The objectives of this paper, by approaching to the period of Ottoman Empire from the point of a spatial framework, are:

1. to reveal that Turkish cities have been developed in accordance with the organization of the institution of waqf and "imaret" system,
2. to try to show the meanings of service buildings for the city as an entity and their places in the context of the entire settlement,
3. to prove that the Turkish City of Ottoman Period has had a peculiar structure.

The method of this study is to examine the obtained characteristics of Turkish cities of Ottoman period through the spatial organization of Bursa, which was the capital city during the establishment period, an important commercial center between East and West until 16th. century, and one of the three important cities of Ottoman Land to the end of 19th. century.

1. SPATIAL ORGANISATION OF TURKISH CITY OF OTTOMAN PERIOD

At the stage of broadening the boundaries of the country towards West, in relation to expansion policy of Ottoman State, a systematic approach has been applied to develop the important strategic cities as administrative, commercial, cultural or regional centers.

1.1. THE POPULATION OF THE CITY HAS BEEN INCREASED BY THE MEANS OF IMRATTING POLICY SUCH AS VOLUNTARY EMIGRATION, EXILE ("SURÜM") AND FORCED TRANSFER OF POPULATION.

Bursa, being a frontier settlement and a military headquarters for the Ottoman Army, has been inhabited by varied people from Anatolia in order to have a confident area from the points of sufficient population and extension.

Before the conquest, Turks had begun to settle in the city for the quest of commerce (1), after the conquest the city has been inhabited by Turks from Kayseri, Konya, Niğde, Ardın, Saruhan, Başkale, Maras. Following the conquest of the Balkan Peninsula
some of the prisoners of war have been settled in Bursa and surroundings (1); voluntary migrations have been occurring to the city from the Balkan Peninsula for economic reasons, too (3). In 1490 with a population of 90-95 000 Bursa has been within the first 25 cities of the world (4).

1.2. THE ENVIRONMENTAL CONDITIONS OF THE SETTLEMENT HAVE BEEN ARRANGED BY APPLYING SOME PREVENTIONS IN THE CONTEXT OF THE REGION AND THE COUNTRY

After Bursa has become the administrative center of Ottoman state and especially during the reign of Yildirim Beyazit (1389-1402) some commercial and demographic policies have been applied in order to raise the city to an international status:

- The network of trade routes has been rearranged by determining the strategy for conquests and taking their possessions of important harbours and commercial centers.
- The relationships with the neighboring countries have been renewed.
- Religious leaders, scientists and sheikhs from Anatolia and other Islamic countries, famous families from Yagilirmak territory and the great conqueror of Rumelia have been invited to settle down in Bursa.
- The Great Mosque (Ulucami) has been constructed to the east of the Castle (near Orhan complex) and has become the fifth religiously sacred building of the Islamic World.

Thus Bursa has become the center of commerce between Anatolia and Rumelia and one of the bonded warehouses of international commerce (5). At the same time the city has become the much visited cultural and spiritual center of Ottoman State.

1.3. IN RURAL AREAS, ADJACENT TO THE SETTLEMENT CENTERS, THE ‘SAVİYE’S WHICH HAVE CONSTITUTED THE FIRST NUCLEUS OF THE SETTLEMENT PARTS AIMS TO BE DEVELOPED IN TIME (6) HAVE BEEN ESTABLISHED.

‘Savıyes’ were shelters having facilities such as feeding, health, worship and education to provide the necessities of the immigrants to the settlement. It should be taken notice that especially at the first phase and the period lasted to the end of the 16th century, the mosques constructed outside the built-up areas have had ‘savıye’s’ (7).

In Bursa, at the establishment period, during the reign of Orhan Gazi, Hıdırellez Nur and Yıldırım Bayezid, the settlement has been Nilser Neighborhood (the fortified settlement). At the surrounding of it, rural ‘savıye’s have developed: Orhan Mosque (1339), Yıldırım M. (1390), Yagil M. (1415), Tayy Kadin M. and Muradıye Mosque (1426) were such buildings performing both social and religious function. These savıye-mosques have couraged the first housing groups around them. Although they have been at a distance from the main settlement they have been dependent on it (figure 1a). As the population of the city increased, these houses spreaded out from these nucleus towards the center and created the quarters (figure 1b). At the end of 16th century, when the general settlement form of the city has formed, these ‘savıye’s have performed their roles regarding with the creation of the physical form of the city (morphology) by staying at the fringes (of it) (figure 1c).
1.4. IN CITIES, RICH WAKFS HAVE BEEN FOUNDED BY SUPPORTING THEM WITH THE COMMERCE INSTITUTIONS AND AGRICULTURAL LAND IN CONNECTION WITH THESE WAKFS, THE SETTLEMENTS HAVE BEEN EQUIPPED WITH THE SOCIAL SERVICE BUILDINGS (COMPLEXES AND SINGLE BUILDINGS). THE OFFICERS HAVE PERFORMED A LEADING ROLE FOR THE CREATION AND DEVELOPMENT OF CONQUERED AREAS WITH CONSTRUCTION OF SERVICE BUILDINGS IN THEIR OWN SOCIO-ECONOMIC ORDER.

In Bursa,
- to the east of Hisar Neighborhood, on the vacant land sloping southwards of the newly approaching trade center of the city, Ali Paşa, Reşit Ibrahim, İbrahim Paşa complexes;
- in the center which has been already defined by Orhan Complex, the Bedesten and Great Mosque Complex, Hacı İzzet Paşa Complex, and to the north-east of the center Timurtaş Paşa Complex; to the east of Söke, Yıldırım, Teşil, Bayezit Paşa, Emir Sultan and Seyyidler complexes;
- to the west of Hisar Neighborhood on the way to Çekirge, Muradiye Complex have been built by the sultans and by the important people (8).

These organisations founded to satisfy common necessities of urban citizens have performed an important role for the development of Turkish city as a pecular system.

Here, it can be (safely) stated that in addition to the following factors
- nomadic background of Turks (9) and cultures of Asia-Turk societies,
- the elements of Islamic world (10),
- cultural accumulation of Anatolian-Dynasion (11)
Turkish city has emerged into also under
- the influence of the relationship between the institution of waif and 'imaret' system as the products of settlement policy of Ottoman-Turkish period.

In my opinion, the spatial organisation of Turkish city of Ottoman period has composed of three main parts:
- center — at inner fortress 'the administration zone' which had a great power to control urban affairs
- near/adjacent to this administration zone, 'the commerce zone' where crafts and small trade activities have concentrated
- community — complexes and single service buildings
Such as, Reşit Ibrahim, İbrahim Paşa complexes of the settlements buildings while the city has been spreading out
- housing areas.

2. THE INSTITUTIONAL ORGANIZATIONAL LEVEL THAT HAS INFLUENCED

THE URBAN STRUCTURE — WAKF /'IMARET' SYSTEM

The institutions have achieved an important role in the process of transition to the settled living order both in Anatolia and Russia. This highly-organized level of institutional order of Ottoman Turks which has not been reached in other Islamic countries is one of the most important factors in the creation of a homogeneous and lasting culture of society (12).
### Table: Changes in the Types of Building over Time

<table>
<thead>
<tr>
<th>Type of Building</th>
<th>Establishment period (1328-1453)</th>
<th>Development period</th>
<th>End of the 16th century</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mosque</td>
<td>43.4 %</td>
<td>41 %</td>
<td>86.4 %</td>
</tr>
<tr>
<td>Educational</td>
<td>28.4 %</td>
<td>35.6 %</td>
<td>84.2 %</td>
</tr>
<tr>
<td>Commercial</td>
<td>69.1 %</td>
<td>29.6 %</td>
<td>77.7 %</td>
</tr>
<tr>
<td>Bath, thermal spring</td>
<td>32.9 %</td>
<td>35.3 %</td>
<td>88.2 %</td>
</tr>
<tr>
<td>Complex</td>
<td>64.6 %</td>
<td>32.3 %</td>
<td>100.0 %</td>
</tr>
</tbody>
</table>

50% of the commercial buildings have been constructed at the establishment period during which Bursa had struggled to have an important status among world trade centers.  
50% of baths and thermal springs were in service by the end of the 16th century.

64% of the complexes which have played an important role in the creation and development of the city organizing the service buildings of housing areas have been founded at the establishment period. At the same time Bursa was the administrative and cultural center of Ottoman State. The context of the complexes which have been founded at the establishment period were more varied than the following ones (18). Since the complexes were directly connected with the creation of the city, the system had not need to construct any complex after the development period.

2.3. 'IMARET' SYSTEM (THE COMPLEX) - CITY ENTITY

The elemental method in the creation and development of Turkish city of Ottoman period was the 'Imaret' system which has been founded and managed by the waif institution (15). 'Imaret' system have been applied in the settlements as the complex. The complex is an entity which has buildings of worship, education, culture, health, feeding and public fountain which are free of charge and their estates (market, shops, houses, agricultural land, mill, oven) in a special order in urban space. The management of the complex has been organized through a deed of trust of pious foundation by the founder of waif.

While complexes have been providing the necessary services together, for the creation of housing areas, the buildings which have brought income (shopping center, inn, etc.) have concentrated at the center and intensified it. Thus, while these housing areas have been equipped by community facilities, the city complex has also developed according to the determined objectives (17). This means that the complexes have been organized within a framework of a social-economic institution of the city complexes. So, they reveal an interrelated relationship.

The complexes administered by great waif which were established before 1500 and the allocation of 'mici' land to the waifs in conquered areas was peculiar to the establishment period of Empire. These facts can explain the relationship between

- waif institution and 'Imaret' system,
- creation of city and waif, thus
- 'Imaret' system and creation of city.

The reduction in the number of complexes after the establishment period of Empire proves the leading role of complexes for urban housing areas. In fact, when the phenomenon of 'gara' (holy war) stopped, the construction of complexes decreased, because of the difficulty to find land to be allocated to waifs.
The functions of the institution of watf-‘imaret’ system can be summarized as follows:

- It has formed religious and social entities used daytime by providing social buildings such as ‘medresse’, library, hospital, ‘imaret’, inn, bath, shops together with great mosques.
- It has worked as a social facilitator, encouraged social integration, especially during the establishment and development period of the Ottoman Empire.
- It has played a leading role as a social center for the development of surrounding housing areas (an understanding searched for today’s settlements).
- It has evolved in a balanced way with the flourishing during the establishment and development periods and loosening of the social structure during the recede period of the Empire.

At the establishment period of Ottoman Empire the organisation of watf-‘imaret’ system has performed a distinctive role on the creation and development of urban living patterns and physical maturity of cities.

The functions of complexes can be summarized as follows:

- They have been located in such a way that they have led the development of the city around the old fortified settlement by surrounding the possible macroform of the settlement in all directions.
- They have determined the boundaries of the city, by limiting housing areas.
- They have determined the potential settlement areas, by providing the services such as feeding, bath, health, worship and administration for people inhabited on vacant areas outside the existing city.

3. THE HIERARCHY OF QUARTER - NEIGHBOURHOOD UNIT (‘SENT’)

DEPENDING ON THE SPHERE OF INFLUENCE OF SERVICE BUILDINGS

People who shared the same religious beliefs and traditions have conveyed in quarters as a unit of housing district. The sphere of influence of the first step service buildings at the city center has realized in so suitable dimensions depending on pedestrian conditions of that time that inhabitants of the quarter have easily known and follow each other from the point of visual/auditory/social aspects and have been aware of the events in the quarter. The small mosques at the quarter centers have been placed to service an area of 3 ha. with a diameter of about 100 meters (Figure 2). The quarters take place around these small mosques have included roughly 1000 inhabitants. Thus -with the assumption that the average household was 5-6 it can be said that a quarter unit has had 200 housing units and the density has been 333 inhabitants/ha. Of course, it should be taken notice that the density could not be same in all district of the city.

According to the hierarchy of the settlement the quarter units have formed the neighbourhood unit. The complexes defined the neighbourhood center has been located at a higher place than the public facilities of quarter centers. So it has been dominant on its environment and the visual relationship with the city could have been founded. It has been at the center of a theoretical circle of about 20 ha. with a radius of 250-260
meters. Its sphere of influence has been formed by combination of:
its adjacent area served only by the complex,
the surrounding quarters which have developed due to the
complex and had necessary public facilities such as small
mosque, fountain, school at their centers (13) (Figure 2).

According to this:
- having first step service buildings at their centers, the
  quarters have formed the neighbourhood unit,
- having complexes at their centers, the neighbourhood units
  have formed the settlement.

Therefore there is a hierarchy in Turkish cities of Ottoman
period from the structural point of view. This hierarchy has
been revealed by following points:
I. location of community facilities,
II. the scale of these facilities (hierarchy of small service
  buildings/complexes).

In this respect, it can be stated that Turkish city of Ottoman
period has been an understandable social organisation with a
hierarchy and an open pattern.

When the housing areas of Bursa at the end of 16th century are
analyzed according to the quarters, it is understood that the
general settlement area showed on the map is not a completely
built-up area. In other words, it shows only a macroform deter-
mind before inhabiting. In short, the targets have been showed
for the housing areas by determining potential settlement areas
around the center. The macroform of the settlement has been
determined by defining the nucleus of the quarters and the
neighbourhoods (remember that the community facilities have
located between the old city and the fringes of it) and thus
the development of the city through desired direction has been
guaranteed. When compared to contemporary city planning
approaches, this phenomenon is a very advanced approach, an urban
development form and a planned development model/method.

This creation form is not a casual, unplanned and unordered
development of the city. It can be conceptualised as a develop-
ment approach for the future.

Thus, in Turkish city of Ottoman period
- Turks have developed a settlement model in the process of
  transition to the settled living order;
  this model is distinguished from Islamic city in regarding
  with the following aspects:
    - the institutional organisation level of the city,
    - the phenomenon of planned complexes, and
    - the organisation of quarters in the context of the city,
      their integration level.

Our last statement is that the general settlement form of Turkish
city of Ottoman period has been determined by applying the
leading principles and vital organs of the settlement, although
their physical plans haven't been showed on the papers.
8. These were 'rural complexes' with more than one function.
15. Community facility buildings are mosques, social, educational, physical and spiritual education institutions, health and hygiene buildings (madrel), primary schools, libraries, 'tekkeler', 'sarılye'; water-supply buildings (public fountain, aqueduct, reservoir); health buildings (bath, thermal spring, hospital, toilet); commercial buildings (bazaar, inn, covered/open markets); social assistance buildings (guesthouse, caravansarai, 'imaret'); bridges and other technical service buildings.
17. For ex., estates of Yeşil Complex (İskandar and Geyve Inn); estate of Emir Sultan Complex (Çukur Inn); estate of Bâyiçi Ibrâhîm Complex (Doğan Inn/Inn) and estates of Damir Bey Complex (Tûn Inn and shops) were at the center of Russe apart from the other buildings of walled.


Figure 1
THE HIERARCHY OF QUARTER-BELEDZHINIYOD VIZIT
DEPENDING ON THE SPHERE OF INFLUENCE OF SERVICE BUILDINGS

This also be considered making use of the field known by (highlighted, district) and Gospel Bay.