

TRANSFORMATION OF ISTANBUL'S URBAN STRUCTURE AND ITS IMPACT ON REAL ESTATE PRICES

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ABSTRACT

Urban structure of Istanbul has been constantly transformed, restored and adjusted to the current needs of the society due to population increase, economic development and its strategic location under the influence of the changing global forces. After 1980s, the growth of service sector, economic development, development of telecommunication technology and construction of Bosphorous bridges and highways stimulated multi-center development of the city. As a result of suburbanization, middle and upper income families took place around these new sub-centers. The purpose of this study is to investigate the impact of these sub-centers with respect to office rent, retail rent and housing prices.

For the analysis, first the spatial distribution of population density is investigated. It is shown that the population is declining in the central locations, mainly due to a transformation from housing to business and changing family structure and life styles, but growing very rapidly in the peripheral districts in parallel to the growth of jobs in the sub-centers and in the industrial sites. Rising incomes and car ownership can be given as other reasons for decentralization of population. In addition, the location of larger portions of the population, jobs and wealth on the periphery illustrates that Istanbul by passed the typical developing country city stage where most of the lower income people lived in the periphery.

The spatial distribution of office rents is investigated as a representative of the development of multi-center development of the city and their impact on the real estate prices. The run-down urban structure of the old CBD could not provide appropriate space for the increasing demand for modern office buildings. In addition, the development of transportation and telecommunication technology eroded the importance of accessibility to the old CBD and stimulated the decentralization of office space and the development of sub-centers on the periphery.

URBAN TRANSFORMATION: Controversies, Contrasts and Challenges

The spatial distribution of housing prices is investigated also to illustrate the impact of new sub-centers. Istanbul's long history, world famous natural beauty and varying socio-economic structure caused large discrepancies with respect to the spatial distribution of housing prices. While some of the modern districts have become comparatively more attractive, the historic districts have lost wealthy population elements due to changes in life styles, deterioration of their neighborhoods and the settlement of low income migrants. These changes have created locational advantages and disadvantages, which are reflected in the real estate market and intra-urban migration, which in turn have affected demand for housing and housing prices.

The spatial distribution of retail rent is also investigated in order to show its impact on the other real estate prices. The analysis illustrates that the larger shopping centers within the vicinity of new sub-centers have higher retail rent prices and they have higher impacts on the real estate prices in their environments.

Furthermore, restructuring waterfront areas and its impact on land prices is also investigated in Istanbul. It is illustrated that, giving new functions to the vacant industrial buildings along the Golden Horn shores increased land prices and caused functional transformations and thus revitalization of these shores

As a conclusion, multi-center development, revitalization of old CBD and redevelopment of waterfronts are the major transformation areas of urban structure in Istanbul. They effect real estate prices and cause functional changes in their surrounding areas.

KEY WORDS: Transformation, Urban structure, Multi-centers, Revitalization, Istanbul

INTRODUCTION

After 1980s, there are a lot of research on the intra-metropolitan location of economic activities and thus, multi-center development of cities and its impact on the urban structures. Globalization and free trade policy have played as a catalyst role for this transformation of urban structure in many cities. As one of the earlier studies, Griffith (1981) developed a model for the distribution of population density in multi-centered Canadian cities. In US, most job growth in the manufacturing, wholesaling, retail and service industries in the 1982-87 period has been in the urban peripheries of the twelve consolidated metropolitan statistical areas (Gordon and Richardson, 1996). Furthermore, Giuliano and Small (1991) analyzed the relationship between population and employment changes in the spatial context and the impact of edge cities on development of sub-centers. There are also several studies which investigated the decentralization of population and employment in European cities. Hall (1988) in a study of five rings around London, showed that while the most peripheral rings experienced fastest growth, in terms of both employment and population, the two most central rings have experienced negative growth. In the 1990s, a similar spatial trend of movement of population and employment was illustrated in Paris by Sahling and Anderson (1992). Dieleman and Faludi (1998) observed the same process in the Ruhr and the Milan region of northern Italy. Musterd et.al.(2006) illustrated a similar pattern of decentralization of population and employment in Amsterdam. As an example for developing countries, Mexico City experienced a similar pattern of multi-center development to developed countries (Rowland and Gordon, 1996). Several studies illustrate the multi-center development and its impact on restructuring process in Chinese cities

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(Yeh and Wu, 1999). This trend resulted in more balanced distribution of traffic and housing price than the mono-centric cities as in other countries. At the same time, these new sub-centers in the periphery stimulated redevelopment of the squatter areas in their surroundings.

Multi-center development and modern housing projects in their surroundings caused the decline of the old CBD and its historical neighborhoods as in some other metropolitan cities (Berry and Kim, 1993; Leinberger, 1990). Several projects were proposed for the revitalization of the old CBD. On the one hand, restoration of the old buildings, regeneration and transformation of urban functions, on the other hand, pedestrianization of the main streets and construction of metro contributed to the socio-economic development of these declined zones (Ding et al., 2000; Atkinson, 2000; Abraham, 2001; Crievingen and Decroly, 2003; Fang and Zhang, 2003; Ergun (2004); Ozus and Dokmeci, 2005).

Another transformation area of post-modern cities is restructuring of waterfronts. Some of the major examples of these cities, Rotterdam (McCarty; 1996), Istanbul (Bezmez, 2008), Baltimore (Stover, 1995), Boston (Kotval and Mullin, 2001), San Francisco (Kotval and Mullin, 2001), New York (Campo, 2002), Barcelona (Malone, 1996), Hong Kong (Bristow, 1996), Singapur (Chang, Huang and Savage, 2004) and Tokyo (Saguchi and Malone, 1996) can be given. Transformation of vacant industries into cultural, recreational and trade facilities, luxurious housing and beautification of sea shores and beaches increased land prices and thus revitalization of these areas.

Thus, the review of the literature illustrates that the previous studies concentrate on the few dimensions of the restructuring problems of large metropolitan areas and there is need for more comprehensive approaches. The paper aims to present the changes in urban structure and its impact on real estate in Istanbul, in an effort to understand both the uniqueness and the universality of decentralization in a developing large-city experience. Three areas of transformation of Istanbul are taken into consideration: (1) Multi-center development and its impact on real estate prices and functional change in their surroundings; (2) Revitalization of the old CBD and (3) revitalization of the waterfronts. Background information about Istanbul is given in the second section with respect to distribution of population and employment. The impact of multi-center development on real estate with respect to office, retail rents and housing prices; The impact of revitalization of CBD and also the impact of revitalization of waterfronts on real estate prices are given in section three. Final section is devoted to a conclusion and suggestions for further research.

2. BACKGROUND

Spatial distribution of population and job locations are important determinants of multi-center development of cities. The population of Istanbul increased from 983.041 to 12.782.960 primarily due to rural migration between 1950 and 2009 (State Institute of Statistics, 2009). It is also the largest socio-economic, cultural and tourism center by being the capital of three empires in Turkey with unique natural and historical characteristics which further enhance its attractiveness. Its tremendous population growth resulted in its expansion and thus multi-center development of the city in the periphery.

URBAN TRANSFORMATION: Controversies, Contrasts and Challenges

The spatial distribution of population and jobs can be investigated according to the concentric zones which were developed during the different time periods (Dokmeci, 2009). The core area covers up to 3 km. from the center, which correspond to the old CBD (Figure 1) with a 2000 year history and has since been continuously redeveloped (Dokmeci and Berkoz, 1994). While this zone used to account for 6 percent of population, 33 percent of the service sector and 13 percent of the industrial sector in 1985, these ratios decreased to 2 percent, 13.5 percent and 3 percent in 2009, respectively. The core area is connected to the periphery by metro, rapid train, buses and ferries and thus, it has the highest pedestrian traffic due to its unique central location and being a major traffic exchange node. Its population has continuously decreased due to the transformation of land use from housing into business. After the 1980s, with the help of local and international revitalization funds such as UNESCO, it has continued to be an active business center due to its central strategic location and being an internationally renowned tourist center with its Byzantium churches and Ottoman mosques and palaces. These projects were also successful to start gentrification in the historical residential neighborhoods of the core area (Dokmeci and Ciraci, 1999; Ergun and Dundar, 2004; Ergun, 2003; Ozus and Dokmeci, 2005).

The first ring reaches 10 km. from the center (Figure 1), which covers the area occupied by the city in the 1950s before the commencement of mass rural migration (Dokmeci and Berkoz, 1994). Most of the buildings in this zone experienced renewal due to the changes often in construction density ratios. While this zone used to have 50 % of the total population, 53 percent of service employment and 50 percent of industrial employment of Istanbul in 1985, these ratios decreased to 22 percent, 40.9 percent and 26.4 percent in 2009 respectively. Although the service and manufacturing ratios of the periphery surpass the first ring, this zone still forms the economic backbone of the city with all the headquarters of the banks and the larger firms, and the majority of the shopping malls are located in this zone being the inner ring of the city. This zone includes mostly upper and middle income people as well as a small amount of squatters (Dokmeci, 2009).

The second ring is taken as the peripheral area beyond the first ring (Figure 1). In 1985, this zone accounted for 35 percent of population, 14 percent of service employment, 37 percent of the industrial employment, these ratios were increased to 76 percent, 45.6 percent and 69.5 percent in 2009, respectively (State Institute of Statistics, 2009). The development of this zone accelerated after the construction of the second bridge over the Bosphorus and peripheral highways in 1986. The impact of infrastructure on population and jobs growth caused the transformation of land-use along the highways. This zone still continues to expand rapidly with planned and unplanned development of retail, residential and industrial establishments.



Figure 1. Concentric Zones of Istanbul

Thus, after 1980s, population and economic growth together with construction of infra-structure stimulated the development of sub-centers in the periphery of which caused on the one hand, transformations of land-use and urban structures in the periphery and on the other hand, decline of the CBD of Istanbul.

3. TRANSFORMATION OF URBAN STRUCTURE AND REAL ESTATE PRICES

After 1980s, transformation of urban structure in Istanbul can be investigated into three categories: (1) the impact of multi-centers as spatial distribution office rents, retail rents and housing prices; (2) Revitalization of old CBD (Beyoğlu and Sultanahmet); and (3) Redevelopment of waterfront.

3.1 THE IMPACT OF MULTI-CENTERS

The impact of multi-centers on urban structure can be investigated in three categories: (1) The spatial distribution of office rents; (2) The spatial distribution of retail rents; and (3) The spatial distribution of housing prices. The combination of these three types of forces causes the functional and structural changes in the surrounding areas of multi-centers.

3.1.1. SPATIAL DISTRIBUTION OF OFFICE RENTS

After 1980s, the number of office buildings increased as a result of restructuring of economy, globalization and growth of service sector in Istanbul as in many world cities. Development of transportation systems and improving telecommunications system has contributed to the decentralization of CBD activities. Development of these new office markets has a great impact on the distribution of urban property values. Different characteristics of these centers with respect to location, density requirements, urban and architectural design quality, transportation and social services effect office rents (Aksoy, 2005). High office rents areas marqes the sub-centers in Istanbul (Figure 2). They develop along the radial road which is parallel to Bosphorus high income neighborhoods, at the highway intersection nodes or near the large modern housing projects.

URBAN TRANSFORMATION: Controversies, Contrasts and Challenges

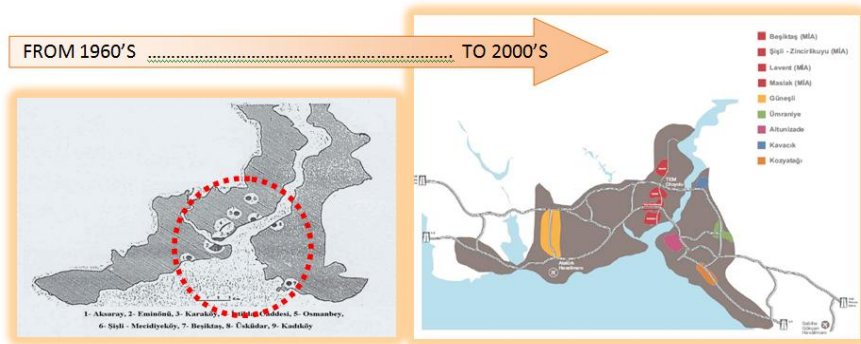


Figure 2. Transformation of Istanbul as multi-centered city

In terms of the future development of office market in Istanbul, the location of new sub-centers should be determined by using comprehensive and dynamic research methods, not only benefit of the private sector developers as it is today, but also for the economic benefits of the city. Otherwise, in the free market economy, private investor would use the land for the sole purpose of extracting the largest net return over a foreseeable period of time, but experience has shown that the market consume resources in a short-sighted way, creating almost insurmountable problems for generations to come (Ratcliffe, et.al. 2004).

The sub-centers have the highest real estate prices in the city and, thus they tend to increase real estate prices in their surrounding areas which cause functional transformation. Restructuring of their environment mutually effect real estate prices in the sub-center itself. Therefore, determination of efficient location of sub-centers is a crucial task for urban planners to stimulate redevelopment of the city.

3.1.2 SPATIAL DISTRIBUTION OF RETAIL RENTS

After the 1980s, globalization and economic restructuring increased Istanbul's integration with the world economy (Keyder and Oncu, 1994) and encouraged the transformation of retail organization by shifting power from traditional small traders to large domestic and foreign firms (Tokatli and Eldener, 2002). One of the reasons of the attractiveness of the retail market for large domestic and foreign companies has been the significant increase in per capita income in the country since 1980s (Tokatli and Boyaci, 1999). The transfer of western capital and the rapid transmission of the western consumption culture are apparent in different parts of the city. Increasing exposure to other cultures stimulated the growth of a new consumer culture and lifestyle under the influence of global consumption patterns. The spatial expression of this transformation was in terms of large shopping malls which are flourishing throughout the Istanbul Metropolitan area (Terzi, et.al. 2005). Between 2005 and 2010, the number of shopping malls increased from 32 to 105. 14 of them are under construction and 4 of them are off plan properties. Despite the growth of shopping malls, the traditional shopping streets are also flourishing in a competitive way. The majority of shopping malls are concentrated in the high income neighborhoods or near them. Thus, there are still districts which do not have any shopping malls.

The shopping malls as a social space provide good opportunities for family use and for people of different age and income groups through the variety in goods availability and services (Erkip, 2005). On the one hand, shopping malls display international culture and life style, on the other hand they adjust themselves to shopping behavior of districts with different income and cultures. The retail segment comprises 40-45% of overall family spending and consumer expenditure grew 8.8% in 2005 and 9.4% in 2006.

The shopping malls by displaying a new way of life attract many customers and they are very influential in their surroundings. The spatial distribution of retail rents (Figure 3) illustrates their power of their influence on their environments. According to their location within the city, some of them transform middle class housing or squatters into office buildings, some of them transform into luxurious housing.

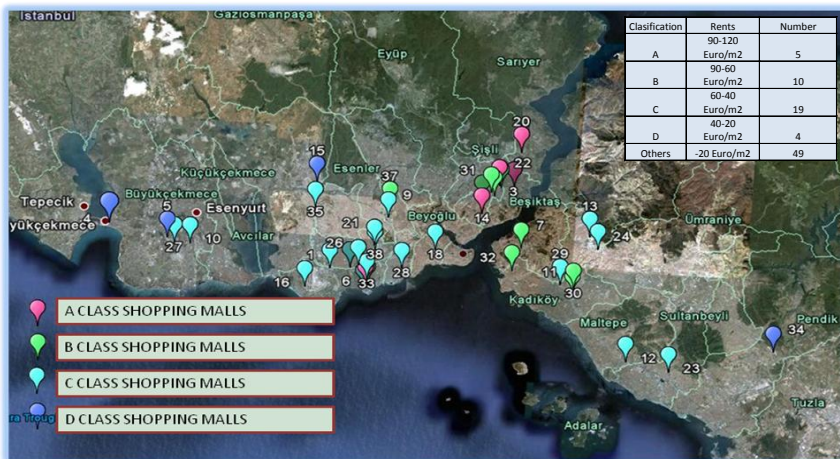


Figure 3. The distribution of retail rents in Istanbul

3.1.3 SPATIAL DISTRIBUTION OF HOUSING PRICES

In Istanbul, the spatial distribution of housing prices varies according to the historical background of the area, socio-economic level, accessibility to the centers and amenities. Moreover, the rapid growth of the city since the 1950s due to rural migration, has affected the quality of life in various sections of the city. While some of the modern districts have become comparatively more attractive, the historic districts have lost wealthy population groups due to changes in life styles, deterioration of their neighborhoods and the settlement of low income migrants. At the same time, development of the new transportation network and multi-center development affected the spatial distribution of housing prices. In addition, the construction of the modern housing projects on the periphery has created not only new opportunities for housing markets but also a trend toward living in modern urban settlements surrounded by green areas with suburban amenities. Meanwhile, since officially sanctioned housing, services and infrastructure have not kept pace with the rapid population increase and unauthorized settlements on the periphery have resulted. These changes have created location advantages and

3. 2. REVITALIZATION OF CBD

After 1980s, multi-center development of the City has caused the decline of the old CBD. While some of the modern districts have become comparatively more attractive. These new neighborhoods had more green areas, better road networks and large parking areas, able to cope with the increasing amount of traffic. Thus, people preferred to live in these modern neighborhoods rather than in historical districts which fell short of their modern needs (Dokmeci et.al, 1996). The historical districts have lost population due to the deterioration of their neighborhoods. In addition, construction of the highways and bridges over the Bosphorus and Golden Horn altered the accessibility measures of urban structure.

In order to revitalize the city center, the main street was pedestrianize, and one of the main arteries of this street which was parallel to the main street, was enlarged to prevent traffic congestion. In addition, organization of film, music festivals and book fairs were contributed to the revitalization of the old CBD. As a result, trade activities were increased, new restaurants, coffee shops and bars were opened and the numbers of customers were increased. By the impact of the revitalizing actions made in these historical residential areas, the deteriorating buildings have started to be bought and restored, resulting in the restoration and improvement of buildings in areas that had been deserted and ruined because of neglect. Artists, architects and middle class people started to return to the restored buildings (Dokmeci and Ciraci, 1990).



Figure 5. Gentrified Areas in Istanbul

The revitalization process has provided economic development in historical residential areas. Thus, during the last 10 years, real estate prices increased 20 times. As a result, these historical neighborhoods attracted the interests of national and international investors.

As a result of globalization and economic development and its population increase, Istanbul is in a continuous development and redevelopment process. The success

URBAN TRANSFORMATION: Controversies, Contrasts and Challenges

of this process lies on the preservation of its historical values for cultural identity and tourism development while sustainable economic and social development and revitalization provided.

3.3.REVITALIZATION OF WATERFRONTS

The waterfront revitalization project of Istanbul includes regeneration of the Golden Horn shores, and redevelopment of the Marmara Sea shores. The purpose of Istanbul Metropolitan Municipality's Golden Horn Waterfront Revitalization project was to clean run down industries and warehouses, to increase green space with pedestrian walking areas along the shores, to clean water by eliminating the pollution resources, to give new functions to the historical buildings which will provide social integration with the rest of the city and add new functions wherever necessary for the same purpose.

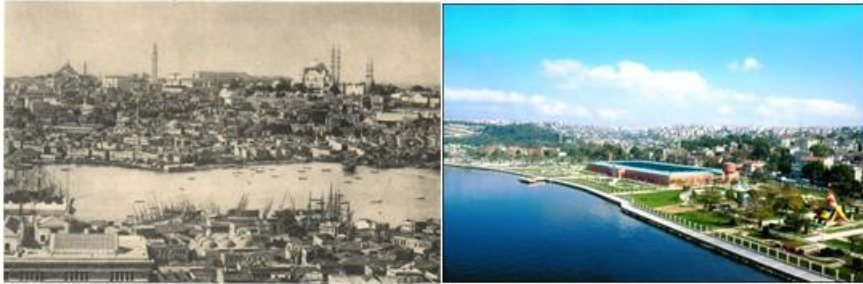


Figure 6. The old and the new vision of Golden Horn shorelines

The functional transformation of industrial buildings not only gives them vitality but also fulfills the demand for cultural and educational facilities in Istanbul. Moreover, the impact of functional transformation of industrial buildings is investigated by analyzing real estate prices in their surrounding and by surveying people. The results illustrate that, although people complain about loosing their jobs due to functional transformation, there is economic development in the surrounding areas which is reflected in real estate prices. While historical buildings were restored and occupied by higher income people or used as boutique hotels, coffee houses and restaurants were opened near by these developments. Provision of green areas along the Golden Horn shores not only improve the quality of scenery but also provide recreation areas which are high demand in Istanbul. Thus, physical, social, cultural and economic development was achieved along the Golden Horn shorelines. The findings of this research are generally in accord with the transition over the last decades in the perception of the role of revitalization of waterfronts and of appropriate revival strategies. It is illustrated that transformation of historical buildings while preserving their architectural qualities has played an important role in the success of the revitalization projects. (Figure 7)

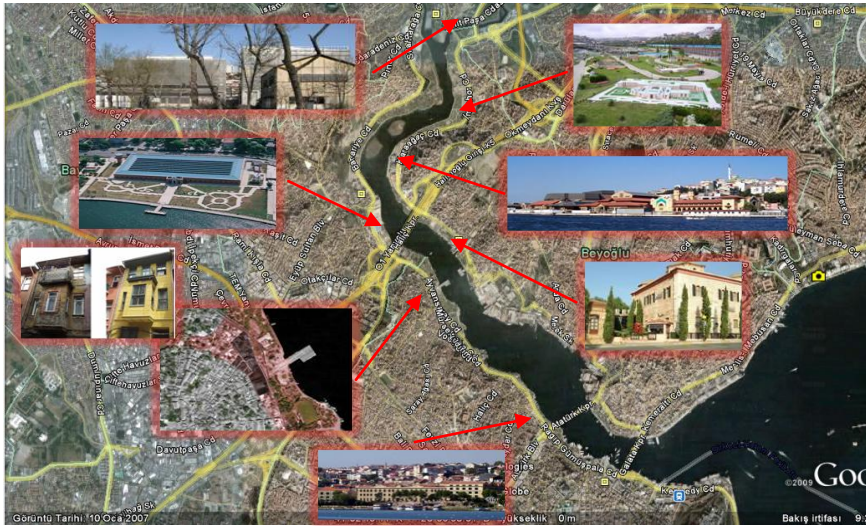


Figure 7. The revitalization projects by Golden Horn shorelines

Thus, the development of sub-centers with respect to office and retail rents contributes to the restructuring of their environment, revitalization of the old CBD provides regeneration of historical buildings and redevelopment of waterfronts revitalize the neglected areas and creates amenities in Istanbul.

4. CONCLUSION

In this study, three important areas of transformation were investigated in Istanbul: (1) multi-center development; (2) revitalization of old CBD, and (3) redevelopment of waterfronts. For the analysis, first the spatial distribution of population density is investigated. It is shown that the population is declining in the central locations, mainly due to a transformation from housing to business and changing family structure and life styles, but growing very rapidly in the peripheral districts in parallel to the growth of jobs in the sub-centers and in the industrial sites. Rising incomes and car ownership can be given as other reasons for decentralization of population. In addition, the location of larger portions of the population, jobs and wealth on the periphery illustrates that Istanbul by passed the typical developing country city stage where most of the lower income people lived in the periphery. Second, the multi-center development of Istanbul is investigated with the help of spatial distribution of office and retail rents and housing prices and their impact on their surrounding areas. Thus, the development of sub-centers with respect to office and retail rents contributes to the restructuring of their environment. These sub-centers are located on the intersections of the radial roads and the peripheral roads. Growth potential of these locations also stimulates urban restructuring due to increasing accessibility. Planned development of these areas is necessary in order to provide urban growth with an identity.

In order to revitalize the city center, the main street was pedestrianized, and one of the main arteries of this street which was parallel to the main street, was enlarged to

URBAN TRANSFORMATION: Controversies, Contrasts and Challenges

prevent traffic congestion. In addition, organization of film, music festivals and book fairs were contributed to the revitalization of the old CBD. As a result, historical buildings were restored, trade activities were increased, new restaurants, coffee shops and bars were opened and the numbers of customers were increased. Artists, architects and middle class people started to return to the restored buildings.

With respect to redevelopment of waterfronts, new functions are given to the deserted industrial buildings along the Golden Horn shores which stimulated redevelopment in their surrounding areas. In addition, The Marmara Sea shores are redeveloped as recreation areas and amenities provided. These projects also contributed to real estate developments in near by areas.

The results of this study can be useful for urban planners, investors and policy makers. Further research is suggested to analyze the economic and social impact of functional and physical changes in the surroundings areas of revitalization projects in order to provide more comprehensive backgrounds to develop more efficient strategies to guide revitalization projects in the future.

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