

PHYSICAL AND SOCIAL EFFECTS OF UNIVERSITIES ON THE URBAN PATTERN:
CASE OF STANBUL

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Abstract

In a world driven by information and knowledge, considering the privilege of universities also its key role in process of physical and social change, this study aims to investigate the effects of universities on the process of urban development and transformation. Within the study, not only the differentiations in the built environment, but also changing social environments after hosting a university will be discussed.

As a result of legal regulations, starting from 1990s there has been a significant number of state and foundation universities in Turkey and Istanbul in particular. In this study, the purpose of the paper, after evaluating the spatial relationship between universities and urban environment in Istanbul, the analysis conducted to determine the level of spatial and social effects of selected foundation university neighborhoods of Istanbul will be evaluated.

1. Introduction

Modern-day understanding, adopting knowledge based production of goods and services, moving forward by neoliberal policies at the international level has brought universities to a new production. While the fundamental function of universities used to be creation and dissemination of knowledge producing and sharing knowledge in the past; new functions such as cooperation with industry and industries, creation of innovations and contribution to the environment have emerged alongside traditional roles of universities.

While universities contribute economic development on one side, they also prepare the social/cultural conditions of development. Besides social development, universities are an influential factor in development of physical environment of their surrounding areas. The development of physical, economic and social/cultural infrastructure of the province also depends on the realization of the above-mentioned contributions of universities (Benneworth et al., 2003). Universities also make use of the social, technical and economic opportunities of their surrounding areas close to them in order to meet the spatial and social requirements they need. Therefore, universities have significant influences on urban development with this feature.

Since the beginning of 1980 s, significant changes started to occur in political and economic structures with the influence of outward oriented economy policies, which started to emerge in Turkey as well. Necessary regulations were introduced both for state universities and foundation universities to provide service in Turkey, with metropolises in the first instance. The main goal was serving the need to increase the education and training level of the young population. The main goal of eliminating the imbalance between regions. Within this framework, consid

most significant factors of economic development, an attempt has been made to universities in the country.

The campuses of Beykent, Istanbul Bilgi and Kadir Has Universities, located in Istanbul, were observed with the purpose of evaluating the spatial and social dimensions of universities on spatial and socio-cultural environment of cities; the locations of the city, their spatial relations and social influences on the environment were dimensions in the process of urban transformation.

2. Relationship Between a University and a City

In addition to the spatial and functional interaction of a higher education institution which it has been established, it also has social, economic and cultural interactions and location of the university campus, the size of the university and the city established are significant factors.

Universities create numerous opportunities to determine the economic future of their country. When these opportunities are utilized correctly, universities provide contributions to their cities in addition to their contributions to the development of the country. Contributions can be summarized as follows:

- Urban income, improvement in the economic structure and labor force mobility.
- Physical infrastructure contributions such as improvement in residences, roads, communication and transportation,
- Social and cultural contributions such as increase of cultural activities and quality of life as well,
- Educational and demographic contributions such as increase in the ratio of higher education, decrease in the rates of birth and death, decrease of migration (Russo, 2005).

The physical and spatial form of higher education institutions, their disciplines, activities, the relations that they establish with the residents and business circles of academic settlements should be the object of careful planning and management. Integration and synergy in local development (Russo, et al., 2007).

Universities also provide significant contributions to the social life of the city where they are located. Arrangements such as seminars and conferences open to the public, special and continuous education centers and consultative committees in which different groups are represented play effective roles in integration of higher educational institutions and increasing social contribution. Higher education institutions are expected to contribute to the development as a whole in order to contribute spreading science and scientific knowledge, tolerance in the area in order to find solutions for the local community, which are the most serious problems. For this reason, it is not a coincidence that the goal of development of universities and the industry has become one of the most emphasized goals of today's world.

Since the university is also one of the social institutions of urban economy; it contributes to the physical, economic and social/cultural development of the city with its legal and academic personnel and students and is also in continuous interaction with political and business circles. Within the process, these contributions are spread throughout the city and provides contributions to the city for social and economic development such as providing

mobility, quality of life, personal development, increase of productivity, fl decrease in crime rates, development of citizenship consciousness, social org (2007).

The number of universities, which have significant contributions for developmen cities, has increased after 1980 s and gained momentum after 1990 s. The higher Turkey has been undergoing a process of rare expansion and structural change du of century.

3. Development of Higher Education Institutions in Turkey and Istanbul

The number of state universities was 21 in 1981 in Turkey. During this perio strengthen the identities of the city and to contribute to the socioeconomic dev by taking into consideration of the levels of development between regions when for universities outside Istanbul and Ankara.

During this period, considering regional development differences in Turkey, whil locations outside Istanbul and Ankara, to strengthen the identity of the host the socio economic development of the region was aimed (Sarg n, 2007).

The Higher Education Law with number 2547 ruled in 1981 (YOK, 1981) is one of milestones of Turkish higher education system. Following the legal regulations a of Foundation Universities , the first foundation university was established in

The majority of 24 universities in 1992, of which 1 was a foundation universi universities, were established in medium sized cities (Sarg n, 2007). The perio when the idea of establishing a university in each city and the concept of four gained importance gradually (zt rk, et al,2011).

15 more universities were established in Turkey in 2006 in cities having a p 120,000 with the purpose of decreasing regional development differences, and development in cities (Sarg n,2007). 17 more universities were added in 2007 ar state universities reached 101 by the end of 2010. Also, at least one universit cities of Turkey. The total number of foundation universities reached 60 by the more foundation universities were established between 2011-2013 (Table 1).

Table 1: Distribution of Universities by Type And Establishment Year (produc www.yok.gov.tr)

	State Universities (%)	Foundation Universities (%)	Total
Before 1923	3	0	3
1923-1981	21	0	21
1982-1990	6	1	7
1991-2000	23	19	42
2001-2010	48	40	88
2011-2015	2	21	23
Total	103	81	184

It has been observed that while there has been a state university in all cities, foundation universities have been established in 14 cities and the majority of them are located mainly in Istanbul (55%) and Ankara (Table 2,3).

The ratio of cities having both state and foundation universities have remained constant. It has been observed that foundation universities have preferred metropolitan cities due to their economy and population movements. (Table 2, figure 1)

Table 2: Provinces by University Types (2015) [www.produktif.com](#)

	No. Of provinces	%
Provinces with both state and foundation universities	14	17
Provinces with state universities	67	83
Total	81	100.0

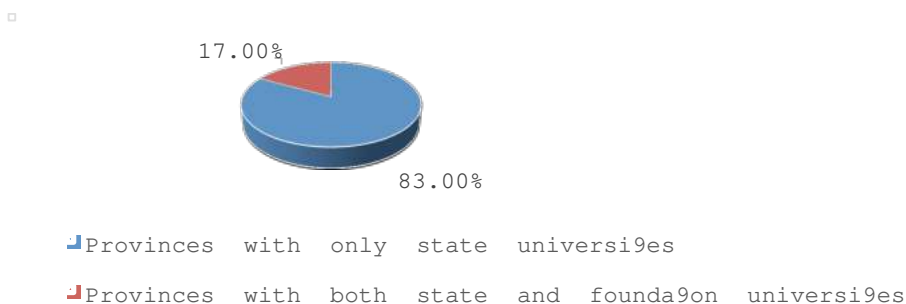


Figure 1: Provinces by University Types (2015)

While the population of Turkey was 77,695,904 in 2014, Istanbul constitutes 18.7% of the population with 14,377,018 persons (TUIK, 2014). 16.6% of the population in Turkey is young population in the age range of 15-24 according to the census data of 2013. When the table given above is analyzed, it is observed that in metropolitan cities the number of foundation universities is higher when compared to state universities. 54.4% of 81 foundation universities are in Istanbul and 8.7% of 103 state universities are in Istanbul. Istanbul constitutes a significant number of foundation universities with its technical, social and cultural infrastructure opportunities, its metropolitan city and its potential for young population (Table 3 and Diagram 2).

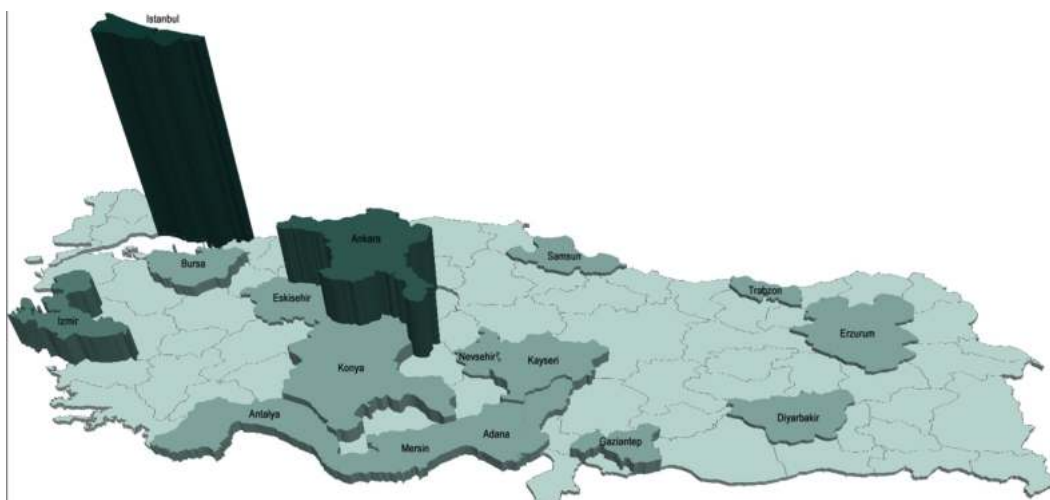


Figure2: Distribution of Universities in Turkey by Cities

Table 3: Distribution of Universities in Turkey by Cities (continued)

	State Universities	%	Foundation Universities	%	Total
Istanbul	19.9 (45.7)	45.4	80.1	53	
Ankara	6 (5.8)	33.3	12 (14.9)	66.7	18
Izmir	3 (3.9)	44.4	5 (6.1)	55.6	9
Konya	2 (1.9)	40	3 (3.7)	60	5
Bursa	2 (1.9)	50	2 (2.4)	50	4
Gaziantep	1 (0.9)	25	3 (3.7)	75	4
Kayseri	2 (1.9)	50	2 (2.4)	50	4
Adana	1 (0.9)	33.3	2 (2.4)	66.7	3
Antalya	1 (0.9)	33.3	2 (2.4)	66.7	3
Icel	1 (0.9)	33.3	2 (2.4)	66.7	3
Diyarbakir	1 (0.9)	50	1 (1.3)	50	2
Erzurum	2 (1.9)	100	0	0	2
Eski ehir	2 (1.9)	100	0	0	2
Kocaeli	2 (1.9)	100	0	0	2
Nevsehir	1 (0.9)	50	1 (1.3)	50	2
Samsun	1 (0.9)	50	1 (1.3)	50	2
Trabzon	1 (0.9)	50	1 (1.3)	50	2
Other Provinces	64 (63)	100	0	0	64
Total	103 (%100.0)	55.9	81 (%100.0)	44.1	184

Since 1982, after the YOK Law came into effect (Council of Higher Education) the universities in Istanbul, has been parallel to the developments in Turkey. In Turkey, the foundation universities displayed a significant increase in Istanbul state universities. The number of universities opened in Istanbul since 1993 is

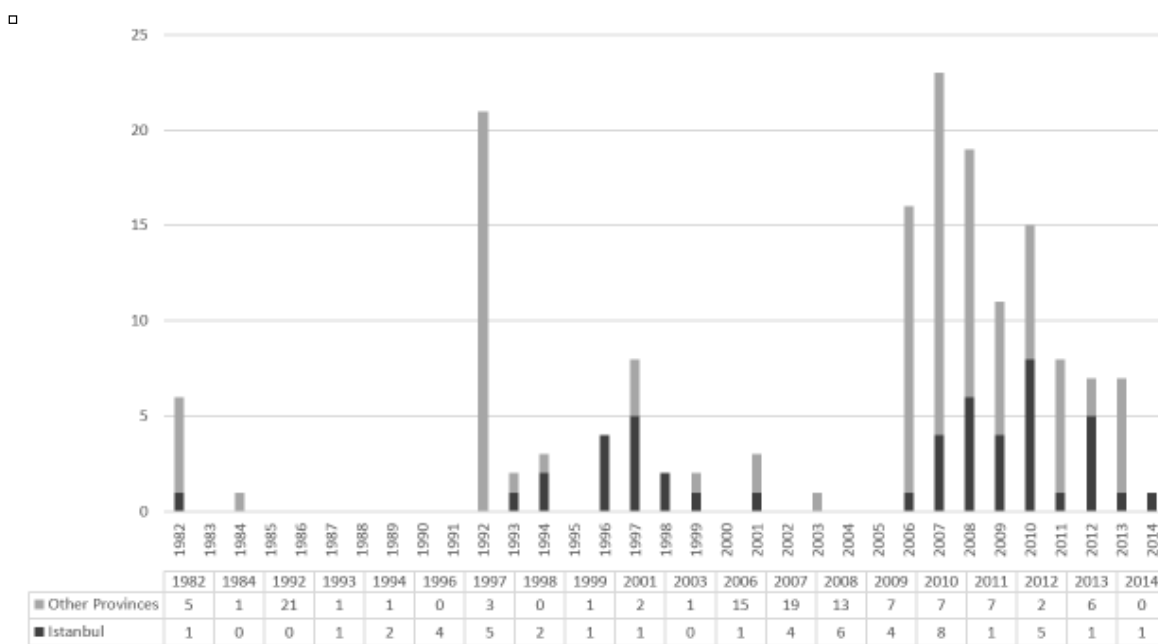


Figure 3: Establishment Years of Universities of Istanbul and Other Provinces

When the spatial distribution of universities in Istanbul is reviewed, 8 of 53 universities are located in the Fatih district, as the city's historical center, it has strong transportation characteristics (Figure 4, 5). In general, newly founded universities tend to have a structure in the city center instead of empty lands in the periphery of the city. Most of the campuses were established in the city centers and have preferred to develop by utilizing the economic potential of the area in which they are located. However, as these universities continue their development in new campus areas towards periphery of the city and away from the center of attractions in these regions. Such as Beykent University in Beylikduzu, Istanbul University Kadir Has University in Selimpasa and Okan University in Sile etc.

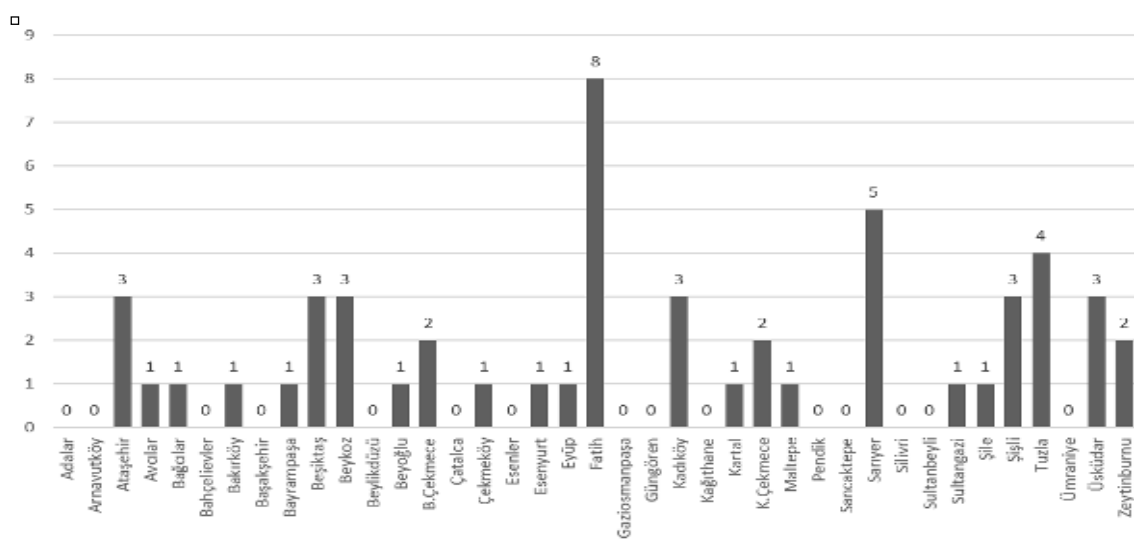


Figure 4: Distribution of 53 Universities of Istanbul by Districts

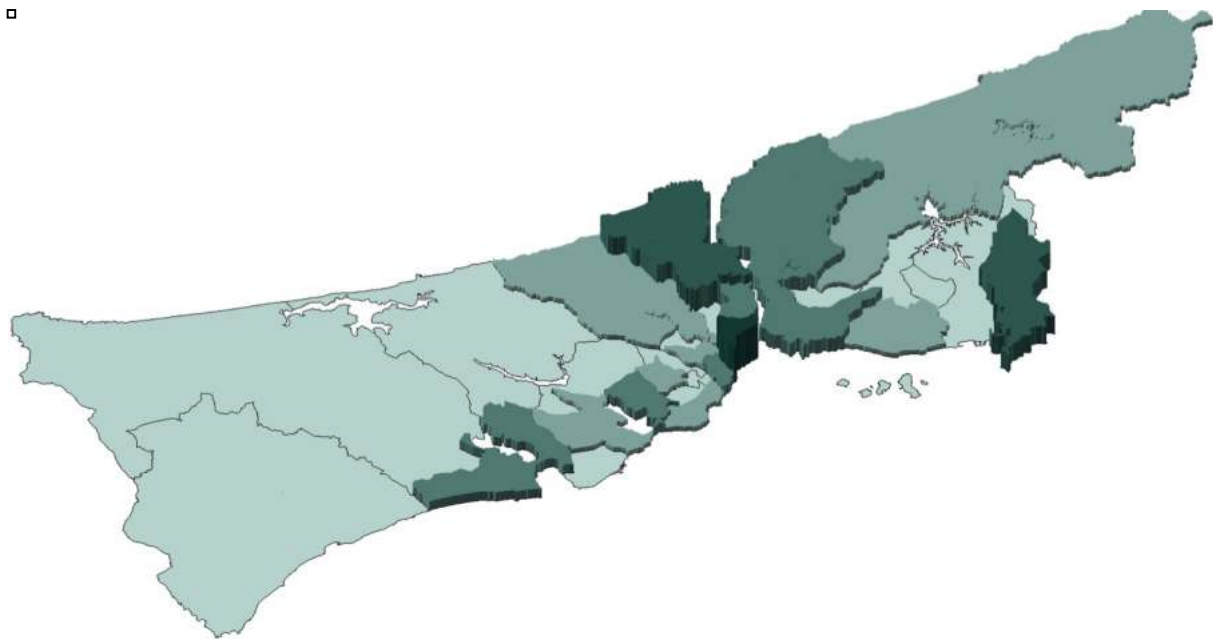


Figure 5: Distribution of Universities by Districts in Istanbul Metropol...

4. Field Survey: Effects of Beykent, Istanbul Bilgi and Kadir Has Foundation U... Their Environment

Within the scope of this research, it has been aimed to evaluate the spatial transformation caused by foundation universities established since 1990 s. universities with campuses close to city centers, having strong transportation income social groups live and are in need of physical/spatial renewal, have b... purpose of the study, besides the comparision of spatial analysis of the neighb... and 1998 (IBB, 2004), the variation in land values has been investigated and s... with residents around the three campuses.

Of the three universities selected, the Cibali Campus of Kadir Has University a... Campus of Istanbul Bilgi University are located along the shore of Golden Horn Peninsula of Istanbul, the Ayazaga Campus of Beykent University is close to the... of the city (Maslak) (Figure 6).



Figure 6: Locations of the Selected Universities

4.1. Kadir Has University

The Cibali Tobacco and Cigarette Factory founded in 1886 with the purpose of producing tobacco products became operational in the beginning of 1900 s and continued its production until 1995. The factory, with its materials and construction technique, is an example of concrete structures of the era besides the space and size of the factory building.

The building, which has lost its unique function in 1995, remained empty until 1997 when the Kadir Has Foundation in 1997 and following a restoration of 4 years; it was opened in 2002 on an area of 12.5 ha as Cibali Campus of Kadir Has University. It is significant example of introducing the function of a university to an old industrial building. The project and its implementation, which created a renewal effect in its periphery, won the Europa Nostra award for 2003 due to its contribution to revival of the building (in addition to preservation of the building, which is a part of European Architectural Heritage Award, 2010).

At the end of 2007, the university enlarged the Cibali Campus by building one more building, a historical factory and also built a sports salon in the inner neighborhoods of the campus.

The administration of the university also has policies for development of real estate in the periphery of the campus. The aim of the project named Neighbors Rights Project is to make contributions to economic, social and environmental development of the neighborhood. The university is located and to implement this in cooperation with stakeholders through dialogues between stakeholders. For this purpose, health screenings, environmental landscape studies, studies of architectural texture, movie and theater shows for the community in the region, areas of sports, culture and education with primary schools in the region are planned. The participation of students of the university, its academic and administrative personnel in the Cibali region (Url: khas.edu.tr)



Figure 7: Views of Kadir Has University

The Ataturk Boulevard passing in the east direction in the vicinity of the university. The western part of the boulevard in which the university is also located in a residential area and the east has been used mainly for commercial activities in the process. In the period before the University was opened, (Figure 7) low quality buildings were existed in Cibali. In the spatial analysis of 2013, it was observed that the university extended in a manner that also covers the industrial facility located in the so-called Cibali. This functional shift has taken place from residential use to trade and service.

The industrial facilities along the Golden Horn were decentralized between the 1990s and 2000s. Some of them were transformed into green zones. In Cibali neighborhood except the transformation of an industrial building into a university campus, there has not been any other important changes that would affect land use of the area.

The only exception is transformation of a governmental building, located on the Ataturk Boulevard. The Medipol University in 2009, which became operational as a Faculty of Medicine in 2013. The change in 1998–2013 and the distribution of changes are analyzed within this framework. It is concluded that the increase in the number of trade units is to a large extent based on the transformation of the Cibali Tobacco Factory to Kadir Has University.

As time passed, the opening of the university in the Cibali district was also reflected in the increase in the price per square meter for lands and the prices of lands increased by 612% in terms of 2013 compared with the prices of 1994 (Figure 10).

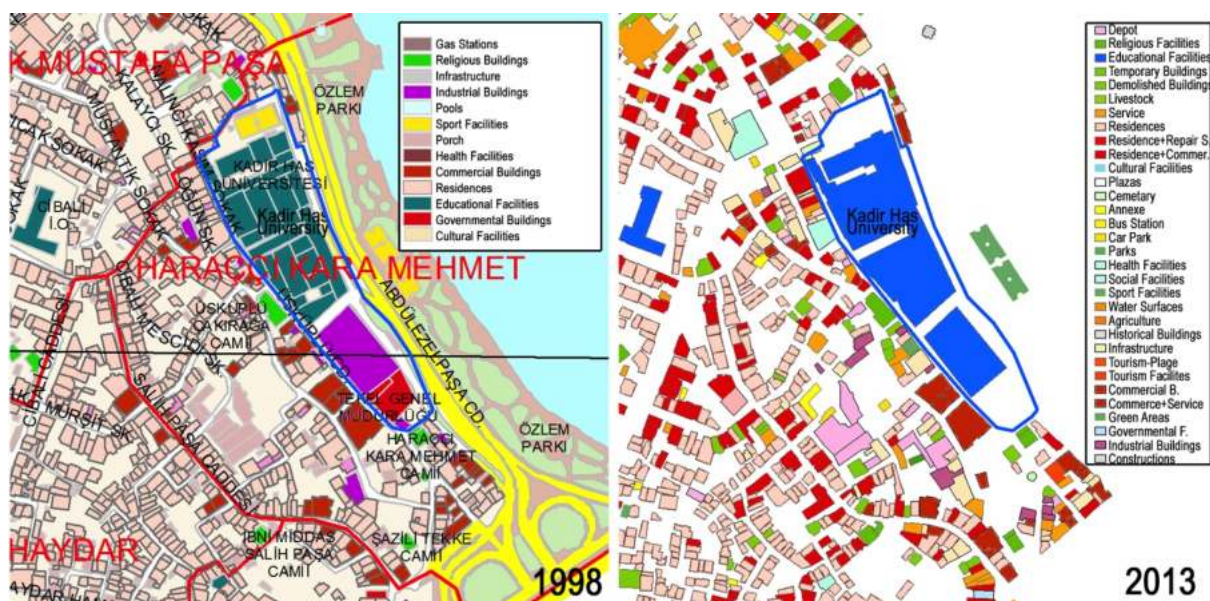


Figure 8: Functional Changes in the Periphery of Kadir Has University (1998–2015)

The surveys conducted lead to the conclusion that following opening of the university also taken in place in rental values, in parallel to the increase in the value of this increase as favorable while tenants considered it to be unfavorable.

The users living in the district considered that the new functions that came along were trade units such as stationary, dry cleaning, supermarket as well as service beverage services and also functions such as social and cultural facilities. However, based on the low educational and economic levels of the population in the neighborhood (66% graduates of primary school), 78% noted that they had not been using these functions and 20% stated that they used them occasionally. And the functions were limited with service functions and trade functions. 58% of the residents considered the university in the place where they live as favorable.

4.2. . Santral Istanbul Campus of Istanbul Bilgi University

The Istanbul Bilgi University was established on 7 June 1996 by Bilgi Education Foundation. The Santral Istanbul Campus of the University, continuing its activities, included within the scope of the research is located on a site north of the Golden Horn, at the former Silahtaraga Power Plant, for which a new power plant was built. The Silahtaraga Power Plant, the first urban scale power plant of the Ottoman Empire, provided electricity for the city from its foundation in 1911 until 1983. The Cultural Heritage Preservation Board declared the building as cultural heritage in 1991 (Aksoy, 2004).

The Plant was allocated to Istanbul Bilgi University in 2004, renovation works were carried out from 2004 to 2007 and new additional buildings were also constructed during renovation. It started to provide service as an education and culture complex. In addition to educational departments of the University, there are also cultural functions, exhibition areas and libraries as well as a guesthouse, places to eat and drink and recreation areas. The efforts to transform the Silahtaraga Power Plant, which

heritage, into Santral Istanbul, was made with contributions of the public and nongovernmental organizations.



Figure 9: Views of Santral Istanbul at Istanbul University

General Directorate of IGDAS (Istanbul Gas Distribution Corporation) is located near Bilgi University. No functional change that could affect land use of the neighborhood was observed in 2007 when the university was opened, however the residential areas in the periphery increased from 2 floors height to 4 and 5 floors following a change of plan. When the spatial and distribution in 1998–2013 is analyzed, it has been observed that existing functions have developed along the road in the east of Bilgi University, that student dormitories in the same direction and similar development of trade had also taken place along the road, providing connection of Bilgi University with the northern shore (Figure 8).

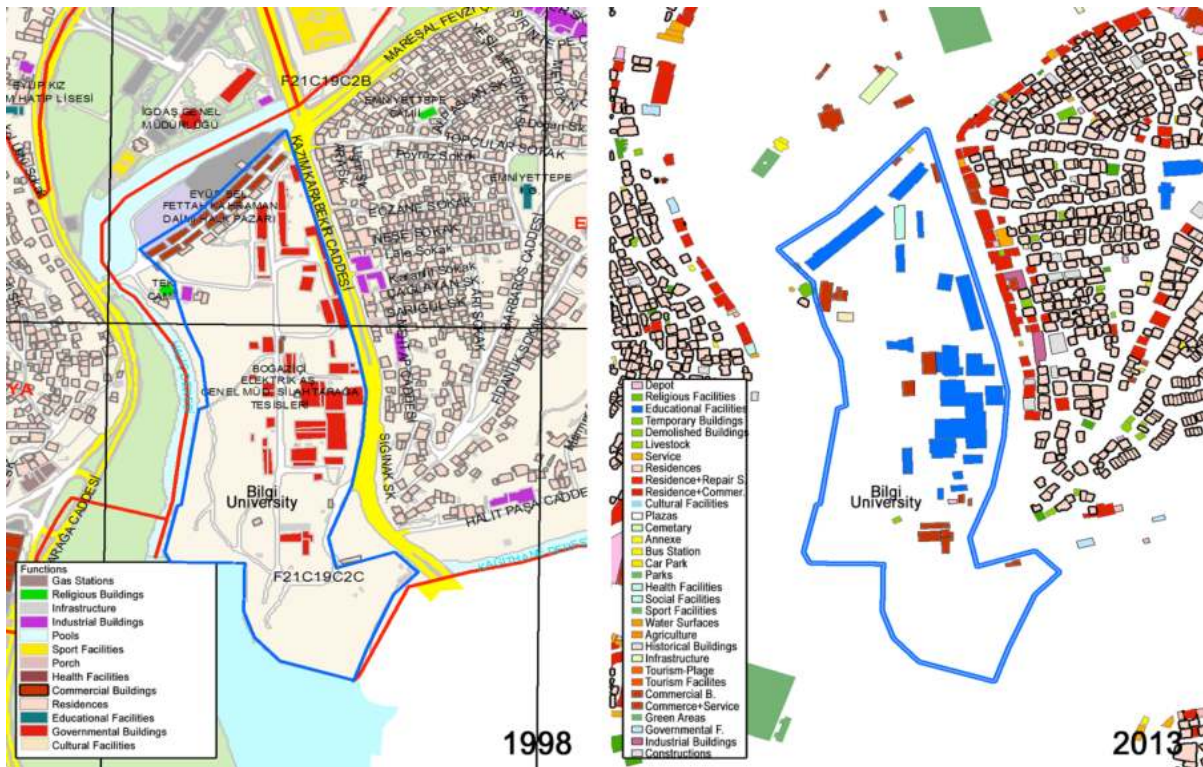


Figure 10: Functional change in the vicinity of Santral Istanbul Campus (1998–2013)

The land values around the university did not display a significant increase like Has, however the unit prices under \$10 in 1994 increased above \$120 in 2014 (Figure 10).

Those living close to the university had noted that following opening of the university, social and cultural activities had increased, a health facility had been opened, and green areas had been made. More than half the population living in the environment had been using the new functions and had found the functional change favorable while those in the region had stated opening of a university in their district had been an unfavorable change.

4.3. Ayazaga Campus of Beykent University

The Ayazaga Campus of Beykent University is located on an area of 0.7 ha on a land parcel in the Ayazaga Municipality in 2005. Beykent University is in Ayazaga, located in the north of the district. It has been in the status of village until 2014. The campus of the university is located in a former residential area. It started to function during the curriculum year of 2005–2006. Within the scope of the research, it was not transformed from a district to a university; it was constructed as a university and started giving education.



Figure 11: Views of 4.3. Ayazaga Campus of Beykent University

While no significant functional change took place until 2013 as settlement in the Ayazaga Campus of Beykent University, highly intensive residential areas were constructed in the west and northeast of the campus during the last 2 years. On the other hand, the socio-economic structure of the region with Islamic political opinions caused a significant increase continuously during the last 10 years. Especially before local elections, the status of a village, the buildings that were 1–2 stories increased up to 5–8 stories. This increase in the settlements and the trade and service units in the land use in the vicinity of the University will not be correct (Figure 9).

As it has been determined in Bilgi University, 66% of the residents in the periphery of the university consider opening of the university as unfavorable. The increase in the land values was considered favorable by land owners and unfavorable by tenants.

Among the three universities examined, it is the one with the lowest land value increase. The land values, which were 2 times higher in 1994 in the periphery of Bilgi University, increased 100% and it still remained as half of Bilgi University (\$70) (Figure 10). The land values in 1994–2014 increased by 380% in the vicinity of Beykent University, by 504% in the vicinity of Has University and by 1952% in the vicinity of Bilgi University.

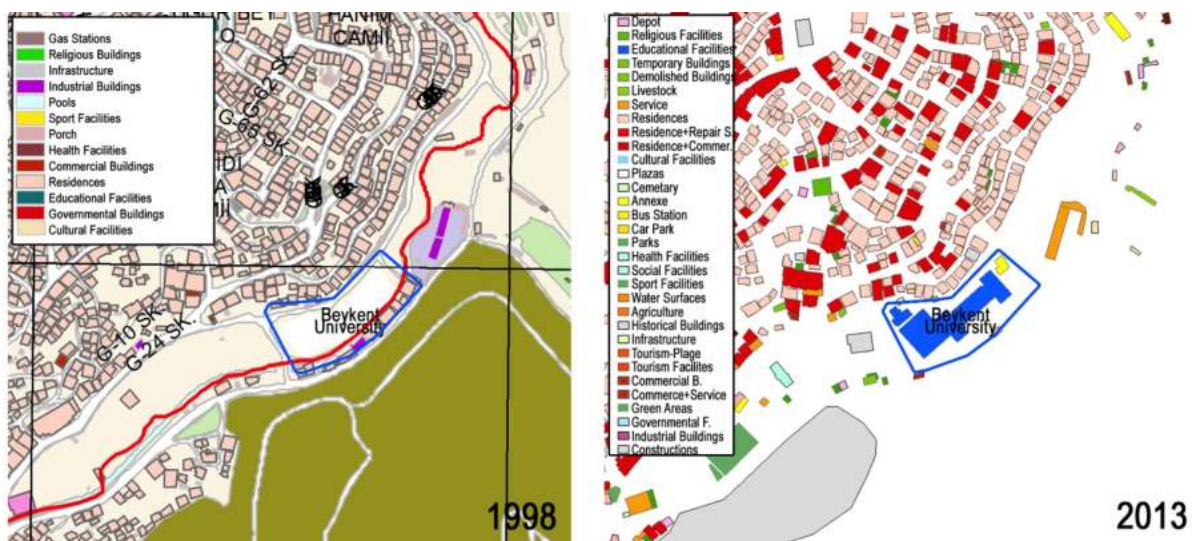


Figure 12: Beykent niversitesi ve yak n evresi fonksiyon de i ikli i

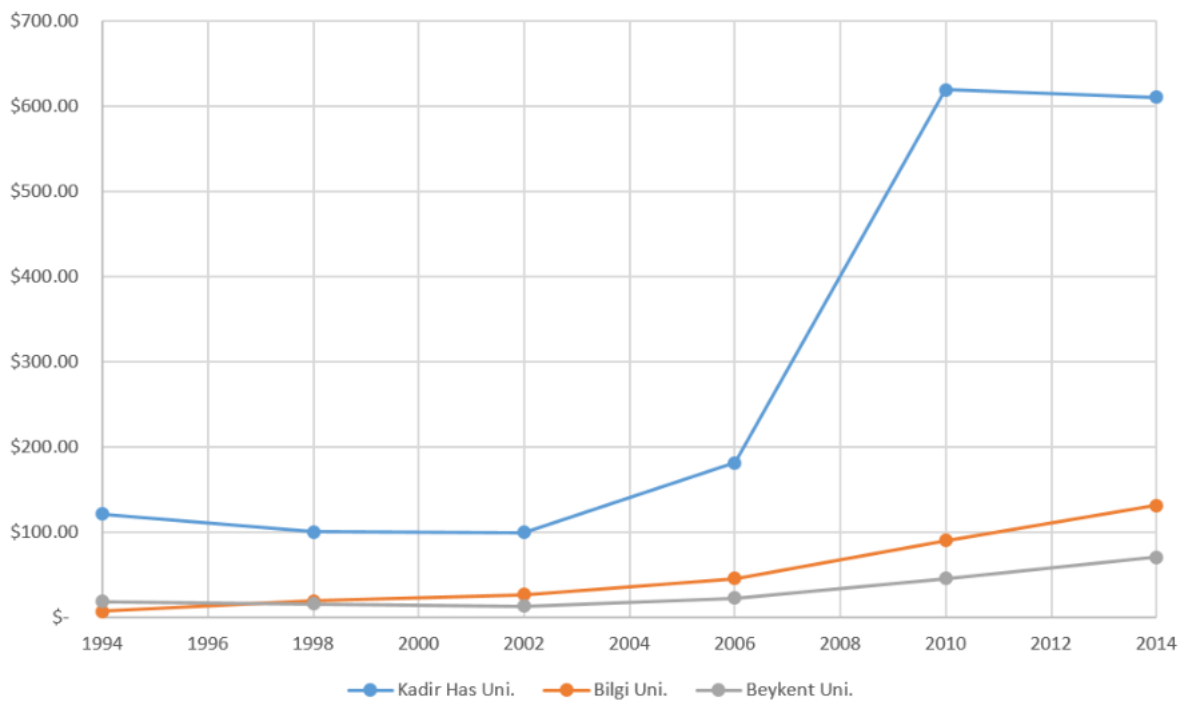


Figure 13: Land prices around the campus sites (Yigiter at al, 2015)

Conclusion

While some of the universities that started education as of 1990 s chose empty areas in the outskirts of the city, some utilized existing building stocks and preferred areas. Newly established university campuses can cause beginning of a transformation in the periphery. The Golden Horn Region, that can be described as historical and cultural, has been undergoing a rapid transformation lately, with culture led renovation projects.

It can be concluded in the study that Kadir Has University is the most successful in its effect on urban structure among the three universities, which is followed by Istanbul Bilgi University. The success of Kadir Has University is based on the facts that it has been evolved in a heritage area, its periphery is a protected area and that it has been under a process of residential areas in its vicinity, which are restored and gain value through European Union. It can also be stated that presence of the Zeyrek Mosque in its vicinity and restoration projects close to it have a positive influence in creating attraction points for tourists. Based on changes in the service function in the periphery of universities, referred to as rehabilitation without causing any change in structural / spatial pattern of the university with social projects into this kind of a transformation, also aimed at for preservation of urban heritage, leaves the danger of gentrification, which is the most negative part of urban transformation, off the agenda.

Just like Kadir Has University, Istanbul Bilgi University has also been assessed for its structure open to the outside world and also for preservation and development. The difference of Bilgi University from Kadir Has University are the facts that it has protected areas in its periphery, that trade has increased especially towards the university and that residential areas are going through an urban renewal process.

Although the existing residential areas in the vicinity of Beykent University are undergoing transformation in the form of urban renewal, there are no existing efforts at restoring parcels in the east of the university and the areas that came into existence after the area are developed in the form of land development.

When the spatial pattern of the three universities are evaluated; it can be concluded that Kadir Has and Bilgi Universities have outward spatial structure because of the numerous connections of the campuses with their neighborhood. Especially the facts that the area belonging to the old electricity factory in the Campus of Bilgi University are used as an industrial museum, fairs, concerts and similar activities are organized in the building and presence of the Rezan Has Museum in the Campus of Kadir Has University are the proofs of this structure. On the other hand, Beykent University displays a closed structure of universities and a closed structuring is observed as entry of cars and pedestrians through a single door, both students and cars are checked carefully during entries and exits and entry points are not permitted in the campus. The strict structure of the university prevents a limited functional change of the neighborhoods land use.

It is evident that only existence of universities is not sufficient for their effect on urban structure. For this, it has been considered that in addition to the structural, spatial and functional changes of universities, their functions and their relationship with their periphery, the need for a clear and demanding about the benefits that universities can provide for them.

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