of Bursa caused by the immigrants and their impact on the form of the city, in the context of sustainable urban development.

This chapter consists of six sections which includes an introduction on urban development process in Turkey. The second section highlights the importance of urban housing patterns to achieve sustainable development dealing with the theoretical literature on the related concepts and indicates the relationship of sustainable urban development and urban housing patterns. The effects of migration on the development trends of housing environments in Turkey and urban development and housing processes in Bursa are explained in the following sections. The fifth section covers an analysis of the immigrant housing patterns both around the historic city center and in periphery of the city. The paper concludes with a discussion on the effects of immigrant housing districts on the sustainable development of the city, offering some strategies and implementation policies.

2. Importance of urban housing patterns for sustainable urban development

As Burton, et.al. (2000) cite, the last decade has witnessed a burgeoning interest in the concept of sustainable development. In particular, the need to develop sustainable cities, in other words to achieve sustainable urban development, has become a global political aim. In fact, sustainable development summarizes the challenges that the world is facing; to manage a global social and economic development, which neither deteriorates the ecological systems, nor exhausts the natural resources. Cities have been given a central place in

discussions about sustainability problems, because in cities many people live closely together and are engaged in a large number of activities. As a socio-cultural entity the city fulfils a number of functions for specialised types of people, whose occupations and social roles differ from those of rural dwellers (Hatfield Dodds, 2000, Gullberg, et.al., 2000). Where and how people live play an important role in achieving sustainable development both in physical and socio-cultural contexts.

To understand how certain groups are allocated to certain parts of the city it is important to understand the urban housing market. The housing stock of a city constitutes more than just accommodation; it is a link with the past, a record of history, a silent witness to the periods of city growth and decline, especially in historic cities. In historic cities, changes concerning home environments show a dramatic transition procedure from past to future; from tradition to modernity. On the other hand, the specificity of a historic city- its identity, history, culture and distinctiveness- has very close relationships with diversity and complexity of urban housing patterns, which are directly related with socio-cultural, socio-economic and political structure of the city. These arguments show that the immense diversity and complexity of housing within different neighborhoods, cities, and countries, and their effects on sustainable urban development are worth emphasizing.

Housing constitutes the largest space user in the city and has always played an important role firstly in shaping urban regions and then achieving their sustainable development. The operation of the supply and demand for housing divides different groups of people to different types of housing in different parts of the city. The result is a rich residential mosaic which can be named as urban housing pattern. It is not a static but dynamic phenomenon due to fluctuations in additions to the stock, demolitions, and conversions. (Short, 1996), (Knox, 1994), (Hartshorn, 1992).

The decentralization of employment and commercial functions, and out-migration of higher income groups to newer peripheral housing change urban housing environment and weaken neighborhood viability. By this way the process of residential decline begins with the transformation of rural land to residential use, and then higher-density apartment construction in inner rings together with population and density increase. The last stage is the renewal of obsolete areas, with the construction of moderate -or low income multiple-family housing or luxury apartments (Hartshorn, 1992). All of these stages bring about unsuitable conditions to achieve sustainability in cities.

There is much more diversity in housing conditions among Third World countries than there is in the developed world. Housing conditions and housing problems of the two worlds are quantitatively and qualitatively very different. Third World countries vary from each other in all fields including housing systems, policies and stocks. The only common denominators are low levels of income, a limited inheritance of quality housing, inadequate investment in residential infrastructure, and high levels of urbanization (Bourne, 1981). The urban housing market of the third world can be identified in two distinctive social and spatial patterns. While the upper and middle classes are living in well-constructed, even luxuriously designed and landscaped houses, the poor are in the high density slums typically on the periphery, called squatter settlements and typify many cities of the Third World. Some of them are temporary, others are more permanent and better organized; but

most are unplanned, with low quality housing, high unemployment, and insufficient social services. In some areas, these spontaneous residential settlements represent from one-third to one-half of the total population of the metropolitan area (Bourne, 1981), (Hartshorn, 1992).Today, all of these characteristics are assumed as indicators of unsustainability. Jenks (2000) discusses the suggestions which are made to overcome the unsustainability of peripheral development through the tax system in the formal sector, and inclusive processes in the informal sectors. However, it is an approved fact that these kinds of precautions in terms of material   arrangements are not enough to achieve sustainable development of any urban area.

The main idea to emphasize is that the urban housing pattern is fracturing the city into distinct areas which are the basis for identifiable communities of shared attitudes, adopted as the basic actors of sustainable urban development. As Short (1996) points out, the identification of these communities and their creation and restructuring is a very important topic for housing all over the world. This shows that, it is an important necessity to examine urban housing process both in spatial and socio-cultural dimensions. In the last decades, researchers studying on the concepts of sustainability and sustainable development agree on emphasizing this necessity and have consensus on two distinct requirements of sustainable development; physical and socio-cultural. Physical requirements of sustainable development can be classified under the headings of "high quality of life", "optimum density", "minimum energy and resource use". On the other hand, socio-cultural requirements   can be classified under "changes in world views", "development ethics", "awareness and responsibility of environment and sustainability" and "participation in the   sustainability studies" as the leading keywords (Çahantimur,2007). In this study different patterns of immigrant housing in Bursa are analysed in terms of physical requirements of sustainable urban development. The subcomponents of these requiements were identified by the author as follows: physical environment conditions, vitality/diversity, accessibility, flexibility, safety and efficiency of the environment as the subcomponents of "high quality of life", density of people, density of buildings and density of functions as the subcomponents of "optimum density", use of recycled materials and systems, minimum use of motor vehicle as the subcomponents of "minimum energy and resource use" (Çahantimur, 2007). First of all, urban development process in Turkey, explaining the effects of internal and external migrations will be summarized in the following section.

3. Effects of immigrant housing on urban development process in Turkey

Socio-economic developments and industrialization as well as political choices made during and after World War II effected settlement strategies and housing production models in Turkey. As a result of serious internal migration from rural to urban areas which started with industrialization, the urbanization phenomenon in all its aspects has become one of the basic problems of the country. Illegal housing and squatter developments increased rapidly around large cities and the dwelling shortage doubled every year (Tapan, 1996), (Erkut,2000).

The basic institution facilitating the negative impact of migration is "gecekondu". The term "gecekondu" literally means "built in one night", and has become the Turkish equivalent of

squatter (Erkut, 2000). As Şenyapılı (1996) indicates, the gecekondu phenomenon has a past of half a century in Turkish cities, similar to what happened in many large cities of Third World countries. They are self – help built housing units on public land and there is no differentiation between the owner, the user and the builder of these houses. Starting with 1970s, builder and owner of gecekondu differed from each other, which led to the commercialization and decrease in environmental quality. After 1980s, market value dominated in Turkey and an informal market started with its own rules and operating system, which does not allow the ordinary migrant to build a gecekondu anymore. Erkut (2000) summarizes this process as follows; the "use value" of houses was the dominant characteristic of the first generation gecekondu. Throughout time, the commercialization of the gecekondu process resulted in the construction of informal settlements that created illegally subdivided lands which are either rented or sold. The "market value" is the dominant characteristics of second generation of gecekondu. The development process of gecekondu areas after 1980s is explained by Şenyapılı (1999) in a very clear way. He points out that the peripheral areas of cities in which formerly only the gecekondu population was interested started to become popular with higher income groups who tried to get away from the disturbing conditions of cities and they began to be used for building collective housing units, mid-income group cooperative houses and private houses. The gecekondu areas close to city centers and transportation networks gained more value and were taken over by large companies to build multi-storey apartment blocks. On the other hand the agricultural lands were sub-divided into plots to be sold and small illegal apartment blocks were built over these plots. In the existing gecekondu areas for which reconstruction plans could be obtained, the owners whose lands were large enough and close to the main roads and centers were having small apartments built by contractors, while others were setting up similar two- or three-storey apartments themselves by using their own family resources, with no regard to environmental standards and reconstruction rules, just as they had done when building gecekondus. The remaining lands awaited the opportunity of being converted into apartments, and the owners of gecekondus who could manage to move into small flats, started to rent them out. Thus, this new development model did, for the first time, lead to the replacement of the organized and neat gecekondu districts by areas where widespread "moving" and "deterioration" became predominant (Şenyapılı, 1998).

In developing countries, social housing (mass housing) areas are alternatives to squatter settlements. The social (mass) housing concept defines the housing production which has arisen as a result of projects aiming at producing a large number of dwellings by public or private associations for the low- and middle-income groups, in other words, for those who cannot acquire a dwelling through their own savings. They can be grouped into two; as the first group, providing multi-storey apartment blocks for rent or ownership produced by public associations, and as the second group, providing land with infrastructure or land together with a partially built dwelling supplied by the state or local governments for low income groups, with the aim of turning a self-help housing production into a planned procedure (Tapan,1996).

Tapan (1996) claims that the mass housing applications in Turkey have brought along a new urbanization model with a planned physical development. The mass housing projects usually produced outside the existing urban area are not affected by the urban fabric. They

are applications that shift the urban population to the periphery of cities and have common administrative and maintenance organizations. Unfortunately, most of these settlements don't have enough relations with the city center, but there is another fact that efforts for developing infrastructure in this respect have gained impetuous.

4. Bursa as a historic city and an industrial center

Bursa is one of the most important Anatolian cities which comprises the oldest and most authentic examples of monumental and civil architecture and which combines rich tradition, culture, history and nature at the same time. It is a valuable city shaped by a rich cultural heritage and succeeds to reach our times without losing its importance. In the south of the Eastern Marmara, Bursa has been one of the oldest settlements in Anatolia and the first capital of the Ottoman Empire, due to its geographical location, agricultural convenience of its natural structure and its importance from military point of view. Today, being the fourth biggest city of Turkey, Bursa is economically very dynamic and has been undergoing a rapid industrialization and urbanization process. It has one of Turkey's highest population increase rate as a result of its being a focus of large inner and outer immigration. There has been a huge migration from other regions as well as from Balkanic countries since 1950s. For these reasons, unfortunately, the unique historic identity of Bursa has suffered a lot, however the city is still withstanding the onset of rapid urbanization (fig.1).

Fig. 1. Bursa in Turkey

4.1 Urban development process in Bursa

Today, landscape of Bursa is composed of diverse civilizations. The societies governing the region during history have left important cultural heritage. Each civilization trying to establish its sovereignty has also been influenced by existing social and cultural structure of the region. The "cultural synthesis" that forms the city culture is more dominant in Bursa than most of the other Anatolian cities. When the city is examined in terms of historical and social aspects of the cultural evolution, the traces of six periods can be seen. These are; the Prehistorical Period, the Hellenistic Period - including the Aegean migrations and the Persian Hegemony, and The Bithynia Kingdom, The Roman Period, The Byzantine Period, The Ottoman Period and The Republican Period (Anc. of Bursa,1984),(Süel,1996).

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The facts that Bursa is located very near to Istanbul, which is an important world city, and that the trade roads have been organized accordingly have been an important factor in the historical evolution process of this city. Automotive and textile ranking first, Bursa is an important industrial city as well as an important international trade center. This situation caused an increased demand for the fertile agricultural fields in Bursa. In the light of these, it is thought that it will be necessary to summarize the processes of urban development and urban housing in Bursa.

Tekeli (1999) thinks that in order to understand the urban transformations experienced by this city and the influences thereof, first of all, the geographical location of the city should be studied. Bursa is located in the south of a fertile plain field, in the north terrace of the Great Mountain's [Mount Uludağ] skirt. Besides this natural structure, another important determinant character of the geographical location is the close distance between Bursa and İstanbul- the city which has conserved its world city properties for centuries. These conditions explain the formation of a pre-industrial city and its transformation to a larger trade center. Bursa became important thanks to silk production in 555 A.D. and has been taken by the Ottomans in 1326. The city has a castle of 800 m lenght in the east-west axis and 500 m width in the north-south axis, an inner castle comprising the palaces of the city governors and an "under castle" part in front of the eastern door which constitutes the main entrance of the city (fig.2).

Fig. 2. Bursa Castle and its near environment in 1921 Map (Bursa Metropolitan Municipality Archieves)

Tekeli (1999) has observed that the city has experienced three important structural changes by now. He briefly explains these changes as follows:

- In the second half of the 14th century, the first major transformation took place. Concomitant to the expansion of the Ottoman territory and due to the delay in the conquest of İstanbul, Bursa became the center for long distance trade. Consequently, bedesten-centered "çarşı" system at the outer castle emerged and became a new focal node of prestige for the city, which determined the development dynamics as well as the identity of the city.
- In the second half of the 19th century, the reconstruction under the influence of the Ottoman Empire's modernization programs stimulated the second major transformation. In this process, Bursa assumed the role of silk thread supplier for European silk weaving industry. On the other hand, influenced by the changes in the political and socio-economical structures of the Ottoman Empire, Bursa is accepted as one of the first cities that created their modern public spaces, after Istanbul and Izmir (Tanyeli, 1999).
- The third major transformation was caused by the urbanization experienced in Turkey after World War II, especially by the changes due to the qualitative increase in industry observed after 1970s in Bursa.

Tekeli (1999) highlights that the fate of Bursa is closely associated with five basic functions and locational specifications of the settlement. The first dimension is related to the central location of the city at the edge of a fertile plain and in the center of a rich agricultural hinterland. The second dimension involves the proximity of Bursa to a world city –İstanbul. The third dimension covers the functions of the city as a long distance trade center. The fourth dimension involves the function of the city as an industrial production center. The fifth dimension is related to leisure and theraphy functions due to the existence of thermal springs. All of these dimensions effected the housing stock of the city, therefore it is also necessary to clarify the developments experienced in housing regions, in order to clearly understand the urban transformation of the city. In the following section urban housing development process of Bursa is summarized.

4.2 Urban housing in Bursa

At the beginning of the 21th century, the city is occupying a very large space. The expansion in the east-west direction is 30 km and in the north-south direction 16-17 km. The population is almost 2 million, in other words the city has reached metropolitan dimensions. The economical structure of the city is very dynamic and diverse. It reflects the problems of an industrial city, of which macroform has rapidly expanded. Tekeli (1999) explains the materialization of urban housing transformation in Bursa in two different ways. One of them is pulling down the existing city patterns and building rapidly new apartment-buildings instead. The second one is the expansion of the city borders by opening new areas for construction. Both of these two implementations has increased the accommodation capacity of the city. Today, we can mention about five main housing groups in Bursa, different from each other in terms of typology. Dostoğlu (2000) classified them as follows:

- traditional housing including most authentic examples of Ottoman civil architecture, which are found both in the center and near environment of the city (fig.3) ,

Fig. 3. Examples of traditional houses in Bursa (A.I.Çahantimur archive)

- apartments, of which construction has started with the modernization movements of the Republican Period (fig.4),
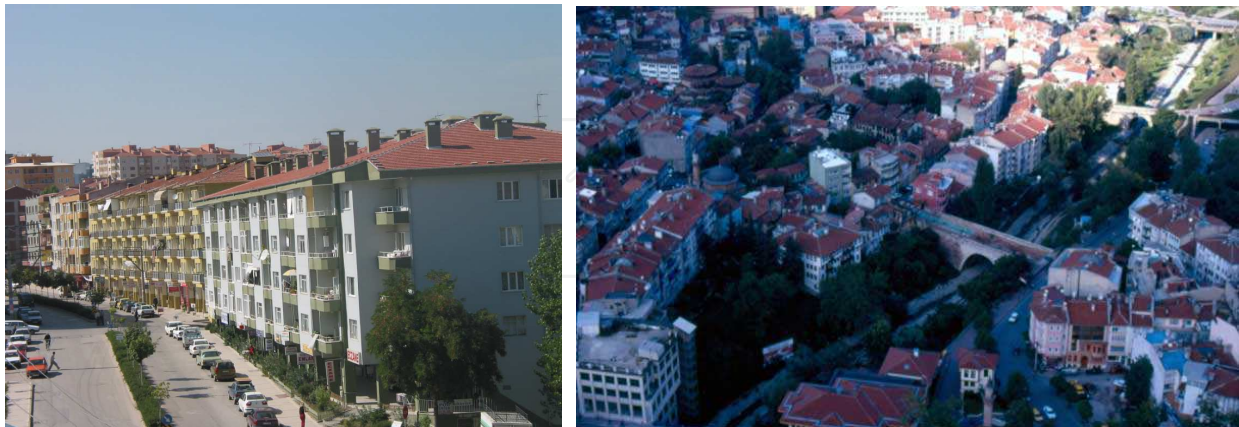

Fig. 4. Examples of apartment blocks in Bursa (A.I.Çahantimur archive)

- squatters (gecekondus), which have been constructed on the forbidden areas in the city periphery by immigrants with their own resources. They have been developed in time in accordance with their family needs and financial sources, as a result of the shortcomings in supplying the housing demands because of the internal and external migrations (fig.5),

Fig. 5. Examples of squatter settlements(gecekondus) in Bursa (A.I.Çahantimur archive)

- social housing blocks which are built with the aim of solving the housing problem in 1950s as an alternative to squatter settlements (fig.6) ,

Fig. 6. Examples of social housing blocks in Bursa (A.I.Çahantimur archive)

- villas and luxury mass housing blocks which have developed as a result of the increased car ownership and nostalgia for a life with garden and are preferred by high income groups in order to avoid the stress of urban life (fig.7).

Fig. 7. Examples of villas in Bursa (A.I.Çahantimur archive)

Unfortunately, in spite of several construction plans prepared and different propositions submitted for the housing problem as from the 1960's, 65% of the housing areas have been established illegally - as is the case with the other big cities. This situation shows that the planning effected only by market powers is not capable of inspecting the city development and in that sense market fails to solve the important problems of the city (Altaban, 1999). In figure 8, the map showing the boundries of the metropolitan city in 1998 can be seen.
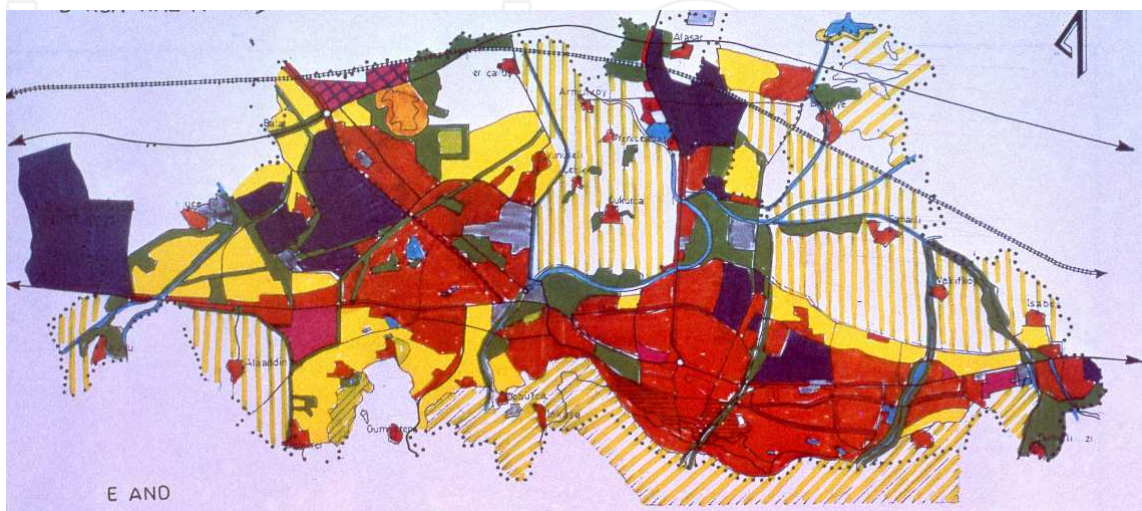

Fig. 8. Map of Bursa in 1998 (Bursa Metropolitan Municipality Archieves)

5. Analysis of the immigrant housing patterns in Bursa

Bursa, as an important industrial city in Turkey, is expanding very rapidly like other big cities in developing countries. Most of the development is in the form of urban sprawl at the fringe of the urban areas. This urban sprawl has led to many environmental and transportation problems and the loss of valuable agricultural land. On the other hand, the squatter settlements around the historic city core, especially the ones ascending Mount Uludağ, in the south of the historic city walls, threaten both the unique identity of the city and natural characteristics of the mountain.

Being circumscribed by Mount Uludağ to the south and fertile agricultural land to the north, Bursa has a linear macroform and is sprawling out in east-west direction. Until 1980s, urban development of the city in physical and spatial context had been mostly to the east. After 1980s, establishment of new industrial zones in the west of the city eventuated in the beginning of a new urban housing development to the west of the city. In figure 9, urban development of Bursa by periods of time is seen. In the figure, the red color represents the urban sprawl until 1958, the green represents the urban sprawl between the years 1958-1976, the yellow represents the urban sprawl between the years 1976-1982, blue represents the urban sprawl between the years 1982-1990, purple represents the urban sprawl between the years 1990-1995.
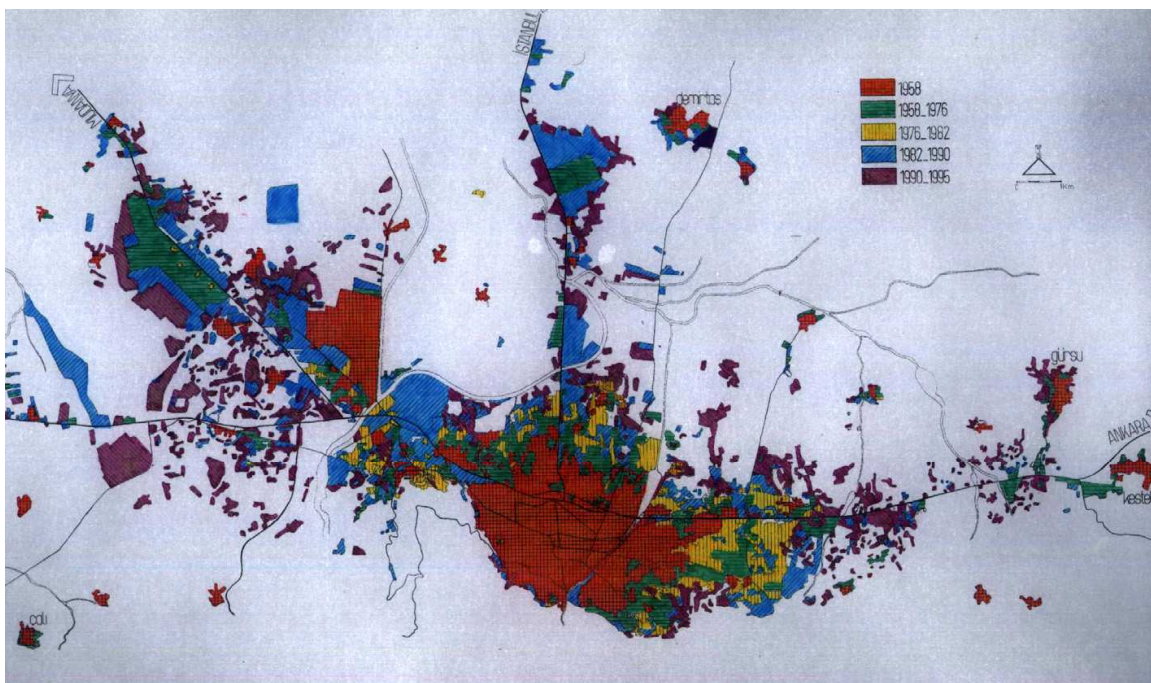

Fig. 9. Urban development of Bursa by certain periods of time (Bursa Metropolitan Municipality Archieves)

Between 1945 and 1960, planned development of industry caused a fundamental increase on the population of the city with internal migration. Mutman (2003), mentions about two important cases which occured during this process. One of them is the development of a gridal settlement area composed of one- or two-storey houses which provide a low standard of living in the northwest of the city. These houses were built to accommodate the immigrants from Balkanic countries. The other is the removal of the factories founded near

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the city centre to the north side of the city. This radical decision brought about development of new settlement areas around these factories in the periphery of the city.

Types of immigrant housing in Bursa can be classified in four groups, which can be defined as follows;

1. Immigrant housing with gridal layout pattern which is composed of one- or two-storey houses in the northwest of the city (fig 10),
2. Apartments provided by big companies for their employere, near the industrial areas (fig 11),
3. Squatter settlements surrounding the historic city center to the south and sprawling on the agricultural plain throughout the east-west axis of the city (fig 12),
i. Social housing blocks located especially in the east and west ends of the city around the squatter settlements (fig.13).

Fig. 10. Examples of gridlined pattern (adapted from google earth)

Fig. 11. Examples of company dwellings (adapted from google earth)

Fig. 12. Examples of gecekondu settlements (adapted from google earth)

Fig. 13. Examples of social housing blocks (adapted from google earth)

Due to the rapid urbanization process, some legal arrangements accelerated the enlargement of the city borders. In this way, houses in the first two groups are now being located inside the legal borders of the city. But unfortunately, houses in the third group keep on spreading to the fringes of the city in an uncontrolled way. On the other hand, although having been developed as an alternative to the squatter settlements by collaboration of the state and the local government, social housing blocks in the fourth group have negative impact on the silhouette of the city with their massive appearences. In figure 14, types of urban housing patterns in Bursa can be seen, where the color blue represents traditional houses, yellow represents cooperative houses, red represents apartment blocks adjacent to each other, green represents the other apartment blocks.
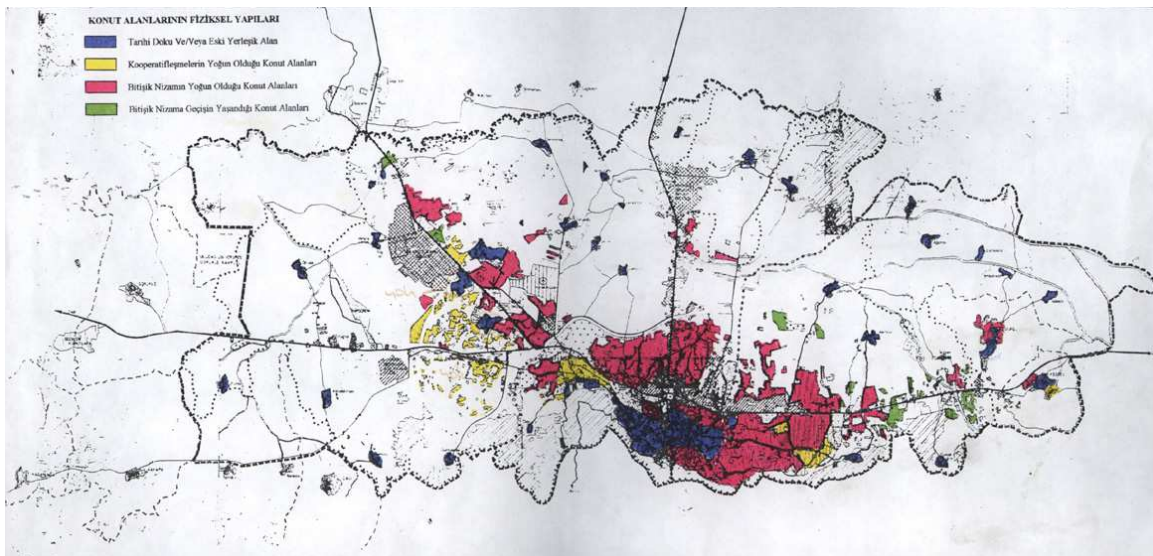

Fig. 14. Different Types of Urban Housing Areas in Bursa (Bursa Metropolitan Municipality Archieves)

In this study, immigrant housing patterns defined in the third and fourth groups, which cause many difficulties in achieving sustainable urban development by giving rise to dispersion of the city, are examined. Squatter (gecekondu) settlements and social housing areas are taken into consideration in two different groups according to their location in the city macroform. As well as being an important historic city, Bursa has had the characteristics of a metropolitan area for a long time. In the light of this fact, it is thought that the analysis

of the immigrant housing patterns both around the historic city center and periphery of the city is necessary in order to compare their effects on sustainable development of Bursa and to offer some strategies on the basis of these comparisions. Data collection techniques such as the use of the archives, personal and group observations, interviews, and identification of physical characteristics constitute the data collection methodology. The spatial data obtained from immigrant housing patterns in two different areas will be evaluated together with social and cultural data by means of "objective analysis of physical environment" and "normative analysis" . A conclusion will be drawn with the help of a comparision between the effects of different immigrant housing patterns in the context of the physical requirements of sustainable urban development, as have been mentioned in section 2. The analyses are explained in the following sub-sections.

5.1 Immigrant housing around the historic city center

The first settlement area of Bursa was established inside the historic city castle and then outspread to the areas around the castle, as it was mentioned in section 4.1. The concept of "külliye" which means a living complex including a "han", which is composed of a number of small accomodation units for people and their animals that were used for transportation, a "medrese" which means school, a "hamam" which means public bath, an "aşevi" which means soup kitchen and a mosque is the main characteristic of Ottoman urbanization strategy. As being the first capital city of the Ottoman Empire, Bursa still has many of these living complexes named as "külliye" and traditional neighbourhoods around them. Today the most conserved parts of the city are the neighbourhoods inside the historic city walls and the neighbourhoods around four important "külliyes". However, as a consequence of the urbanization process most of these neighbourhoods has lost their original residents and now they're hosting the low and middle income immigrants who came from the other regions of Turkey. Evenmore, new immigrant houses constructed illegally by the migrants began to mushroom around these traditional neighbourhoods. Especially in the south of the city, there are many immigrant neighbourhoods between historic city walls and the Mount Uludağ (Fig.15). In these neighbourhoods where the topography is made up of steep slopes, houses are mostly put over each other resembling a slow climb up to the Mount Uludağ (Fig. 16).

Fig. 15. A house between the historic city walls (A.I.Çahantimur archive)

Fig. 16. Houses on the lower slopes of Uludağ (A.I.Çahantimur archive)

These immigrant settlements in and around the historic city threaten sustainable urban development of the city in terms of both physical and socio-cultural dimensions. When analysed in terms of physical requirements of sustainable urban development which were defined as quality of life, optimum density and minimum use of energy and resources, the effects of immigrant housing around the historic city center can be summarized as follows;

- Quality of life: The elements of built environment are immigrant houses, either one- or two-storey houses with poor construction materials and systems, or traditional houses. They both have deficiency in terms of physical conditions because of insufficient financial resources and inadequate infrastructure. The squatter settlements composed of "gecekondus" threaten natural beauties and resources of the Mount Uludağ, which is one of the most important natural assets of the city. The poor transportation opportunities and inadequate roads opened without permission cause difficulties in terms of accessibility and safety of the environment. The vitality and diversity of the traditional neighbourhoods are also under the threat of increasing gecekondus because of their damaging effect in the image of the historic city.
- Optimum Density: General opinion about the most appropriate density for sustainable urban settlements is as high as acceptable for the physical and socio-cultural carrying capacity of the environment. The term density includes not only the number of people per hectar, but the buildings and the different functions as well. The immigrant settlements around the historic city mostly have an appropriate density of people and buildings, but there are no other kinds of buildings than houses and this situation shows that the density of functions is lower than required.
- Minimum Use of Energy and Resources: In the past, these kinds of immigrant houses were constructed with traditional materials like brick, stone and timber, and building systems. Consequently they can be recycled and are suitable for ecological sustainability. However, today they are constructed with reinforced concrete which can't be recycled and therefore unsuitable for ecological sustainability. Being near to the city center, people living in these settlements do not have to use motor vehicles in their daily lives, anyway most of them do not have any motor vehicles of their own. The residents use public transportation and this is a desirable action to minimise the use of motor vehicles which is a vital requirement for ecological and physical sustainability.

5.2 Immigrant housing in the periphery of the city

Social housing blocks planned as alternatives of squatter settlements are located in the periphery of Bursa, usually in the proximity of squatter settlements (fig.17)
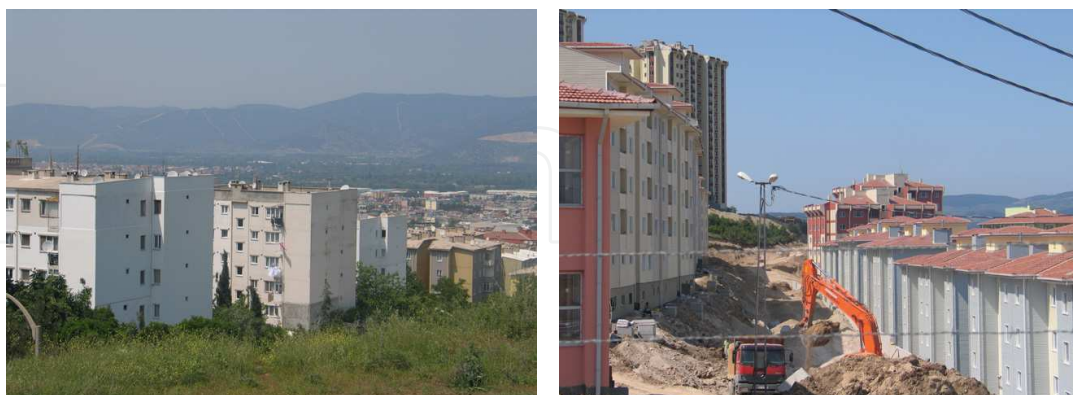

Fig. 17. Examples from social housing blocks (A.I.Çahantimur archive)

They are funded by the state and constructed with the collaboration of local governments and private sector companies. Although it is easy to observe the rapid land-use changes to urban sprawl and the agricultural land loss in Bursa, detailed and up-to-date information is not available from official sources. However, it is a known fact that a widespread expansion of peripheral development is still going on, along the east-west axis of linear macroform of the city. The vast and widespread expansion of peripheral development not only takes up valuable land and increases transportation problems, but also has adverse effects on the historic identity of the city together with psychological, social and cultural needs of people. Whatever drives its development the periphery usually suffers from inadequate investment in the infrastructure necessary to integrate it into the city. When analysed in terms of physical requirements of sustainable urban development, the effects of immigrant housing in the periphery of the city can be summarized as follows:

- Quality of life: The elements of built environment in the periphery are immigrant houses, either one- or two-storey houses with poor construction materials and systems, or multi-storey social housing blocks. The first one -gecekondu- has deficiency in terms of physical conditions because of insufficient financial resources and inadequate infrastructure. The second one -social housing blocks- have better physical conditions indoors than gecekondus, but outdoor conditions are not better than gecekondus'. Social housing areas as well as squatter settlements threaten the fertile plain and agricultural activities. Accessibility and safety of these settlements differ from each other according to their location in the city and socio-cultural structure of their immigrant population. There is no vitality and diversity in these environments, because the houses or blocks they contain are all the same kind and are standing side by side along narrow roads.
- Optimum Density: The immigrant settlements in the periphery of the city mostly have a high density of people and buildings, because of multi-storey social housing blocks and apartment-like gecekondus. However, the number of other kinds of buildings is not big enough to say that there is a high density of functions.

- Minimum Use of Energy and Resources: All of the immigrant houses in the peripheries are costructed with reinforced concrete and have inadequate standarts of environmental control. Therefore they are not suitable for ecological sustainability. Being away from the city center, the residents of these settlements have to use motor vehicles more than the ones near to the city center. This situation makes the reduction of car use and traffic emmisions impossible.

5.3 Conclusion: The impact of immigrant housing on the sustainable urban development of Bursa

As a result of archival data analysis and observations made in the selected immigrant housing neighborhoods, physical, historical and socio-demographic data have been obtained regarding these areas. The analysis of data connote that, immigrant housing areas both around the historic city center and in the periphery of the city have negative impacts on the sustainable urban development of Bursa. Immigrant settlements both around the historic city center and in the periphery of the city-, damage the identity of the city in terms of spatial and socio-cultural components, which are significant for achieving physical and socio-cultural sustainability of the city. Especially gecekondus around the city core threaten the uniqueness of the architectural and cultural heritage of the historic city. On the other hand, immigrant settlements in the periphery of the city increase urban dispersal which cause the agricultural land to be lost. They divide the city into sub-centers that are not easy to access. In most of these settlements "quality of life", that is the overall aim of sustainable urban development, is low in all its aspects. These settlements are faced with most of the indicators of unsustainability like inadequate infrastructure, unhealthy environments, deficient open and green space, poor access to the services and transport systems.

6. Discussion: Strategies for sustainable urban development of Bursa

There is an urgent need for new strategies and policies to strengthen the role of Bursa as a historic city, providing socio-cultural integration, economic vitality and sustainable living environments. More flexible and responsive planning tools that require a strategic understanding and good local knowledge are needed to manage these development goals. It must be highlighted that a considerable effort in developed countries has been devoted to the measurement of sustainability indicators. To adopt this approach may be the starting point for Turkey, as for the other developing countries. Research and analysis of specific realities in different urban settlements are required in order to find possible ways of achieving sustainable urban development of historic cities in developing countries, like Bursa.

As understood from the related literature and successful implementations all over the world, achieving sustainable development requires appropriate policies of planned higher density, mixed – used development in city centers and in peripheries along corridors well served with public transportation. The planning approach to the development of historic city center in Bursa should be more sensitive to the existing traditional fabric, which can accommodate a whole range of economic activities. The value of the social network of traditional neighbourhoods, cultural diversity and economic opportunities should be recognized and, rather than being swept away, they should undergo environmental improvement in order to increase carrying capacity of the historic city core. On the other hand, the ongoing migration and urbanization processes and location of the existing

immigrant housing settlements show that Bursa will be a polynucleated metropol in a very near future. The important points of attention for the future developments should be first of all improvement of public transportation and road capacities, and then intensification of existing low-density areas, particularly around transport interchanges and along transport corridors. These will bring about the prevention of existence of new settlement areas in the periphery of the city.

As a last word, action for sustainable urban development needs to be taken at all levels, but local authorities and communities themselves may be best able to set priorities for and to implement projects. Consequently, investigations about the psychological and socio-cultural aspects of urban environment have to be considered as a vital part of the sustainability policy of the historical cities.

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Urban Development

Edited by Dr. Serafeim Polyzos

Cities are growing as never before and nowadays, it is estimated that at least 50% of the world's population lives in urban areas. This trend is expected to continue and simultaneously the problems in urban areas are anticipated to have an increase. Urbanization constitutes a complex process involving problems with social, economic, environmental and spatial dimensions that need appropriate solutions. This book highlights some of these problems and discusses possible solutions in terms of organisation, planning and management. The purpose of the book is to present selected chapters, of great importance for understanding the urban development issues, written by renowned authors in this scientific field. All the chapters have been thoroughly reviewed and they cover some basic aspects concerning urban sustainability, urban sprawl, urban planning, urban environment, housing and land uses. The editor gratefully acknowledges the assistance of Dr Marius Minea in reviewing two chapters.

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