International Journal of Social Sciences and Humanities Invention 11(05): 8144-8154, 2024
DOI: 10.18535/ijsshi/v11i05.02
ISSN: 2349-2031
https://valleyinternational.net/index.php/theijsshi

Potentıals And Lımıtatıons Of Socıal Area Analysıs: The Case of Bağcılar Dıstrıct, Istanbul

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Abstract:

This paper explores the interplay between social differentiation and urban space in Istanbul's Bağcılar district, employing Social Area Analysis (SAA) to examine micro-level urban dynamics. The initial research involved a literature review and meta-analysis of SAA, which was introduced by Shevky and Bell (1955) and later evolved through advanced quantitative methods by Ostendorf and Musterd (2012). The study integrates macro-level perspectives, analyzing economic changes, socio-cultural shifts, and government policies from 1923 to the present, which are essential for understanding Istanbul's spatial and social transformations. The micro-level analysis utilizes SAA components, including social rank, urbanism, and social differentiation, with data sourced from the Turkish Statistical Institute and the Household Survey of Istanbul Transportation Planning. The findings, contextualized within Bağcılar's specific characteristics, highlight how the district's rapid growth since the 1950s, fueled by rural migration and industrial development, has led to profound socio-economic changes and unique urban development patterns that have implications for social stratification. By combining macro and micro-level analyses and building upon the foundational work of key researchers, this study contributes to the growing body of knowledge on urban transformation processes and their socio-spatial consequences in rapidly urbanizing contexts.

Keywords: spatial fragmentation, social differentiation, social area analysis, META-analysis, census tract, Bağcılar-İstanbul

1. INTRODUCTION

Istanbul's prominence as both an economic and cultural hub within Turkey necessitates a focused examination of its urban planning and settlement policies. This study elucidates the complex interrelations between social differentiation and urban spatial configurations in Istanbul, emphasizing the Bağcılar district. It posits that the interplay of social rank, urbanization, and social differentiation fundamentally shapes spatial differentiation and social stratification in urban environments.

Employing Social Area Analysis (SAA), this research categorizes neighborhoods within Bağcılar into 'social areas' based on standardized scores reflecting population characteristics. These social areas are arranged within a social space diagram, illustrating their relative positions within the broader urban socio-spatial context, and subsequently mapped to create a 'social mosaic' representing the spatial distribution of social characteristics across the district.

This methodological approach allows for a nuanced understanding of how historical, cultural, and economic factors influence urban form and social structure. By exploring these dynamics, the paper contributes to a comprehensive understanding of the mechanisms driving urban transformation and social stratification in Istanbul. The findings underscore the necessity for informed urban planning strategies that acknowledge the diverse socio-economic realities of its neighborhoods, ultimately fostering more equitable and sustainable urban development.

2. UNDERSTANDING SOCIO-SPATIAL DYNAMICS USING SOCIAL AREA ANALYSIS

Shevky and Williams (1949) posited that understanding population variances within census tracts necessitates considering three dimensions of differentiation: social rank, urbanization, and ethnicity. They argued that each dimension has unique indices and distribution patterns, later expanded by Abu-Lughod (1969). These scholars contended that shifts in economic structures and social relations are intricately linked to migration patterns of the working population, from agricultural sectors to manufacturing and commerce.

The concept of 'social rank' as articulated by Shevky and Williams refers to the hierarchical arrangement within occupational structures, with income levels associated with occupational status. Education, a critical element of social differentiation, is increasingly influenced by occupational demands and specialized skill acquisition. Shevky and Bell (1955) described urbanization through demographic shifts, such as fertility ratios, reflecting evolving economic roles and family structures. Measures including housing types and female workforce participation assess changes in family functions and urban societal structures.

In the literature, the dissimilarity index is a standard measure of segregation, assessing spatial segregation between social groups (Massey & Denton, 1988). They identified five dimensions of spatial variation: evenness, exposure, concentration, centralization, and clustering. Recent developments in visualization techniques and GIS have enhanced the application of the dissimilarity index.

The following table presents a selection of articles on the subject. As evident from the literature, the 'dissimilarity index' has been widely adopted in recent studies. Moreover, advancements in visualization techniques and Geographic Information Systems (GIS) have become prevalent tools in analyzing and presenting spatial data.

Table 1: Articles on the subject

No:	Date	Type	Title	Author	Source	Method
1	1955	Book	Social Area Analysis: Theory,Illustrative Application and Computational Procedures	Shevky,E.& Bell, W.	Califomia: Stanford Univ. Press	Social Area Analysis
2	1972	Book	The Social Areas of Los Angeles: Analysis and Typology	Shevky, E., & Williams, M.	Greenwood Press, Publishers Westport, Connecticut	Social Area Analysis
3	1969	Article	Testing the Theory of Social Area Analysis: The Ecology of Cairo, Egypt	Abu-Lughod, J.	American Sociological Review , Apr., 1969, Vol. 34, No. 2 (Apr., 1969), pp.198-212	Social Area Analysis & Factor Analysis
4	1988	Article	*The Dimensions of Residential Segregation*	Massey,S.& Denton, A.	The University of North Carolina Press https://academic.oup.com/sf/article-abstract/67/2/281/2231999	Dissimilarity Index
5	1993	Article	*Spatial Indices of Segregation*	David W.S.Wong	Urban Studies , April 1993, Vol. 30, No. 3 (April 1993), pp. 559-572	
6	1999	Article	*Social Areas in Beijing*	Victor F. S. Sit	Geografiska Annaler. Series B, Human Geography, 1999, Vol. 81, No. 4 (1999), pp. 203-221	Social Area Analysis
7	2007	Article	*Socio-spatial Segregation in Metropolitan Lima, Peru*	Paul A Peters, Emily Skop	Journal of Latin American Geography https://www.researchgate.net/publication/236759525	Index Multi-Group Dimension
8	2010	Article	*"Measuring Residential Segregation in Urban Mexico: Levels and Patterns"*	Paavo Monkkonen	Berkeley IURD (Institute of Urban and Regional Development)	Dissimilarity Index four of the five dimensions
9	2010	Article	*Immigration and Socio-spatial Segregation in Dublin, 1996-2006*	Tony Fahey and Bryan Fanning	Urban Studies , July 2010, Vol. 47, No. 8 (July 2010), pp. 1625-1642	Dissimilarity Index
10	2014	Article	*Socio-spatial differentiation and residential segregation in the Chinese city based on the 2000 community-level census data: A case study of the inner city of Nanjing*	Qiyan Wu, Jianquan Cheng, Guo Chen, Daniel J. Hammel, Xiaohui Wu	Cities, The International Journal of Urban Policy and Planning, Volume 39, pp. 109-119	Quartimax rotation in Primary Component Analysis (PCA) & Dissimilarity Index

After conducting a thorough review and analysis of the relevant literature, the conceptual model for this research was formulated as follows:

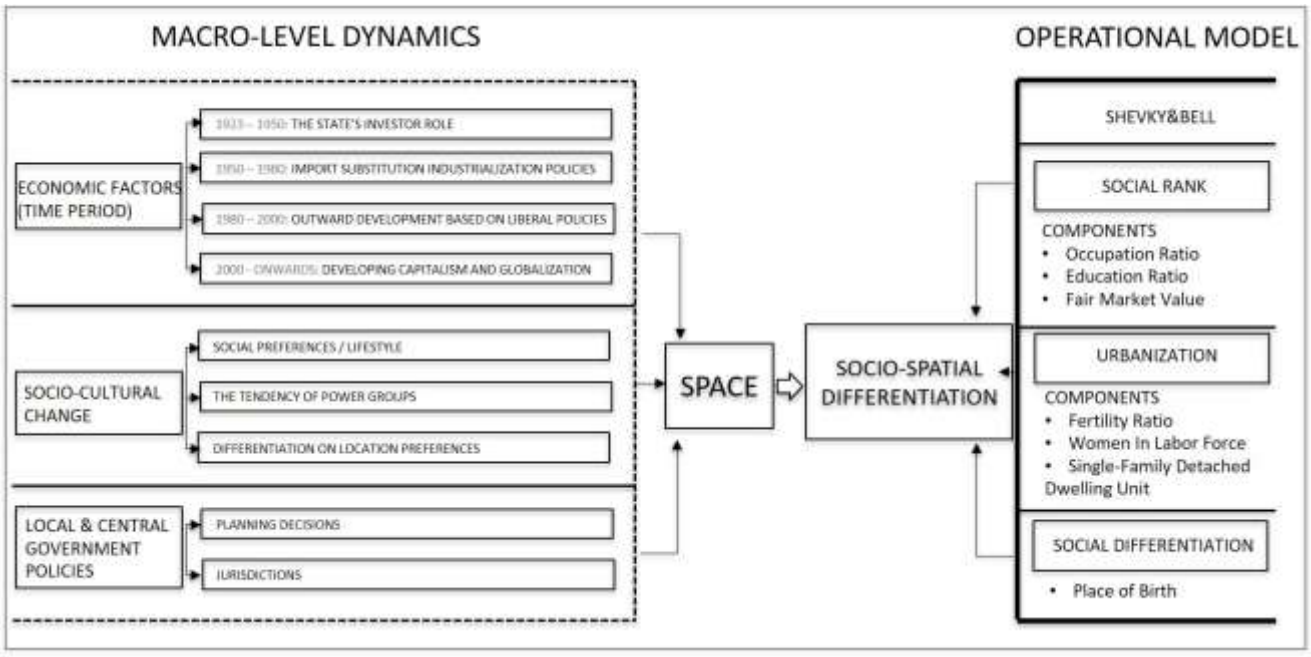


Figure 1: Conceptual Framework

Macro-level dynamics that affect the development of the cityscape and urban morphology include economic factors, socio-cultural changes, and local and central government policies. A brief explanation of these macro-level dimensions is as follows:

After reviewing relevant literature, a conceptual model was formulated:

- Economic Factors: Periods of 1923-1950, 1950-1980, 1980-2000, and 2000-onwards.
- Socio-Cultural Change: Includes lifestyle changes, power dynamics, and spatial preferences.
- Government Policies: Encompasses planning decisions and authority realms.

As societies advance technologically, enhancements in productivity, economic organization, and social relations precipitate shifts in population dynamics from agricultural sectors to industries encompassing trade, communication, transportation, and services. The subsequent phase involves defining indices of urban morphology. Three principal variables—social rank, urbanization, and social differentiation—characterize social stratification in modern cities. According to Shevky & Bell, a comparative analysis between traditional and contemporary societies can elucidate distinct structural transformations. These transformations are categorized into three types: I. the distribution of skills, II. the organization of productive activities, and III. the demographic composition. It is posited that these shifts can be quantitatively assessed through indices that track occupational arrangements, changes in living patterns, and the spatial redistribution of the population.

The social rank component is quantified by the occupation ratio, education ratio, and current market value of properties, calculated on a street-by-street basis. This index is compiled by aggregating data that reflect these specific characteristics for each census region, thus providing a comprehensive measure of social standing within the community.

The urbanization component is assessed through three key metrics: the fertility ratio, the percentage of women in the labor force, and the percentage of single-family detached dwelling units. The fertility ratio is indicative of both population size and the economic dynamics of an area, reflecting broader societal changes, including shifts in family structure. Similarly, the proportion of women participating in the labor force and the prevalence of single-family homes are crucial indicators of changing family structures, which are integral to understanding urbanization patterns.

Research has indicated that social differentiation can often manifest as ethnic segregation. In the seminal work by Shevky and Bell, this form of social differentiation is explicitly discussed under the guise of ethnic segregation. In this study, the variable 'place of birth' is employed to delineate social differentiation, acknowledging the presence of both interregional and intraregional developmental disparities evident in provincial-level data across Turkey.

The primary focus of this research was designated to be a detailed case study of the Bağcılar district, located within the metropolitan area of Istanbul. This selection was made to examine the specific urban and socio-economic challenges and dynamics that characterize Bağcılar, providing insights that may be indicative of broader patterns within Istanbul or similar urban environments.

3. BAĞCILAR CASE STUDY

The conceptual framework is contextualized through a study of the Bağcılar district in Istanbul. Bağcılar, renowned for its socio-economic and institutional dynamics, is a distinct locality situated on the European side of Istanbul. The district is bordered by the TEM (Trans-European Motorway) to the north, the Basın Ekspres highway to the west, and the Güngören district to the east, with Bahçelievler to the South (Figure 2). According to the 2020 Population-Based Census conducted by the Turkish Statistical Institute (TUIK), Bağcılar's population is 737,206, comprising 4.07% of Istanbul's total population. Notably, Bağcılar is the most densely populated district in Istanbul in terms of population density.

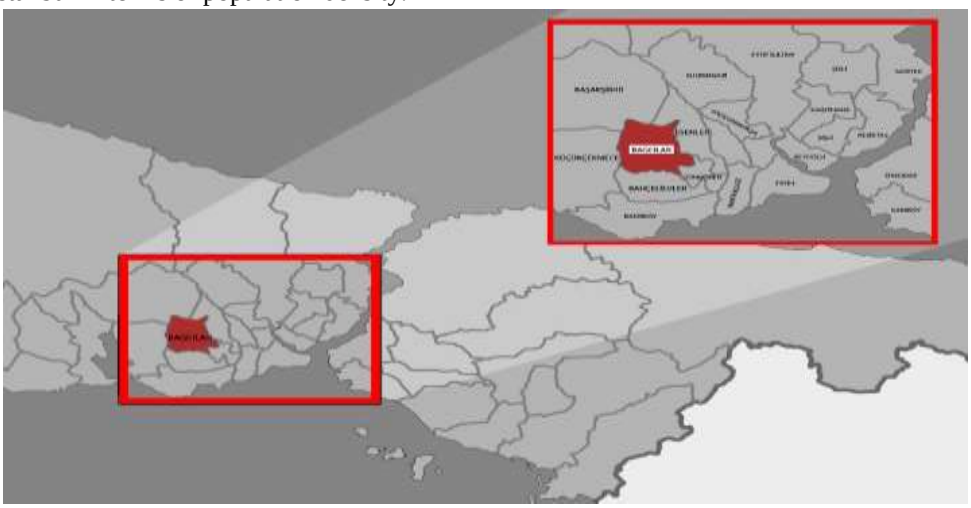


Figure 2: The location of Bağcılar (Source: Bağcılar Municipality, 2024)

During the 1950s, Turkey witnessed a significant wave of rural-to-urban migration, with large groups of people seeking opportunities in cities. Bağcılar emerged as one of the neighborhoods that attracted these migrants due to the availability of inexpensive land suitable for establishing large-scale factories. Moreover, the presence of public transportation connecting Bağcılar

to Eminönü, which served as the central business district at the time, further enhanced the area's appeal. These two factors, namely the affordable land and accessibility to the city center, contributed to an exponential increase in Bağcılar's population (Memiş & Kolay, 2020).

However, the rapid population growth outpaced the development of essential municipal services. The local authorities struggled to keep up with the demand for basic infrastructure, such as road construction, expansion of public transportation networks, design of public spaces, and provision of clean water and reliable electricity. Consequently, informal residential settlements proliferated throughout Bağcılar, as the formal housing market and urban planning mechanisms failed to accommodate the burgeoning population. This phenomenon highlights the challenges faced by rapidly urbanizing areas in providing adequate services and infrastructure to support the influx of migrants, often leading to the formation of informal settlements and urban sprawl.

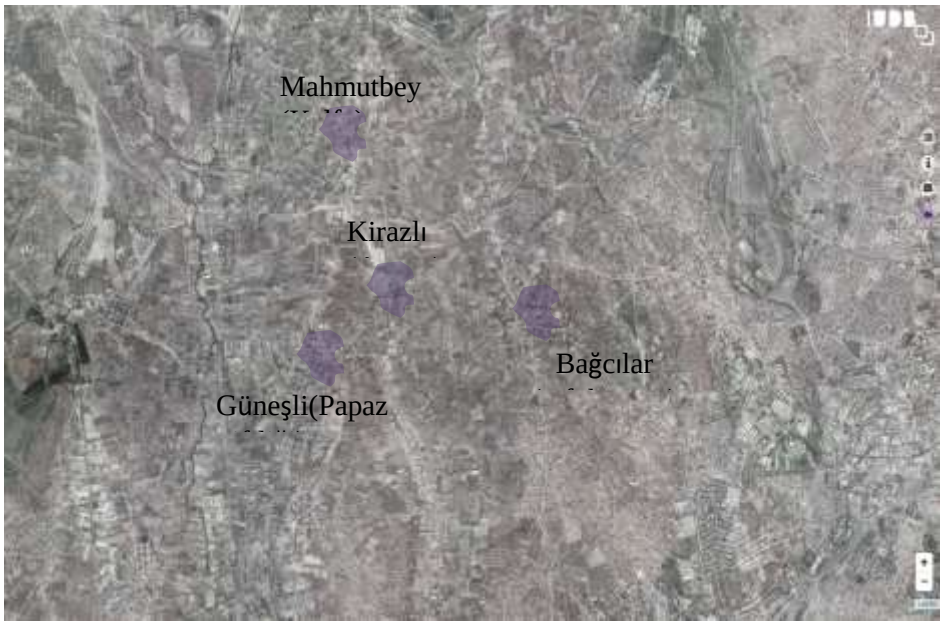


Figure 3: The Historical Land Settlements Patterns of Bağcılar (1970 – satellite image)

The spatial development of Bağcılar has been analyzed across four distinct periods, each characterized by specific economic dynamics. The first period, from 1923 to 1950, was marked by the state assuming an investor role in the context of the newly established Turkish Republic. The second period, spanning from 1950 to 1980, was dominated by import substitution industrialization policies, which aimed to promote domestic production and reduce reliance on foreign imports. The third period, from 1980 to 2000, featured outward-oriented development driven by liberal economic policies, emphasizing export promotion and market liberalization. The fourth period, beginning in 2000 and continuing into the present, is characterized by the impacts of developing capitalism and globalization, leading to increased foreign investment and integration into global markets (Coşkun & Memiş, 2017).

Throughout these periods, both socio-cultural changes and government policies at local and central levels have undergone significant transformations. Socio-cultural changes have encompassed shifts in social preferences and lifestyles, reflecting the evolving values and aspirations of the population. The influences of various power groups, such as political parties, business associations, and civil society organizations, have also played a crucial role in shaping the urban landscape. Furthermore, the spatial differentiation of location preferences has become more pronounced, with certain areas of the city becoming more desirable due to their proximity to amenities, transportation networks, and employment opportunities.

Concurrently, planning decisions and jurisdictions have been significantly shaped by local and central government policies, which have responded to broader socio-economic trends and policy orientations. The interplay between local and central authorities has been instrumental in determining the direction and pace of urban development, as well as the allocation of resources and investments. These policies have had far-reaching implications for the spatial configuration of Bağcılar, influencing land use patterns, infrastructure development, and the provision of public services. As such, understanding the complex dynamics between economic, socio-cultural, and political factors is crucial for comprehending the spatial development trajectory of Bağcılar and its position within the broader urban fabric of Istanbul.

Key transition points are specified below:

a) The 1923 – 1950 Period

In 1924, as a result of the population exchange agreement between Greece and Turkey, Turks residing in Greece and Bulgaria were required to relocate. This significant movement was part of a broader initiative aimed at resolving longstanding ethnic tensions by resettling populations along national lines. Bağcılar, which comprises the villages of Mahmutbey, Bağcılar, and Kirazlı, along with the Papazköy farm, stands as one of the oldest established areas in Istanbul. Originally, these were separate settlements that merged

over time due to urban expansion and development. The area's rich history reflects the broader historical shifts and migrations that have shaped the region.

b) The 1950 – 1980 Period

During the period in question, industrialization policies led to the creation of large vacant lots and an abundance of low-value land within the district, making it an attractive location for factory establishments. Industrial leaders capitalized on these conditions, choosing Bağcılar as a prime site for expansion due to the favorable economics of land acquisition. Concurrently, the burgeoning factories' demand for manual labor was met by a significant influx of migrants from various parts of Anatolia. This migration was driven by the promise of employment opportunities and a better standard of living in the urban environment. Consequently, Bağcılar's population steadily increased, transforming the district into a bustling hub of industrial activity and demographic growth.

c) The 1980 – 2000 Period

Bağcılar emerged as a prime location for industrial development due to the availability of low-priced land, which attracted entrepreneurs and businesses seeking to establish large-scale factories. This affordability made it an appealing option for industrialists aiming to expand or set up new operations without the high overhead costs associated with more central areas. Furthermore, Bağcılar's allure was enhanced by its connectivity to Eminönü, Istanbul's former Central Business District (CBD). The presence of public transportation options facilitated efficient access to key commercial hubs, enabling the smooth movement of both workers and goods. The combination of affordable real estate and excellent transportation links significantly contributed to Bağcılar's growth as an industrial and residential district.

d) 2000 - onwards

After the year 2000, the strategic placement of textile factories along the Basın Ekspres highway in Bağcılar catalyzed the development of numerous textile workshops in the area, functioning as a sub-industry. This concentration of textile operations not only fostered the growth of the primary industry but also led to the proliferation of informal workspaces throughout the district, adapting various buildings and spaces to meet the industry's needs without formal business structures. Moreover, significant construction projects initiated by cooperative housing organizations have played a crucial role in shaping the urban landscape of Bağcılar. Notable projects spearheaded by entities such as the Turkish Airlines workers' cooperative and the Istanbul Metropolitan Municipality Fire Department workers' cooperative have introduced new residential areas, transforming previously underutilized spaces into vibrant communities. These developments have not only accommodated the growing workforce but have also influenced the spatial and socio-economic fabric of Bağcılar, integrating industrial growth with residential expansion.

4. RESEARCH METHOD

The objective of this study is to investigate the interrelationship between social differentiation and urban space. To achieve this, the research questions have been divided into two categories: general research questions, which aim to explore the macro-level dynamics, and operational research questions, designed to measure socio-spatial differentiation.

A. General Questions

1. When analyzing changes in social space through socio-economic variables, how is the relationship between these changes and the space characterized?
2. Throughout the historical process, how does the morphological change in the space affect the alteration in social space within the districts of the sample area?

B. Operational Questions

1. When socio-economic variables at the micro level are assessed within the designated sample area, how are households that are similar or different from each other spatially positioned?
2. When evaluating the site selection criteria in the development of urban space morphologically, what social characteristics do similar or differentiated social groups exhibit when assessed based on socio-economic variables?
3. When analyzing the social similarity/differentiation defined through Shevky and Bell's 'Social Area Analysis,' the specified variables, and the census data from 2000 and 2018, at what level and on which variables are the differences observed?

5. DATA AND METHOD

As detailed in the previous sections, the Social Area Analysis (SAA) technique has been utilized to operationalize the main arguments of this study. The datasets for microanalysis were obtained from the Turkish Statistical Institute (TUIK) and the Household Survey of Istanbul Transportation Planning conducted by the Istanbul Metropolitan Municipality (HHS), covering the years 2000 (TUIK), 2012 (HHS), and 2018 (TUIK)

Table 2: Standardization Matrix of Bağcılar, Istanbul (2000 Census Tract)

			Social Rank Variables				Urbanization Variables				
Province	Neighborhoods										
Name	No	Name	Occupation Ratio Standard Score	Education Ratio Standard Score	Current Value on a Street Basis Standard Score	Social Rank Index	Fertility Ratio Standard Score	Women in Labor Force Standard Score	Single-family detached dwelling unit standard score	Urbanization Index	Type of Social Areas
BAĞCILAR	1	BAĞLAR	71,78	100,00	0,00	57,26	100,00	1,10	20,90	40,67	4C
	2	BARBAROS	38,37	41,38	88,24	56,00	56,72	62,91	53,58	57,74	2B
	3	ÇINAR	62,08	60,33	58,82	60,41	64,54	63,14	50,69	59,46	3C
	4	DEMİRKAPI	10,95	24,85	67,65	34,48	25,57	89,83	75,89	63,76	1B
	5	EVREN	34,62	23,86	81,18	46,55	36,63	54,06	82,96	57,88	2C
	6	FATİH	27,69	20,17	82,35	43,40	23,29	79,87	77,09	60,08	1B
	7	FEVZİ ÇAKMAK	26,27	41,38	88,24	51,96	34,52	78,91	75,98	63,14	2B
	8	GÖZTEPE	10,17	13,52	77,94	33,88	21,34	74,86	77,05	57,75	1B
	9	GÜNEŞLİ	53,96	65,52	78,82	66,10	65,76	46,02	31,01	47,60	2C
	10	HÜRRİYET	74,75	98,60	57,65	77,00	96,37	0,00	0,00	32,12	3C
	11	İNÖNÜ	40,84	48,93	76,47	55,41	56,30	68,54	62,41	62,42	2C
	12	KAZIM KARABEKİR	9,02	33,84	82,35	41,74	44,49	83,77	88,90	72,39	1B
	13	KEMALPAŞA	1,64	21,87	80,59	34,70	28,88	72,14	76,81	59,28	1B
	14	KİRAZLI	32,76	34,96	61,76	43,16	45,35	79,02	66,87	63,75	2B
	15	MAHMUTBEY	9,65	29,63	100,00	46,42	46,25	63,39	54,39	54,68	1B
	16	MERKEZ	100,00	76,84	36,47	71,10	86,25	58,70	21,63	55,53	4B
	17	SANCAKTEPE	80,06	81,54	17,65	59,75	76,85	50,25	57,48	61,52	4C
	18	YAVUZ SELİM	53,82	51,88	72,06	59,25	66,02	63,17	61,27	63,49	2C
	19	YENİ	40,72	41,37	64,71	48,93	48,44	73,05	64,03	61,84	2B
	20	YENİGÜN	69,17	55,95	79,41	68,18	71,57	71,71	35,58	59,62	2B
	21	YILDIZTEPE	35,09	42,37	57,65	45,04	53,46	79,91	41,12	58,16	2B
	22	YÜZYIL	0,00	0,00	5,88	1,96	0,00	100,00	100,00	66,67	1C

Table 3: The meaning of Social Areas is defined as below:

Standard Score of Urbanization	**75.1-100**	1D	2D	3D	4D
	50.1-75	1C	2C	3C	4C
	25.1-50	1B	2B	3B	4B
	0-25	1A	2A	3A	4A
		0-25	**25.1-50**	**50.1-75**	**75.1-100**
		Standard Score of Social Rank			

As the diagram illustrates, there are 16 different types of social areas, and the standard score values increase as you move from left to right along the social rank axis and from bottom to top along the urbanization axis.

1. Social Rank Components;

The social rank component is measured by the occupation ratio, education ratio, and current market value on a street basis.

a. Occupation Ratio

I categorize occupational groups into three tiers. In accordance with the logic of the model, we utilized the distribution of one category (the 3rd group) of occupied persons as the key indicator in an index of social position.

In the 2000 census, identified occupational groups were socio-economically ranked within themselves; they were divided into three groups.

1. GROUP (WHITE-COLLAR)	2. GROUP (BLUE-COLLAR)	3. GROUP (LOW-QUALIFIED WORKERS)
Entrepreneurs/ Directors/ Top Executives Administrative Staff	Public Service Workers Commerce and Sales Personnel Self-employed Person	Agriculture / Stock Raising / Forestry / Fishery Employees in Non-Farm Production Activities / Driving Transport Machine

Due to changes in the census system after 2000, data with this level of detail are not available in subsequent census periods. For this reason, a comparable dataset was selected from the 'Istanbul Metropolitan Municipality Istanbul Main Transportation Planning Household Survey,' conducted in 2012. This dataset was also divided into three groups.

1. GROUP (WHITE-COLLAR)	2. GROUP (BLUE-COLLAR)	3. GROUP (LOW-QUALIFIED WORKERS)
Manufacturing Industry Financial, Insurance, Real estate developer Community and Public Services.	Wholesale and retail trade, Restaurant, Hotel, Entertainment Transportation, Communication, Warehousing.	Agriculture / Stock Raising / Forestry / Fishery Construction Workers Miner, Quarryman Electricity, Water supply, Gas Informal Services

b. Education Ratio

Calculations were conducted for the regions with the lowest levels of educational attainment.

c. The Current Values on a Street Basis:

I calculated the total of the street fair values within the boundaries of the administrative district.

2. Urbanization Components;

Urbanization components are measured by the fertility ratio, the participation of women in the labor force, and the ratio of single-family detached dwelling units. The fertility ratio is inversely related to urbanization; lower fertility rates are indicative of higher degrees of urbanization.

a. Fertility Ratio: ratio of children per woman
b. Single-family Detached Dwelling Unit Ratio
c. Women in Labor Force: percentage of women employed or actively seeking employment

3. The Social Differentiation Components;

The social differentiation component is measured by place of birth.

In all analyses, calculated ratios—including the occupation ratio, education ratio, fertility ratio, and current values on a street basis—are converted to standardized values using the formula for standard scores outlined below. These indices are then formed by calculating the average. The standard score ranges from 0 to 100, facilitating the grouping within these boundaries. This range also simplifies comparisons of values across social rank and urbanization indices.

Calculation of Standard Score:

$I=100 – (x*(r-o))$

I= standard score

x= 100 / subtraction between max and min value

r= calculated variable

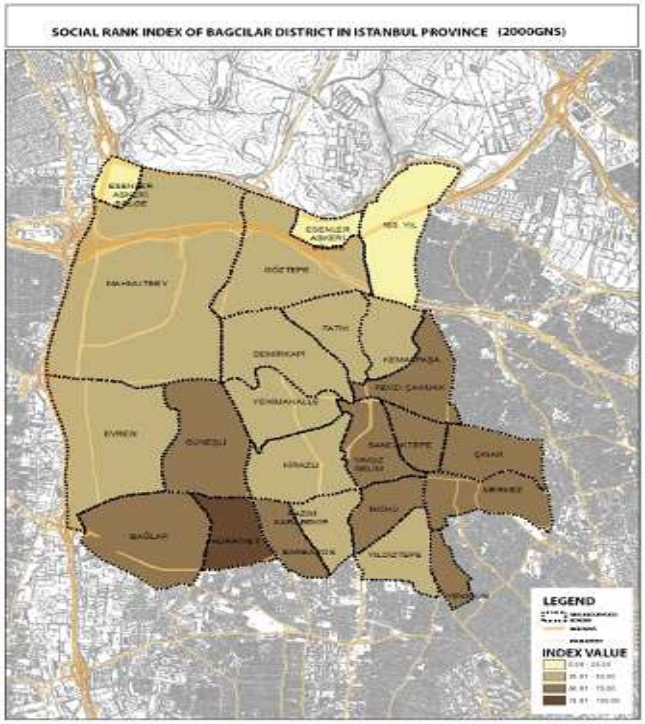
o=the minimum value of the calculated variable

After converting the calculated values into standardized values, two standard indices of social rank and urbanization—for each neighborhood are established. These indices allow each neighborhood to be positioned within a 'social space diagram.' It is crucial to identify which social areas each neighborhood belongs to and to discern their similarities or differences. To facilitate this, each neighborhood on the map will be color-coded according to the type of social area it represents. This visual representation will help in understanding how neighborhoods are clustered into social areas with similar characteristics.

6. FINDINGS

The findings of the Social Area Analysis (SAA) for two distinct time periods, 2000 and 2018, are visualized. I assessed the components of social rank and urbanization for both 2000 and 2018.

Cartography of Social Rank Indexes



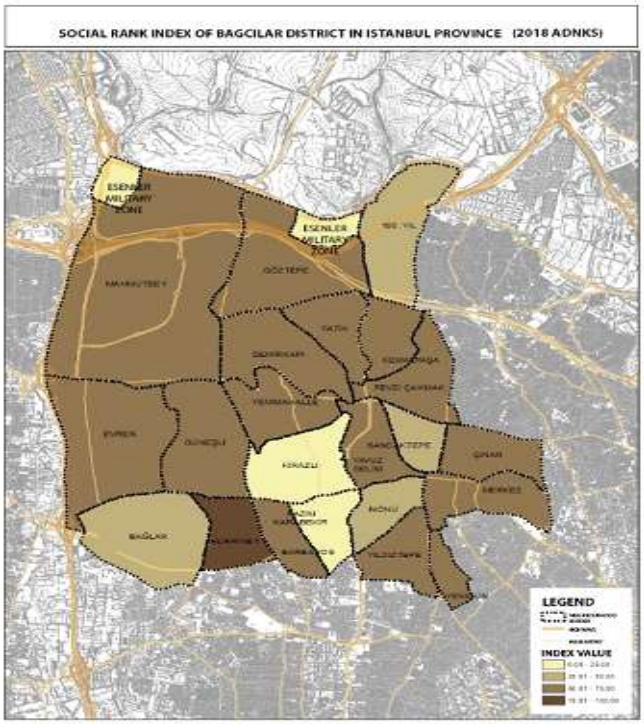
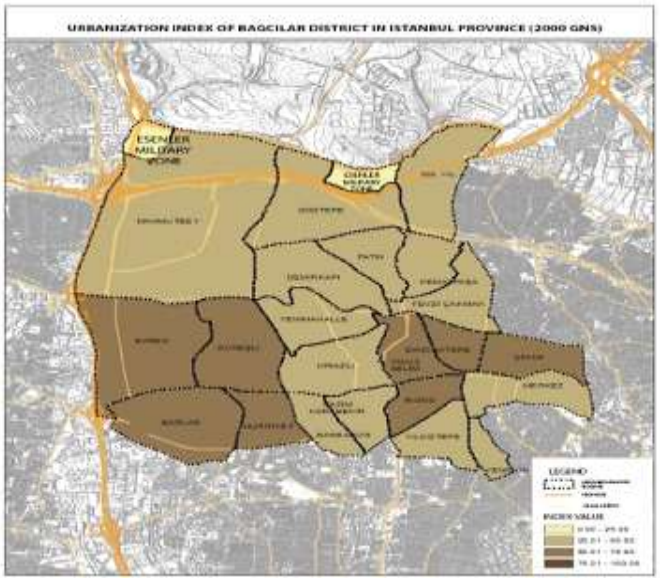


Figure 4 and 5: Social Rank Indexes 2000 (Left) and 2018 (Right)

In the 2000 dataset, the neighborhood with the lowest standard score in the Bağcılar district is the 100. Yıl district, located in the northern part of the district. Conversely, the Hürriyet District holds the highest standard score. Evaluating the occupation ratio as part of the social rank components, districts with a high percentage of employees in agriculture, animal husbandry, forestry, fishing, hunting, and non-agricultural production activities/transportation machinery operation, alongside a high proportion of elementary school graduates when considering the education ratio, indicate different socio-economic dynamics. The 100. Yıl district, which has the lowest values, is the last to develop residentially within the district's spatial development. It records the lowest standard score for the social rank index due to its weak transportation links, remote northern location relative to the district center, and limited access to public services such as education, health, and green spaces.

In the 2018 data, there is an absence of data for the Kirazlı and Kazımkarabekir neighborhoods, which are presumed to have the lowest standard score values. Consequently, the lowest standard score was not calculated for any neighborhood in this year's dataset. The district-wide efforts to evenly distribute public transportation services have led to an overall increase in the standard score values in terms of accessibility. Comparing the two datasets reveals a decrease in the standard score values of the Bağlar, İnönü, and Sancaktepe districts.

Cartography of Urbanization Indexes



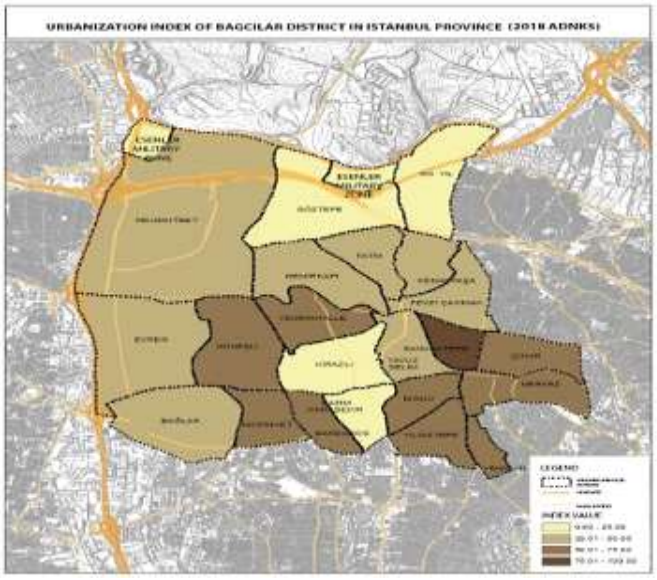


Figure 6 and 7: Urbanization Indexes 2000 (Left) and 2018 (Right)

When the components in the urbanization index are evaluated, the urbanization value is low in neighborhoods with high fertility rates since women's participation in the labor force is low. The high number of single-family detached dwelling units, which is

defined as a third component, indirectly affects the urbanization value to be high. It has a similar neighborhood pattern to the Social Rank Index. When the datasets for the two years are compared, due to the central and local policies that support the increase in women's labor force participation in modern societies and a general decrease in fertility rates, the number of neighborhoods with the lowest urbanization value (0-25 value range) increased in 2018.

Social Areas of Bağcılar

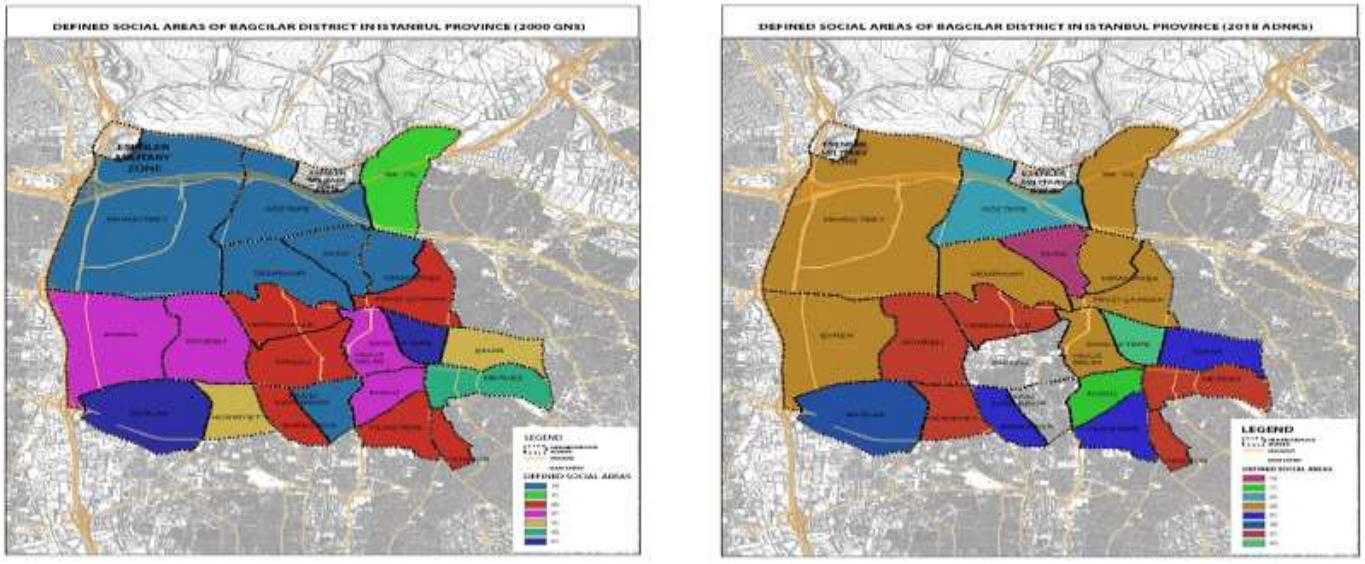


Figure 8 and 9: Social Areas of Bağcılar 2000 (Left) and 2018 (Right).

As explained in the previous section, there are 16 different types of social areas, and the standard score values increase as you move from left to right on the social rank axis and from bottom to top on the urbanization axis.

Table 4: The color meaning of Social Areas in 2000

Standard Score of Urbanization	**75.1-100**	1D	2D	3D	4D
	50.1-75	1C	2C	3C	4C
	25.1-50	1B	2B	3B	4B
	0-25	1A	2A	3A	4A
		0-25	**25.1-50**	**50.1-75**	**75.1-100**
		Standard Score of Social Rank			

Table 5: The color meaning of Social Areas in 2018.

Standard Score of Urbanization	**75.1-100**	1D	2D	3D	4D
	50.1-75	1C	2C	3C	4C
	25.1-50	1B	2B	3B	4B
	0-25	1A	2A	3A	4A
		0-25	**25.1-50**	**50.1-75**	**75.1-100**
		Standard Score of Social Rank			

Looking at the data for two different time periods, it has been determined that the areas with the lowest values are not included. Almost all of the neighborhoods have average values.

Index of Social Differentiation

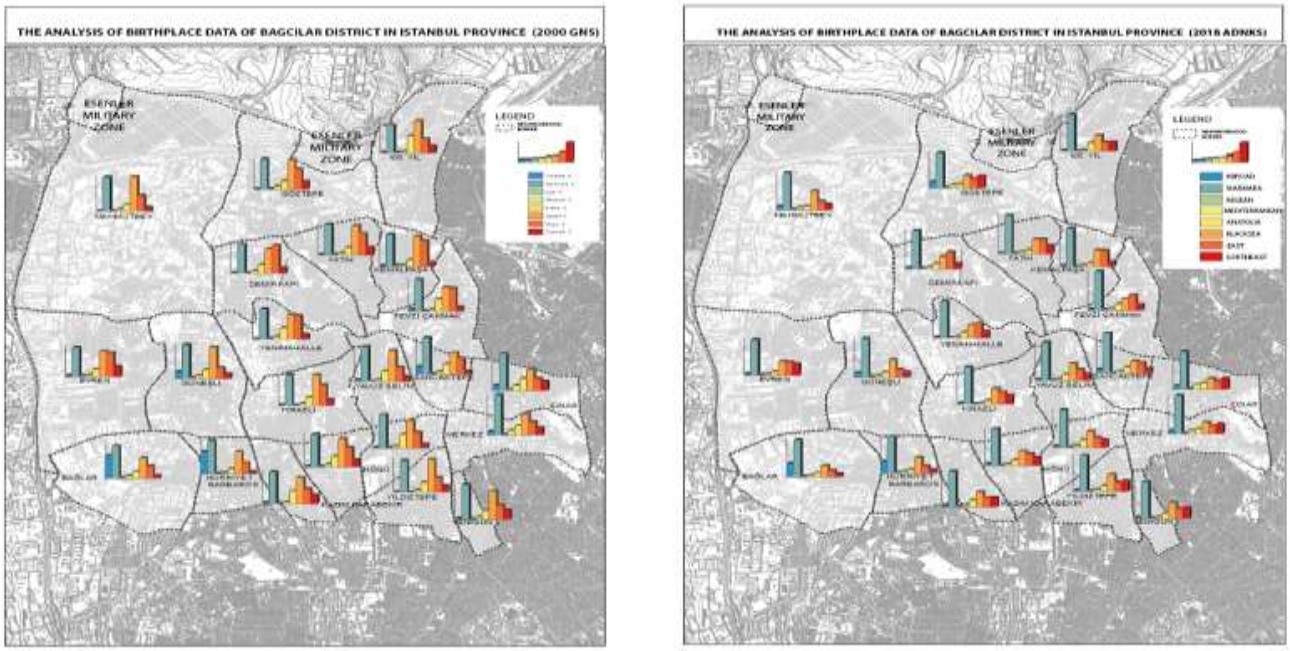


Figure 10 and 11: Place of Birth 2000 (Left) and 2018 (Right)

Considering all these index values, Bağcılar was also evaluated based on place of birth data to define similar and divergent neighborhoods throughout the district. The Black Sea Region provides the most significant immigration influx in Turkey. Within the borders of the Bağcılar district, most immigrants came from the Black Sea Region. It is known that there are numerous hometown associations belonging to the provinces in the Black Sea region throughout the district. However, those born in the Marmara Region have the highest rate, to the extent that we will define them as the 2nd generation in the 2018 data.

7. EVALUATION AND DISCUSSION

This study aims to elucidate the intricate relationship between social differentiation and the urban spatial fabric. The measurement of social differentiation has been a subject of considerable scholarly interest, with various methodologies employed in the literature. For our analysis, we utilized the Social Area Analysis (SAA) technique, which has been employed in prior research, notably in studies conducted in İzmir, Turkey during the 1970s. This approach offered a novel perspective on social differentiation studies during that period, contributing to the burgeoning discourse in the field.

It is crucial to acknowledge the limitations inherent in utilizing such methodologies, particularly concerning the availability of comparable datasets. To mitigate this challenge, we adopted a multifaceted approach, leveraging diverse data sources and standardizing values to facilitate comparison and comprehension. Recent endeavors, such as the comprehensive "Vulnerability Analysis" conducted across Istanbul, underscore the growing significance of understanding social-spatial dynamics within the realm of urban planning.

While the focus of this paper delineates the datasets at the neighborhood level within a single district, the doctoral thesis expands this scope to encompass two districts of Istanbul. The selection of Bağcılar as the primary research site was deliberate, rooted in the author's familiarity with the district and access to pertinent data sources, facilitated by their affiliation with Bağcılar Municipality. Despite inherent limitations and potential shortcomings, this study endeavors to bridge existing gaps within the literature, laying the groundwork for future scholarly inquiries and empirical investigations in this domain.

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