

How Istanbul Could Be At The Top In Global City Indices?

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Abstract : Today there is a significant competition among the global cities. Each global city tries to preclude its competitors by way of making strategic movements. Global cities are compared in global indices that are regularly published and organized by worldwide known foundations, and on international scale, each city is ordered in accordance with a certain ranking. Directors of global cities greatly consider these orderings; primary aims and practices should be determined in accordance with the goal of being at the top in these indices. Istanbul, which is one of the famous global cities having long-standing background, has got involved in this competition as well. This study aims to evaluate the performance of Istanbul through the indices of global cities and to appoint the positive and negative aspects of it. In the research, the measurement criteria of the most 10 popular indices of global cities including Istanbul has been examined in detail with regards to using data set and results. The study suggest that Istanbul is quite competitive city and draws away its competitors in the matters of global accessibility, growth rate, commercial activity and vitality, attracting foreign investment, real estate investment, attracting the control centres of industrial firms and servicers. It has been established that Istanbul has covered a distance in topics of research sufficiency, information and communication technology, research and development, and hosting the head offices of global firms, but the city needs to make more improvements in these matters. In addition, the way of being in a better position of global cities indices for Istanbul depends on important improvement and structural reforms to be executed in the matters of environment, energy consumption, producing green energy-saving building, environmental management, green action planning and public participation. Findings are guide to the decision makers in the matters that should be taken further consideration in the process of management and planning, and in what way cities should make improvement in order not to fall behind the competition.

Keywords - Istanbul, Globalization, Global City Index, Competition

I. INTRODUCTION

Developments of technologic communication, which came up in the last of 20th century, triggered the economic, political improvements, contributed to approaching of the states and communities, and reduced country border's importance [1]. Economic and politic developments in the world conditions discovered new concepts touching human and living spaces. The concept of "Globalization" which addresses the all world communities, and expresses social, spatial and economic developments as together, takes part at the outset. It is possible to encounter the definitions of opponents or supporters of globalization in literature.

Globalization is generally defined as "Certain mutual values in economic, politic and cultural going beyond local and national boundaries extend all the way to all around the world" [2] or "Increase in the level of realizing the decrease in the influence of geography in social, economic and cultural meaning." [1]. Not only globalization term being in interaction with world communities in every sense has economic dimension, but it has also technologic, cultural and environmental dimension. Although the fact of globalization has existed throughout the human history, it is known that the notion was first used in an article with the topic of usage and distribution of world resources, written by W.Foster in 1833 [3]. After a long time, the notion appeared in "The Economist" journal on 4 April 1959 [4]. As for the popularity of current notion of globalization come by the study with the topic of "sharing and using of resources" written by Garrett Hardin in 1968. As for nowadays this notion has become well-accepted concept all around the world and an idea to be used in every area.

This study consists of three parts. In the first part, there is literature information about the notion of global city and global city competition. In the second part, firstly short essential information concerning the most 10 popular indices including Istanbul prepared by international foundations aiming to specify the place of global cities in international competition and to make comparison between each other has been severally given; subsequently, the rankings and situation of Istanbul in these indices has been questioned. In the last part, the global city performance of Istanbul on indices, as a whole, has been evaluated; determining the positive and negative aspects in global city competition has completed the study.

II. LITERATURE REVIEW

In a sense, globalization is the possibility of being in interaction with the world. This possibility presents a set of advantages and disadvantages to people and the cities. The biggest effect of globalization idea is the need of new markets in parallel with the increasing development by means of manufacture with industry and technology. In addition, countries' interests, growth target, efforts of persisting existence and being dominant power lies behind the background of the notion. The free passing of capital and information through the boundaries with the development of communication systems, the mutual effect of social and economic values forming the world economy, the approaching of social economic values belonging to national economies has rendered the conception of the process of globalization inevitable [5].

The effects of globalization concept essentially become prominent in economic, politic, administrative and cultural area. These effects reflect on the places directly interesting the human, namely the cities. Globalization gives the cities a set of new, economic and cultural roles. In addition, globalization has accelerated the competition between the cities and has changed the location of cities at the national/global settlement levels. In addition to the new city typology arising out of the development of globalization concept, which is the function of the heart of international trade, it takes the responsibility on functions of which "In conjunction with the firms and financial activities producing specialized services for the purpose of becoming controlling centres at the organization of international economy, becoming market for generated innovations and products along with becoming innovative manufacture base in the leader industrial departments" [6]. For the cities reached at global level by means of this change at the functions of cities, there is a new developed city type conceptualized as "world city" or "global city" [7].

The concept of "World City", first discovered by Patrick Geddes in 1915, did not come the fore a lot during those days' conditions. Later, the study of "The World Cities" prepared by Peter Hall in 1966 became milestone for this concept. The cities which are associated with the concept of world city in this study expressed "grand cities becoming prominent as international centre." In the following years, the concept of "sphere" which is synonym of "world" was used in academic studies [8]. In Concept City Science Terms Dictionary it is defined as "a grand outstanding city in the hierarchical settlement systems, of which influence area crossing the national lines concerning economic, cultural, politic effects, and which achieves the success of fulfilling the functions of capital management organized in on a global scale." [9]. Global city was defined as cities producing specialized goods and services at high level in every respect; because of this, it is expressed as the place hosting international firms offering services at global level in branches of accounting, management consulting and financial services [7].

After the 1970s, with the run-up of globalization process, economic, social, politic and cultural developments presented cities opportunity to be manufacture, trade and service centre and new living spaces, which transparently reflect the results of globalization. Certain cities whose scope grew with globalization became centres for firms and financial activities producing specialized services, controlling the world economy [6]. Since 1980s, as a result of the developments in communication and transportation fields, global cities have extended the competition fields by becoming territorial focus centres. In addition to this, a hierarchical order between the settlements being global cities has become significant. In general, between the global cities, which are ranked in accordance with their "influence area", and "competition power", New York, London, Paris and Tokyo has become prominent. These cities govern other cities and cultures in the world thereby producing goods, services or cultural items appealing worldwide in many issues and controlling information with capital. Global cities are usually separated into three main groups according to the influence area and competition power: "cities addressing world economy", "cities addressing continental economy", and "cities affecting their own territories".

Cities have become the essential factor for economic, social and politic revolution, development and growth in history. Similarly, today cities are still the most significant agent of globalization. In particular, the developments, which occurred in 1980s, affected the communities in many aspects, reorganized social and locational relationships and this process provided cities with becoming an agent [10]. All these advancements have turned globalization with the notion of global city competition into the matter, which needs to be examined. The report of "Competitive Cities in Global Economy" published by OECD in 2006 made the matter more important [11]. Cities are now seen as one of the most important factor of global economy. Accordingly, many cities in the world develop politics to preserve their brand value and get ahead in intercity competition [12] [13]. Cities, for the purpose of revealing competition power, are evaluated according to the economy, culture, social, politic; education, health and many other factors and they are ranked or categorized in accordance with prepared reports [14]. This is categorization and ranking is mainly named global city index.

III. RESEARCH METHODOLOGY

In this study the document analysis method and literature search method has been used. Academic studies in the matter of global city and global city competition has been gathered together and examined. Subsequently, all global city indices generated by different foundations in the world was researched, information concerning these indices has been gathered. Regarding indices, the following information has been acquired systematically:

- Which foundation worked on the index?
- For what purpose the index was organized?
- In which years the index was published?
- What comparison method was used in the index?
- Which subordinate indicators were used in the index?
- Which global cities were included in the study?

Afterwards, the most 10 popular global city indices including Istanbul were picked and the situation of Istanbul has been scrutinized according to these indices. Finally, the global city performance of Istanbul, as a whole, has been evaluated in accordance with the indices under the titles of “current situation” and “performance change”.

IV. GLOBAL CITY INDICES

In developing world conditions, global competition comes to the forefront in matters such as contribution to economic development in accordance with the protection of resources and sustainability policy for reducing the difference of development between the settlements and region, and organizing domain-specific structural descriptions as acquisition through making development. In this context, indices, which are made for the purpose of testing global competition, reveal the roles of cities or their regions. In this part of the study, indices made by international foundations have been scrutinized so as to compare positions of global cities on international competition and make comparison between each other. These studies usually differ between subordinate indicators with certain matters. Evaluations have been carried out depending on findings arisen out of detailed and worldwide studies. As a result of these evaluations, global cities have been compared between each other and current situations; potential, future situations of cities have been clarified.

Among the global city indices which enables Istanbul to establish and to scrutinized the process of its development side, competition level and place in global meaning, the most suitable 10 indices for evaluation of global competition and city character of Istanbul has been selected and addressed in detail. For detailed examination the following indices has been chosen:

- Globalization and World Cities Research Network
- The Global City Power Index
- The Global Cities Index
- The Global Destination Cities Index
- The Global Financial Centres Index
- Ericsson Networked Society City Index
- The Europe Green City Index and The Sustainable Cities Index
- The Live Cities Index
- The Global Residential Cities Index

4.1 Globalization and World Cities Research Network (GAWC)

In 1999 the first study, which was made up by Globalization and World Cities Research Network (GAWC) established by Loughborough University, used accounting, advertisement, banking-finance-insurance business- law and management consulting data in the year of 1998. It categorized 122 cities as “Alpha”, “Beta”, “Gamma” cities with “Global Network Connectivity” measurements. In this categorization, Istanbul falls into gamma global cities. In the following stage, world cities were categorized by changing the working methodology in 10 subgroups under the three main categories of alpha, beta, and gamma. As to global city nomination, it was separated into two subgroups of “high sufficiency” and “sufficiency”.

In the alpha++ group, cities having the function of controlling and directing global economy and integrating with the entire world at high level, have appeared. In the alpha+ group, cities presenting many services that global cities need, have taken parts. In the alpha and alpha- group, there are cities making strong connection between the region and nations they locates on, and having the characteristics of being territorial centre. While Cities in the beta group provides connection between their own territories or nations and global economy, cities in the gamma group consists of cities which are not developed enough for providing connection between small regions or nations and global economy, and presenting some services. Cities in high sufficiency and sufficiency group represent the potential of being global city [15].

This index was republished in 2000, 2004, 2008, 2010 and 2012 by using indicators belonging to the titles of “Institution Quality”, “Human Resource”, “Concrete Substructure”, “Legal Substructure”, “Live Quality”, “Global Accessibility”. Institution Quality is the most important component increasing wealth in the city, incomes and employment. Since Human Resource refers to labour quality, it is seen as an important factor in urban competition. By means of wealth of the nation and the city is determined by Concrete Substructure, raw materials become prominent in the meaning of substructure and consumption factors. While Legal Substructure determines the legal background of the nation or the city and its framework, the wealth of whom takes high quality presented by Live Quality in the country or the city is determined and the attraction level of qualified workforce and the level of protection are measured. Global Accessibility looks the accessibility of nation or city in transportation, which is decisive factor in competition. Indicators of this study are shown below [14].

Table 1: Globalization and World Cities Research Network Indicators [14]

Indicators	Sub-Indicators	Indicators	Sub-Indicators
The quality of institutions	Corporate culture	Legal infrastructure	Legal system
	Corporate traditions		Legal culture
	Corporate governance		Official regulations
	Corporate management		Legal obligations
	Corporate operations		Planning laws and vision
	Corporate brand		Natural environment
Human capital	Quality of workmanship	Quality of life	Quality of residential areas
	Quality of education		Shopping opportunities
	Work environment		Culture and entertainment
	Qualified workforce		Safety indicators
Physical infrastructure	Production conditions	Global Access	Global location and spatial returns of the city
	Financial structure		Transport and accessibility
	Technological infrastructure		Access to information
	The size of the market		Corporate Access

Globalization and Global Cities Research Network carried out categorization in 2012, and cities falling into this categorization are shown below. Istanbul was in the 6th of alpha- category including more than 300 cities in 2012 ranking. In the alpha++ only London and New York are found.

Table 2: GaWC Classification [15]

Alpha	Beta	Gamma	Candidate	
Alpha ++	Beta+	Gamma+	High Sufficiency	Sufficiency
Alpha +	Beta	Gamma		
Alpha	Beta-	Gamma-		
Alpha -				

Table 3: GaWC 2012 Alpha Cities [15]

Alpha ++	Alpha +	Alpha	Alpha -	
London New York York	Hong Kong Paris Singapore Shanghai Tokyo Pekin Sydney Dubai	Chicago Mumbai Milan Moscow Sao Paulo Frankfurt Toronto Los Angeles Madrid Mexico City Amsterdam Kuala Lumpur Brussels	Seoul Johannesburg Buenos Aires Vienna San Francisco İstanbul Jakarta Zurich Warsaw Washington Melbourne New Delhi Miami	Barcelona Bangkok Boston Dublin Taipei Munich Stockholm Prague Atlanta

As a result of acceleration gained in recent years, Istanbul moved to the Beta in 2004 ranking, and in 2008 moved to the alpha category defined as “very important cities integrating grand economic regions and nations with world economy”. As a consequence of Years of the study made was examined, the ranking of London, New York, Hong Kong and Paris cities was not changed on the basis of years while Istanbul developed in the category groups. Tokyo city was found in the 7th of ranking by falling two lines from 2000 to 2012 [15].



Figure 1: GaWC 2012 Alpha Cities [15]
Produced by the Authors

4.2 The Global Power City Index

The essential aim of this index prepared by “Urban Strategies Institution affiliated with Mori Memorial Foundation” locating in Tokyo which is capital of Japan, is giving information about the showing people main facts of cities and the perspective of attractiveness of the cities. This study, including 40 cities, has been worked on since 2008, and Istanbul got involved in this study in 2013. This index evaluates cities in two main parts having 11 sub-categories. Cities have been researched through the titles of “Function Based” and “Actor Based” [16]. Sub-categories of the functions are given in the following chart.

Table 4: GPCI Comprehensive Ranking [16]

Flow of Function-Specific Ranking		Flow of Actor-Specific Ranking			
Function Ranking Method	Economy	Market Size	Actor - Ranking Method	Accumulation of Enterprises & Business Deals	
		Market Attractiveness		Potential of Business Growth	
		Economic Vitality		Ease of Doing Business	
		Human Capital		Business Environment	
		Business Environment		Richness of Human Resources	
		Ease of Doing Business		Accumulation of Industry to Support Business	
		R & D		Academic Resources	Favourable Environment for Employees & Their Families
				Research Background	Political & Economic Risk, & Disaster Vulnerability
				Research Achievement	Qualities of Research Institutions, Researchers & Directors
	Cultural Interaction	Trendsetting Potential		Accumulation of Research Institutions & Researchers	
		Cultural Resources		Opportunities That Stimulate Researchers to Conduct Academic Activities	
		Facilities for Visitors		Readiness for Accepting Researchers Research (Funding, Support with Living Expenses etc.)	
		Attractiveness to Visitors		Career Opportunities for Researchers	
		Volume of Interaction		Daily Life Environment (Ease of Living)	
	Liveability	Working Environment		Cultural Stimulation	
		Cost of Living		Accumulation of Artists	
		Security and Safety		Accumulation of Art Markets	
		Living Environment		Environment for Creative Activities (Studio Rent & Spaces)	
		Living Facilities		Daily Life Environment (Ease of Living)	
	Environment	Ecology		Cultural Attractiveness & Opportunities for Interaction	
		Pollution		Public Safety	
		Natural Environment		Richness of Tourist Attractions	
	Accessibility	International Transportation Network		High-class Accommodations	
		International Transportation Infrastructure		Dining (Variety of Cuisines, Prices etc.)	
		Inner-city Transportation Services		Shopping (Environment, Prices, Attractiveness etc.)	
		Traffic Convenience		Mobility (Travel Time & Fares to Destinations)	
				Environment to Purchase Goods (Prices & Access to Products)	
				Daily Life Environment (Ease of Living)	
		Work Environment (Income & Employment Opportunities)			
	Educational Environment				
	Leisure Activities				
	Public Safety				
	Quality of Medical Treatment				

As a result of the research, in every two category separate rankings have been formed. In these rankings Istanbul is in the 31st rank in the function-based indicators while it is in the 27th in actor based indicators. In the index London is in the 1st, New York is in the 2nd, Paris is in the 3rd and Tokyo is in the 4th line in both categories.



Figure 2: Global Power City Index- Function- Specific Rankings [16]

In the following graphic an evaluation of Istanbul has been carried out in comparison with London, which is in 1st in the index, and in accordance with the average findings. In this index, according to the function-based indicators Istanbul grabbed London in liveability meaning while it falls behind considerably in other categories. Istanbul exceeded the average in actor-based study in respect to visitor number, passed average in respect to director and visitor number. By contrast, it falls behind average in the other indicators.

While Istanbul is in the 25th ranking in 2013 according to the general evaluation, in the first four rankings London, New York, Paris and Tokyo be located on. In 2014 Istanbul raised 21st ranking while the first four cities had no change. According to result of the index carried out in 2015, Istanbul was in 31st ranking and the first four cities were still London, New York, Paris and Tokyo.

4.3 The Global Cities Index

“Andrew Thomas Kearney” which is an independent foundation carried out the Global Cities Index. The index aimed to measure to what extend each of cities complies with developing trends and at what level they can be a global city. In the scope of this study there are 25 different indicators under 5 different titles. Five titles is put in order as “Business Activity”, “Human Capital”, “Information Flow”, “Cultural Experience” and “Politic Activity” [17]. The indicators of these matters are given in the following table.

Table 5: The Global Cities Index Indicators [17]

Indicators	Sub-Indicators
Business Activity	Headquarters of major global corporations
	Locations of top business services firms
	The value of a city's capital markets
	The number of international conferences
	The Flow of goods through ports and airports
Human Capital	Size of foreign born population
	Quality of universities
	Number of international schools
	International student population
	Number of residents with university degrees
Information Exchange	Accessibility to major television news channels
	Internet presence
	Number of international news bureaus
	Broadband subscriber rate
Cultural Experience	Freedom of expression
	Including number of major sporting events a city hosts
	Number of museums, performing-arts venues
	Diverse culinary establishments
	Number of international travellers
Political Engagement	Number of sister-city relationships
	The number of embassies and consulates
	Major think tanks
	International organizations and local institutions with international reach that reside in the city
	The number of political conferences a city hosts

According to the evaluation in pointing, Istanbul was in the 28th ranking in the study in 2008 while it fell into 41st by falling back 13 lines in the study of 2010. It became the 37th by rising 4 lines in the study of 2012. New York, London, Paris, Tokyo, Hong Kong preserved their rankings in first 5 lines respectively from 2008 to 2014.

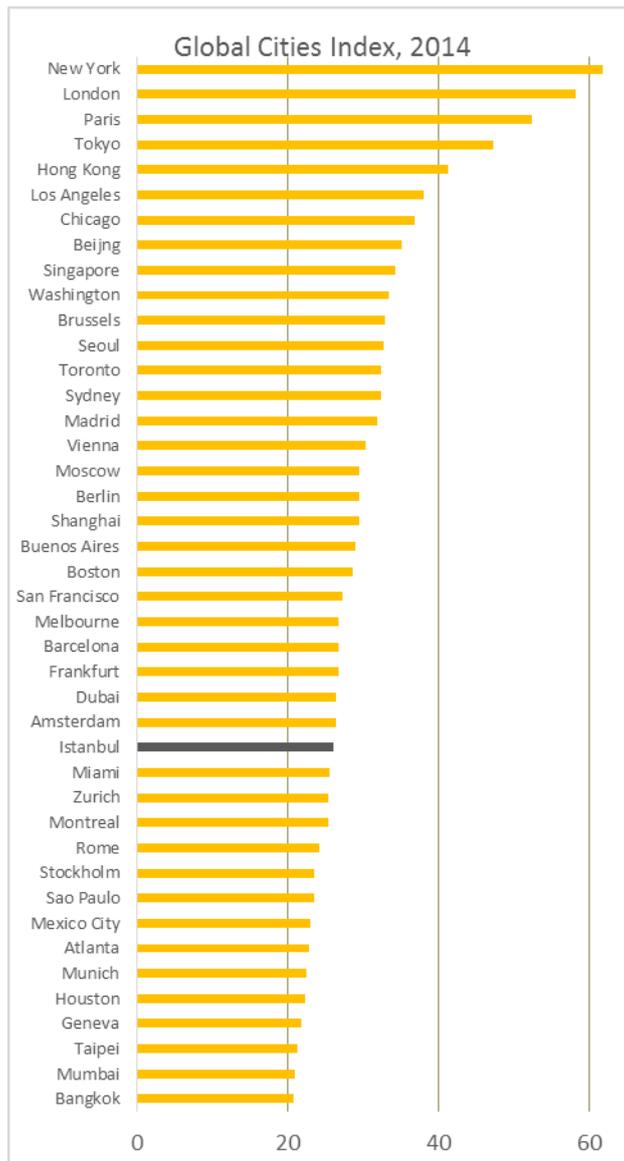


Figure 3: The Global Cities Index Ranks [17]

Table 6: Change over the years in the GPCI rank [14]

Cities	2008	2010	2012	2014
London	2	2	2	2
New York	1	1	1	1
Paris	3	4	3	3
Tokyo	4	3	4	4
Hong Kong	5	5	5	5
Los Angeles	6	7	6	6
Chicago	8	6	7	7
Singapore	7	8	11	9
Beijing	12	15	14	8
Washington	11	13	10	10
Seoul	9	10	8	12
Brussels	13	11	9	11
Madrid	14	17	18	15
Sydney	16	9	12	14
Melbourne	n/a	n/a	32	25
Berlin	17	16	20	19
Toronto	10	14	16	13
Moscow	19	25	19	17
Vienna	18	18	13	16
Shanghai	20	21	21	18
Buenos Aires	33	22	22	20
Amsterdam	23	29	26	26
San Francisco	15	12	17	22
Boston	29	19	15	21
Istanbul	28	41	37	28
Barcelona	n/a	26	24	24
Montreal	n/a	31	30	30
Dubai	27	27	29	27
Frankfurt	21	20	23	23
Miami	32	34	36	29
Zurich	26	24	25	31
Stockholm	24	23	27	33
Munich	35	33	31	37
Sao Paulo	31	35	33	34
Rome	30	28	28	32
Geneva	n/a	32	35	39
Vancouver	n/a	n/a	n/a	39
Houston	n/a	38	38	38
Mexico City	25	30	34	35
Atlanta	37	40	39	36
Bangkok	22	36	43	42
Copenhagen	36	37	42	40
Taipei	34	39	40	40
Mumbai	49	46	45	41

Besides, according to the future potentials a ranking was carried out in 2015 by using criteria such as personal welfare, national economy, innovation and invention. According to this ranking in the 1st line San Francisco, in the 2nd line London and in the 3rd line Boston was placed. Pursuant to the Global Cities Index and analysis arising out of predictions the first 25 cities was appeared. Istanbul was not included in this ranking. Istanbul contains the regional centre of global firms by playing host. The access was provided to a lot of national markets through Istanbul. In addition, the city contains “3rd stage global city qualities” by being home to the important international organizations. Istanbul is regularly in interaction with all world cities since it reached at certain platform in both economic and social-cultural meaning by means of having crossing international transportation connection.

Table 7: Regional Centre of Multinational Companies Located in Istanbul [28]

	Company	Country	Region
1	Coca Cola	90	Eurasia and Africa
2	Ge Healthcare	80	Central Asia, Middle East, Africa, Russia and the Commonwealth of Independent States
3	Microsoft	76	Middle East, Africa
4	Intel	67	Middle East, Africa
5	Unilever	36	North Africa, Middle East, Russia, Ukraine
6	VeriFone	30	Balkan Countries, Israel
7	Glaxo Smith Kline	30	Middle East, Africa
8	Schneider Electric	27	Middle East and Balkan Countries
9	Ericsson	22	Middle East
10	Cargill	20	North Africa, Middle East and Turkic Republics
11	Volvo	18	Africa, Middle East and Turkic Republics
12	Basif	18	North Africa, Middle East
13	PepsiCo	14	Greece, Cyprus, Serbia, Bosnia Herzegovina, Kosovo, Macedonia, Croatia, Slovenia
14	Roche	14	India, Egypt, Morocco, Algeria, Tunisia, UAE, Saudi Arabia, Jordan
15	Henkel	14	Kenya, Tanzania, Iran, Egypt, Tunisia, Algeria, Israel, Gulf countries, UAE, Saudi Arabia
16	P&G	11	Eastern Europe, Middle East, Africa
17	Bsh	11	Central Asia, Iraq, Cyprus
18	Pfizer	10	Caucasus and Central Asia Region
19	MasterCard	10	South East Europe
20	Novo Nordisk	9	Near East Countries
21	LG Electronics	9	Morocco, Egypt, Israel, Syria, Tunisia, Algeria, Lebanon, Libya
22	Adobe	9	Albania, Bosnia and Herzegovina, Croatia, Israel, Kosovo, Macedonia, Montenegro, Serbia
23	Benetton	7	Georgia, Uzbekistan, Kyrgyzstan, Turkmenistan, Tajikistan, Cyprus
24	Ceva Logistics	6	Balkan countries, Egypt, Central Asia
25	MultiTurkmall	6	Russia, Libya, Georgia, Iran
26	Visa	2	Israel and Romania

4.4 The Global Destination Cities Index

The Global Destination Cities Index, which was begun to be worked on by MasterCard in 2010, was carried out for the purpose of ascertaining the most attracting cities for the tourist on a global scale. This study comprises of 132 world cities, 36 European cities, and it has been obtained by way of considering the indicators of visitor numbers and journeys to these cities by airways. Within the scope of the study, Istanbul has been evaluated firstly among the world destination cities, secondly among the European destination cities [18].

Considering the visitors stayed at least one night has formed the visitor numbers. Furthermore, in the research while official data has been used for 122 cities out of 132, using “Airflow Model” has used predictions for the remaining 10 cities the predictions have been made. Istanbul is in among the cities obtained from the official data. Using visitor surveys as base has formed the money data spent for the 59 in 122 cities. 42 cities, which have not got visitor survey, have been combined by applying multiplication to the national average of tourists staying the night and the number of tourists staying the night in the city. “IMF Balance of Payments Travel Credits” data have been used for the expense data so as to 31 cities which have not got both national and visitor survey data.

London (15,95 million) takes the first place by passing Bangkok (15,98) with a slight variation as a result of the index data obtained from the study. London is followed by Paris (13,92 million), Singapore (11,75), New York (11,52 million), Istanbul (10,37 million), Dubai (9,89 million), Kuala Lumpur (9,20 million), Hong Kong (8,72 million) and Barcelona (8,41 million) respectively. Istanbul took the first place for being the fastest growing city between 2009 and 2013 by taking consideration the number of airways connection and journeys through 132 cities. In terms of international tourists Istanbul takes the 6th place. Also, Istanbul takes the 11st place in the incomes of tourism in this field.

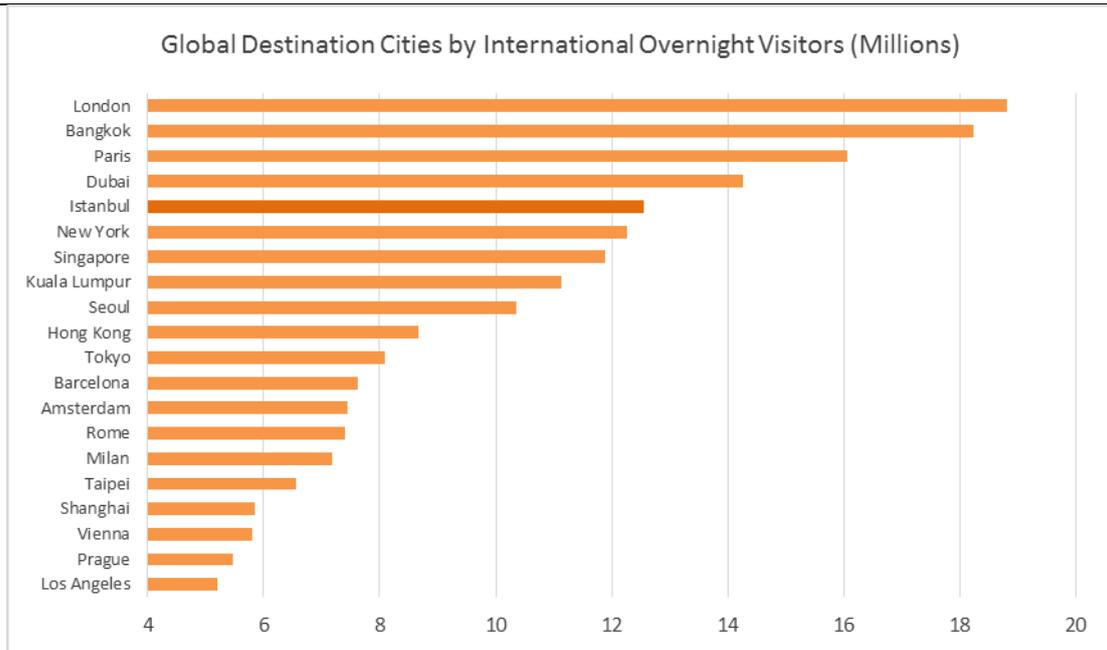


Figure 4: Global Destination Cities by International Overnight Visitors (Millions) [18]

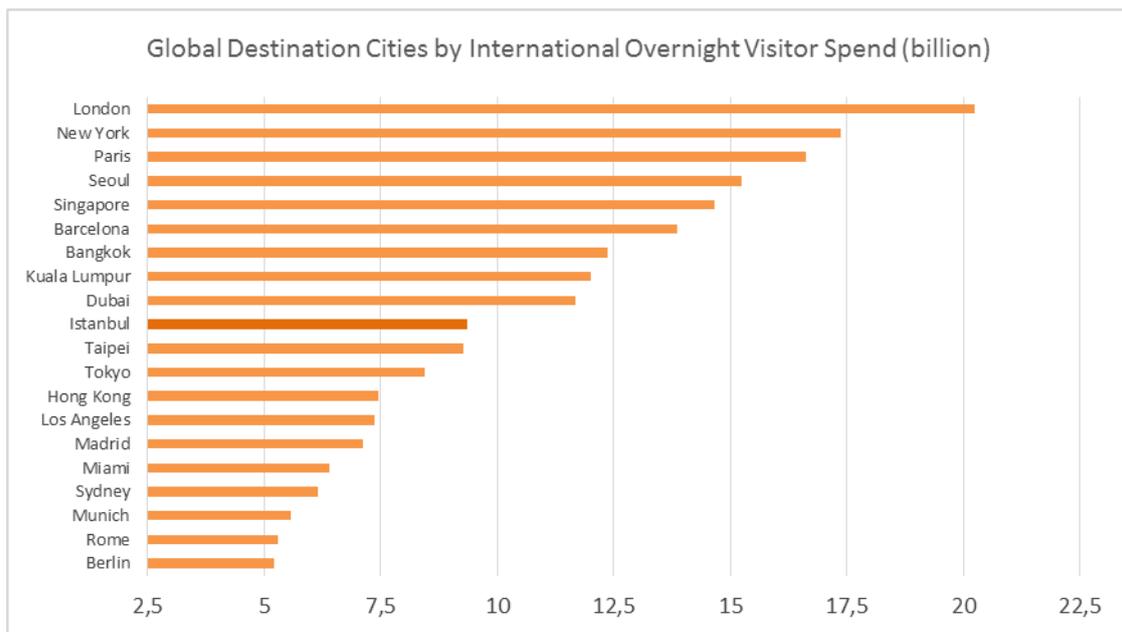


Figure 5: Global Destination Cities by International Overnight Visitor Spend (billion) [18]

According to the index results obtained in 2015 Istanbul takes the 5th place with 12,56 million people by progressing one grade in the visitor numbers. On the other hand it takes the 10st for the amount of money spent. Among the global destination cities London with 18.82 million visitors takes the 1st place in 2015.

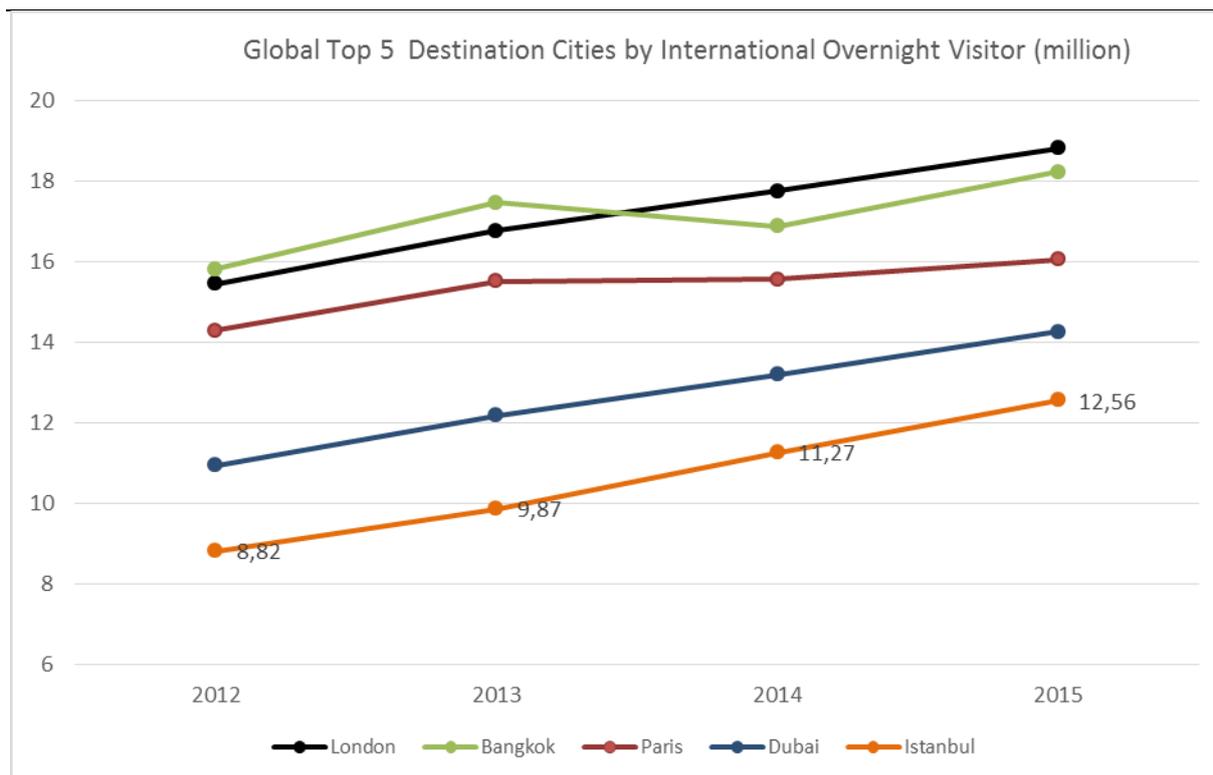


Figure 6: Global Top 5 Destination Cities by International Overnight Visitor (million) [18]
Produced by the Authors

According to the exchange ratio of spent money between 2014 and 2015 Istanbul grew by 7.30% rate. This rate is quite bigger than the rate of London (2.30%) in the table of spent money. This rate made Istanbul the 3rd fastest growing city behind Bangkok and Kuala Lumpur. One of the outstanding points of the research is that the growing rate of Tokyo is 6.80%. According to the money spent by the visitors, Istanbul took the 12th place following Tokyo in 2014, but in the following year it took the 10th place by raising two lines.

In terms of the part of this study containing 36 European cities Istanbul is the 3rd in the visitor numbers. London and Paris, which are the other two important global cities of Europe, took the first two places. It is possible to count that according to the number of exchange ratio (11.40%) Istanbul took the 1st place among the European cities between 2014 and 2015, as a significant potential factor. However, according to the amount of money spent by visitors, Istanbul takes the place after London and Paris.

Table 8: Europe’s Top 5 Destination Cities by International Overnight Visitors [18]

2014 Rank	2015 Rank	Cities	2012	2013	2014	2015	2015-Visitor Spend(bn\$)
1	1	London	15,46	16,78	17,75	18,82	20,03
3	3	Paris	14,29	15,52	15,56	16,06	16,61
7	5	Istanbul	8,82	9,87	11,27	12,56	9,37
12	12	Barcelona	6,91	7,18	7,42	7,63	13,86
13	13	Amsterdam	6,1	6,65	7,29	7,44	-



Figure 7: Europe's Top 5 Destination Cities by International Overnight Visitors [18]
Produced by the Authors

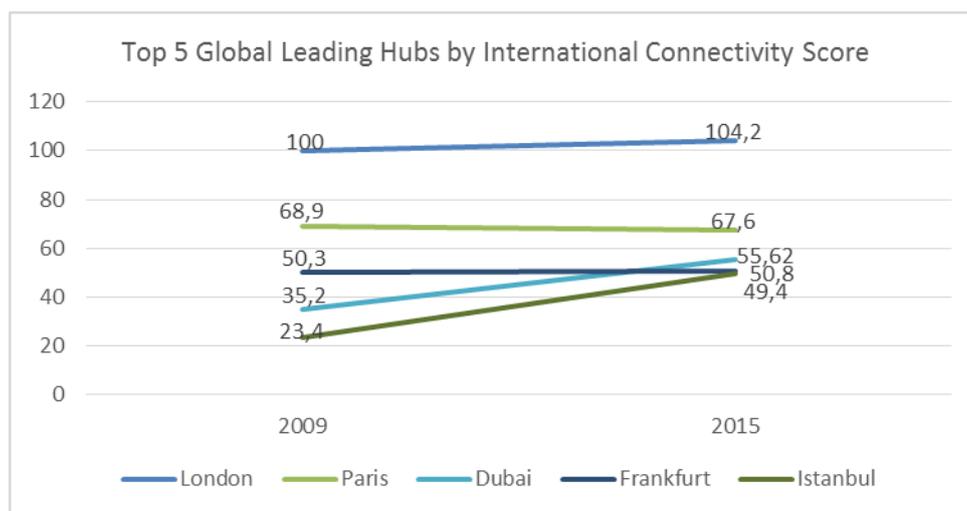


Figure 8: Top 5 Global Leading Hubs by International Connectivity Score [18]
Produced by the Authors

International visitors and their expenses play an important role in the economy of destination cities. According to the result of the study, Istanbul has a significant position for both world and European countries. Istanbul locates in cross-continental transmission playing an important role in geographical location. With the aid of developing world conditions and facilities in transportation and communication, the physical distance has died out. Istanbul, which is the most important city and the door of Turkey opening to the world, has a location accessible for many world countries in short time. Istanbul, which particularly locates on a 4-5-hour flight corridor, is direct reachable distance for 1.5 billion people by airways.

4.5 The Global Financial Centres Index

“The Global Financial Centres Index” is carried out by “The Z/Yen Group” whose centre locates on London and the aim of which is to measure the preferability of international financial centres around the world. In this context, “Business Climate”, “Financial Sector Progress”, “Infrastructure”, “Human Capital” and

“General Factors”, as five competition matters, have been examined in accordance with subordinate indicators. The essential competition matters and their subordinate indicators have been shown in the following table [19].

Table 9: The Global Financial Centres Index Indicators [19]

Area of Competitiveness	Factors of Competitiveness
Business Environment Factors	Political Stability and Rule of Law
	Institutional and Regulatory Environment
	Tax and Cost Competitiveness
	Macroeconomic Environment
Financial Sector Development	Volume and Velocity of Trading
	Availability of Capital
	Depth and Breadth of Industry Clusters
	Employment and Economic Output
Infrastructure Factors	Building and Office Infrastructure
	Transport Infrastructure
	Environmental Care and Sustainability
	ICT Infrastructure
Human Capital	Availability of Skilled Personnel
	Education and Development
	Flexible Labour Market and Practices
	Quality of Life
Reputational and General Factors	City Brand and Appeal
	Level of Innovation
	Attractiveness and Cultural Diversity
	Comparative Positioning with Other Centres

According to the data obtained from Internet surveys for international financial services, London, New York and Hong Kong took the first three positions whereas Istanbul was the 57th in 2013. On the other hand, according to the study published on May 2015 London, New York and Hong Kong preserved their positions while Istanbul was the 47th.



Figure 9: The Global Financial Centres Index Ranks [19]

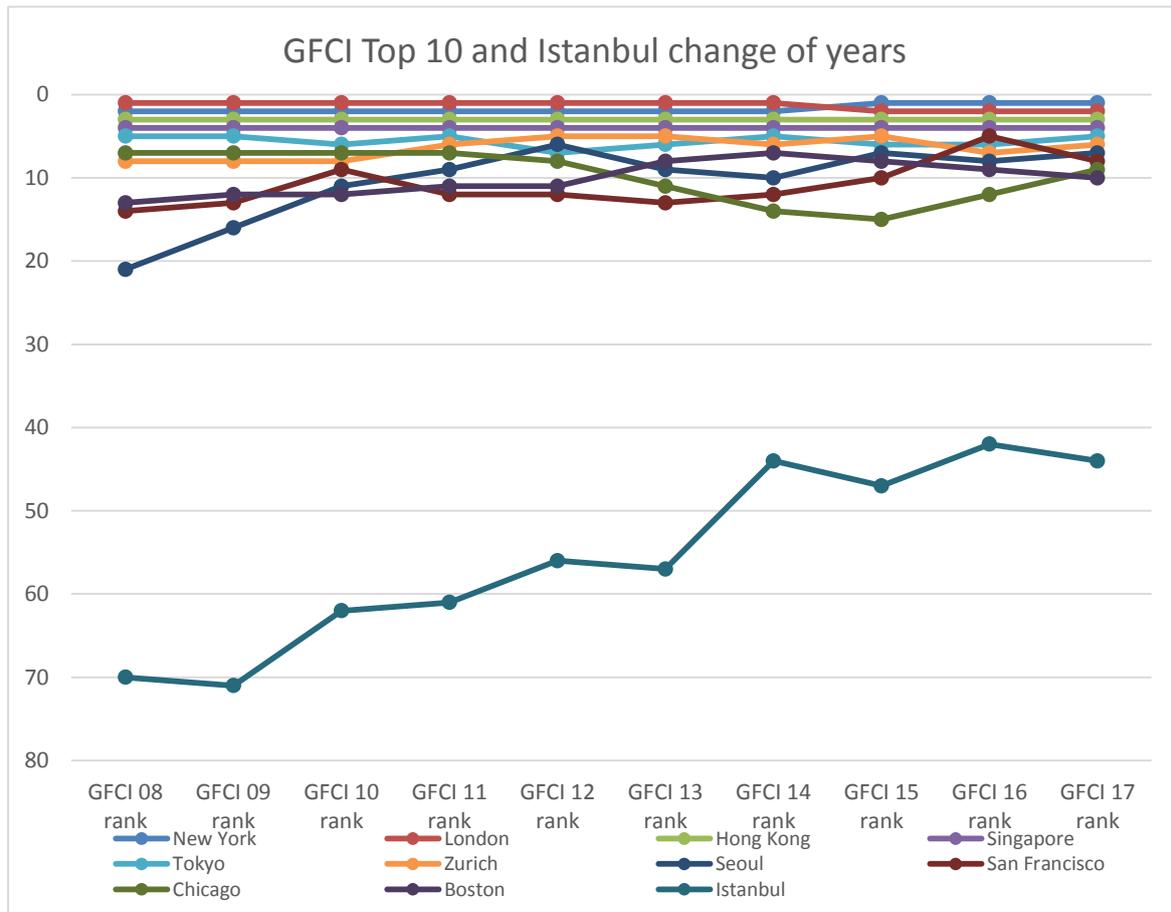


Figure 10: GFCI Top 10 and changes in years [19]
Produced by the Authors

4.6 Ericsson Networked Society City Index

This study has been made by “Ericsson” in order to measure the technology-based development of cities and the adaptation and competition ability of cities, “Ericsson Networked Society City Index” examines the performance of 40 cities measurement in two perspectives. The first one has been examined in accordance with the development of Information Communication Technology (ICT) and the second one has been examined in accordance with the triple evaluation forming the sustainable city development line in society. Different from the past years, with development and equality indicators e-state, fast and extensive mobile access indicators were considered in the research conducted in 2014. Three different aspects were defined for two divergent perspectives (TBL, ICT) in the research. Whereas each aspect defined one variables series, the variables were defined in the subordinate indicators. The aspects and subordinate indicators of two perspectives were shown in the following table [20].

Table 10: Ericsson Networked Society City Index Indicators [20]

Networked Society City Index	Triple Bottom Line	Social	Health
			Education
			Social Inclusion
		Economy	Productivity
			Competitiveness
			Resources
	Environment	Pollution	
		Climate change	
	Information and Communication Technology	Infrastructure	Broadband quality
			Availability
		Affordability	Tariffs
			IP Transit prices
		Usage	Technology use
Individual use			
Public and market use			

It was held that as a result of the data obtained from the indicators, ICT infrastructure developed in the cities. The main reason for this development is the showing-up of new technologies and the increasing number of people using these technologies. Moscow, Sao Paulo, Istanbul, Peking, Shanghai, takes place among the developing cities at ICT indicators. Istanbul took the 12th place at ICT developing rankings, by passing London, Tokyo, and Paris. Also, Istanbul took the 27th place among 40 cities in the social network city index above Shanghai.

Table 11: Ericsson Networked Society City Index Ranks [20]

Cities	ICT maturity improvement rank 2013-2014	Networked Society City Index rank 2014 (%)
Lagos	1	38
Delhi	2	36
Cairo	3	35
Dhaka	4	40
Jakarta	5	34
Beijing	6	26
Shanghai	7	28
Manila	8	33
Moscow	9	17
Karachi	10	39
Sao Paulo	11	25
Istanbul	12	27
Mumbai	13	37
Buenos Aires	14	32
Johannesburg	15	30
Paris	16	3
Tokyo	17	10
London	18	2
Stockholm	19	1
Sydney	20	19
Helsinki	21	6
Taipei	22	13
Mexico city	23	31
New York	24	7
Los angeles	25	11

Hong Kong	26	9
Copenhagen	27	5
Miami	28	15
Oslo	29	8
Seoul	30	12
Singapore	31	4

Table 12: Ericsson Networked Society City Index Ranks 2016 [20]

Rank	Cities
1	Stockholm
2	London
3	Singapore
4	Paris
5	Copenhagen
6	Helsinki
7	New York
8	Oslo
9	Tokyo
10	Seoul
11	Taipei
12	Los Angeles
13	Barcelona
14	Hong Kong
15	Berlin
16	Munich
17	Miami
18	Warsaw
19	Rome
20	Sydney
21	Moscow
22	Istanbul
23	Abu Dhabi
24	Athens
25	São Paulo



Figure 11: Networked Society City Index 2016 [20]

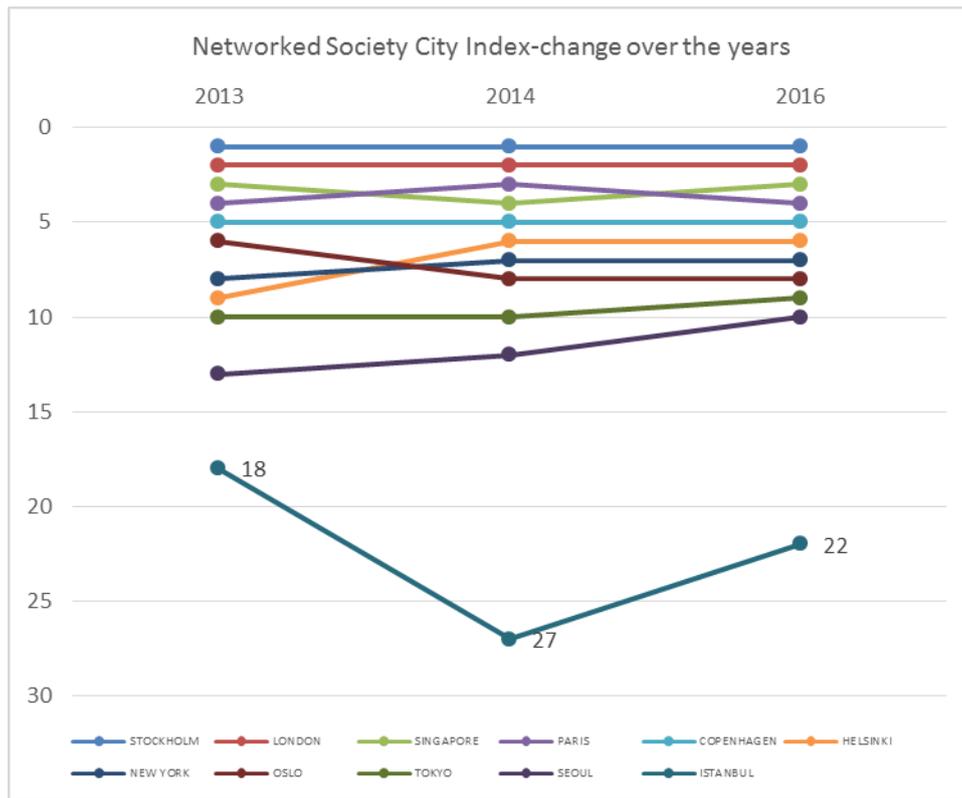


Figure 12: Networked Society City Index-change over the years [20]
Produced by the Authors

4.7 European Green City Index and the Sustainable Cities Index

In 2009 the ability of being competitive of “European Green City Index” working was evaluated by “Siemens” according to the data obtained from the leader 30 European countries. According to this index, almost half of the world population live in these regions and people living in these cities blame for 80% of the green house emission. Besides, with urbanization natural areas, which are crucial for people, are as important as areas capable for agriculture and the green places. In this regard, it is essential that in favour of being successful on struggling with climate change, urban areas need to a part of the solution [21].

These index cities have been evaluated according to 16 qualitative and 14 quantitative subordinate indicators under 8 categories which are “CO₂ Emission”, “Energy Usage”, “Construction”, “Transportation”, “Water”, “Waste and Field Usage”, “Air Quality”, and “Environment Management”. At the end of the study, general ranking has been obtained with the evaluation of 8 common categories. The indicators used in this study and accordingly the subordinate indicators have been shown in the following table.

Table 13: European Green City Index Indicators [21]

Indicators	Sub-Indicators
CO ₂	CO ₂ emissions
	CO ₂ intensity
	CO ₂ reduction strategy
Energy	Energy consumption
	Energy intensity
	Renewable energy consumption
	Clean and efficient energy policies
Buildings	Energy consumption of residential buildings
	Energy-efficient buildings standards
	Energy-efficient buildings initiatives
Transport	Use of non-car transport
	Size of non-car transport network
	Green transport promotion
	Congestion reduction policies
Waste and land use	Municipal waste production
	Waste recycling
	Waste reduction and policies
	Green land use policies
Water	Water consumption
	Water system leakages
	Wastewater treatment
	Water efficiency and treatment policies
Air quality	Nitrogen dioxide
	Ozone
	Particulate matter
	Sulphur dioxide
	Clean air policies
Environmental governance	Green action plan
	Green management
	Public participation in green policy

Within the scope of the research, the data have been scored between 0 and 10 in accord with the indicators shown under the categories. In indicators scores have been given for convenience of international standards or EU politics in this research it is conducted that Copenhagen is 1st with 87.31 points, Istanbul is 25th with 45.20 points, London and Paris are 11th place.

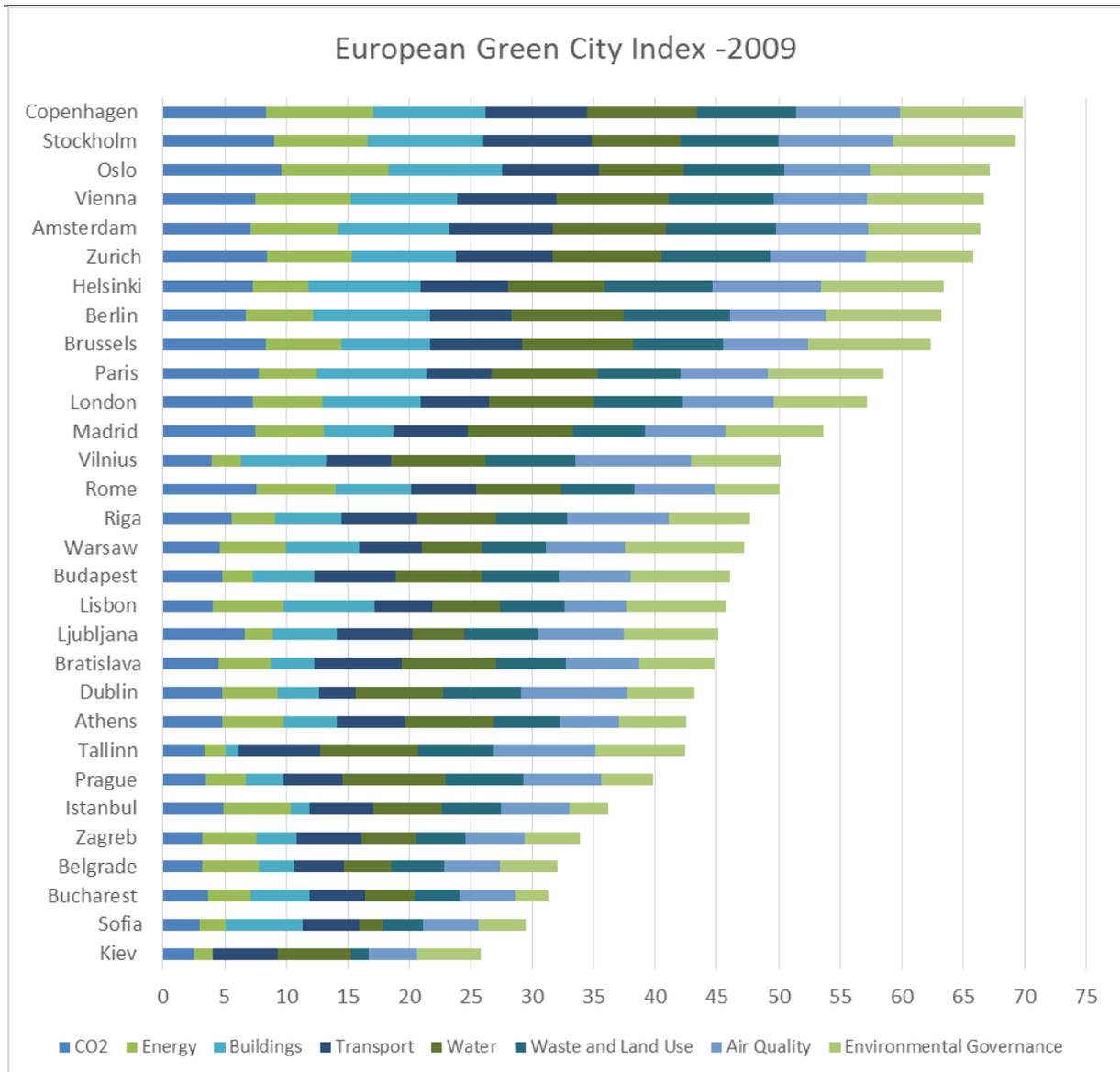


Figure 13: European Green City Index -2009 [21]

In the evaluation of the matter specifically, Istanbul falls behind the other cities in the matter such as environment and construction quality. Therefore, it is needed to develop new politics about the future development process of Istanbul.

Another index that may be considered under this section is “Sustainable Cities Index” which is developed by ARCADIS. As a result of the evaluation with all Human (Social), World (Geographic), Profit (Economy) indicators, Frankfurt is 1st, London is 2nd and Copenhagen is the 3rd place. Istanbul is 36th place, New York is 20th and Tokyo is 23rd as a result of the study [22].

Table 14: Sustainable Cities Index Indicators [22]

Indicators	Sub-indicators
People	Transport infrastructure
	Health,
	Education,
	Income inequality
	Work-life balance
	The dependency ratio
Planet	Green spaces within cities
	Energy consumption and renewable energy share,
	Recycling rates
	Greenhouse gas emissions,
	Natural catastrophe risk
Profit	Drinking water
	Sanitation and air pollution
	Business perspective,
	Combining measures of transport infrastructure (rail, air, other public transport and commuting time),
	Ease of doing business
	The city's importance in global economic networks
Property and living costs	
GDP per capita and energy efficiency	

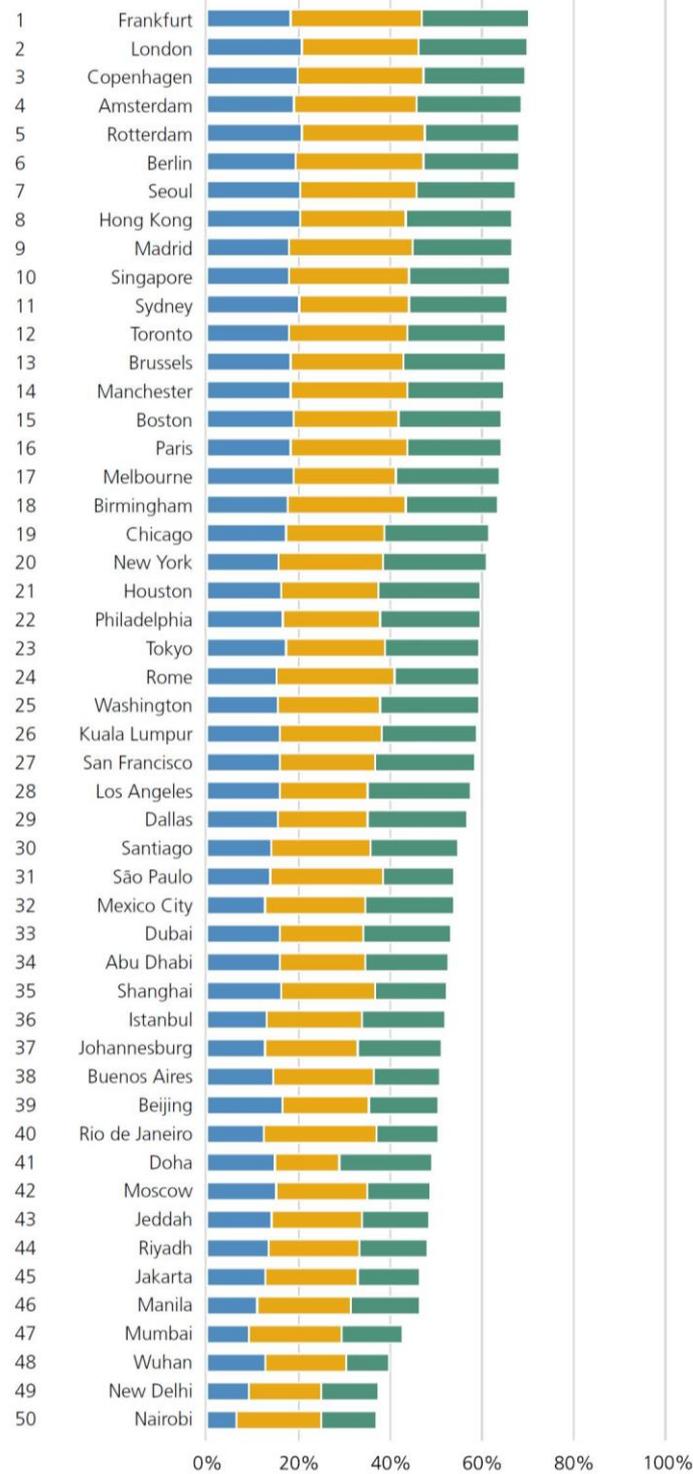


Figure 14: Sustainable Cities Index Ranks [22]

4.8 IESE Cities in Motion Index

The aim of this study is to determine the live quality and sustainability of cities with 72 indicators under 10 titles organized by Navarra University in 2015. “Mobile Cities Index” has come across 148 cities. The subordinate indicators and titles used in this index have been shown below [23].

Table 15: Cities in Motion Index Indicators [23]

Indicators	Sub-Indicators	Indicators	Sub-Indicators
Human Capital	Higher Education	Environment	CO2 emissions
	Business Schools		CO2 emissions index
	Movement of Students		Methane emissions
	Number of Universities		Percentage of the population with access to the water supply
	Museums		PM2.5
	Art Galleries		PM10
	Expenditure on leisure and recreation		Pollution index
Social Cohesion	Ratio of Deaths		Environmental performance index
	Crime Rate	Mobility and Transportation	Inefficiency Index
	Health Index		Number of road accidents
	Unemployment Rate		Metro
	Gini Index		Flights
	Price of Property		Means of transportation
	Ratio of women workers		Index of traffic for commuting to work
Economy	Productivity		Urban Planning
	Time required to start a business	Number of people per household	
	Number of headquarters	Bicycle shops	
	Percentage of people at early business stage	Architects	
	Entrepreneurs	Cycling	
	GDP	International Outreach	Number of international tourists
Public Management	Total tax rate		Number of passengers of an airline
	Reserves		Hotels
	Reserves per capita		Sights map
	Embassies	Number of conferences and meetings	
	Twitter	Technology	Number of broadband subscribers
Sales tax	Broadband		
Governance	Strength of legal rights index		IP addresses
	Corruption perceptions index		Facebook
	Functions of the innovation department		Mobile Phones
	Range of government Web services		Quality of Web services
	Open data platform		Innovation Index
			Wi-Fi Hot Spot
		Smartphones	

In consequence of determination, London is in the 1st place. London is followed by New York and Seoul in the 2nd and 3rd places respectively. Istanbul is in 82nd place. Among the criteria, Istanbul, which takes the 19th place in the title of Social Integrity by passing London and New York, is in front of Seoul with 12th rank in international unity criteria. Seoul takes the 25th place in these criteria rankings. Again, New York is under Istanbul in Social and Environment Matters. Also, in this research Bursa is 98th and Ankara is 108th.

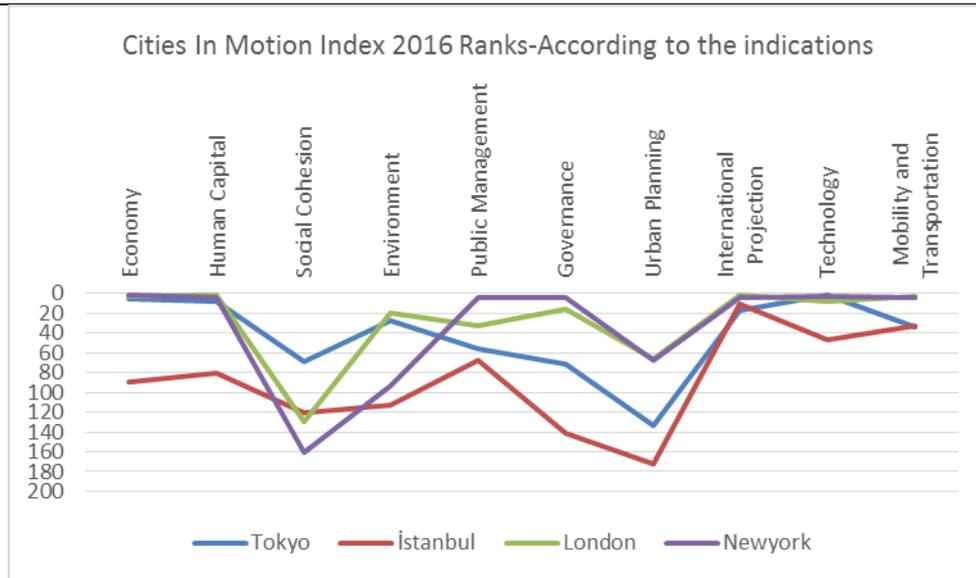


Figure 15: Sustainable Cities [23]

Produced by the Authors

4.9 Knight Frank, Global House Price Index

Knight Frank, Global House Price Index has been made in order to examine changes in residence prices locating on certain cities by “Knight Frank”. In particular, considering the official residence data has carried out this study, which contains outstanding cities showing high performance. According to the ranking that Shenzhen and Auckland takes the first place Istanbul takes the 3rd place. The outstanding point is that Izmir is the 6th behind Sydney and Shanghai following Istanbul. According to World Bank, 54% of world population live in urban areas and since until 2045 the number of world population will increase by 2 billion, it is expected that the impression on the residence prices will increase. By contrast, changes in other global cities (London, Hong Kong, New York Seoul, Paris and Tokyo) are less than Istanbul within 12 months period. Paris is the city where the price change is in the lowest level with -1.80% in global intercity [24].

Table 16: Knight Frank, the Global Residential Cities Index [24]

Rank	Cities	Change (2014-2015) %
1	Shenzhen, CN	47,50%
2	Auckland, NZ	25,40%
3	Istanbul, TR	25,00%
4	Sydney, AU	19,90%
5	Shanghai, CN	18,20%
6	Izmir, TR	16,50%
7	Budapest, HU	16,30%
8	Stockholm, SE	15,60%
9	Gothenburg, SE	14,40%
10	Vancouver, CA	12,90%
16	London, UK	11,40%
45	Hong Kong, HK	7,00%
64	Tokyo, JP	5,00%
73	Seoul, KR	4,40%
89	New York, US	3,30%
136	Paris, FR	-1,80%

V. EVALUATION OF ISTANBUL'S GLOBAL CITY PERFORMANCE

Istanbul has become internationally significant by passing national boundaries because of its strategic location, population, and contribution to national economy. Therefore, the determination of Istanbul's global geographical location, its competition power and potential is quite important in the planning process. Global City Indices has been examined under "Finance, Investment, Business Environment, Macroeconomics, Information Economics, Human Capacity, Technology, Environment and Sustainability, Live Quality, Live Cost" titles and the current situation of Istanbul in these indices, as a whole, has been questioned in this research.

In international area, Istanbul which is constantly progressing in terms of economy and social, with the possession of geopolitical location, potentials, effectiveness in international field, is single city of Turkey among the global cities. Global cities usually aim to provide the development in accordance with sustainability principle and to increase Live Quality level. Similarly Istanbul aims to progress its position in rankings and to increase its capability of competing with global cities. The index examination has demonstrated that Istanbul requires giving importance to the matter of energy using, building energy-saver structures, environment management, forming green action plan and public participation more.

Istanbul is an outstanding city concerning the visitor numbers and expenses. In terms of finance, resources of the city still are not sufficient for global competition although it shows significant progress in last years. It has been assessed that Istanbul has developed in Information and Communication Technologies and Research and Development areas, according to Global Power Index. Despite the fact that many international companies have regional hub in Istanbul, it is more suitable to host more global firms considering its potentials. Index research demonstrates that Istanbul is a competitive and assertive city, but it has not activated its potentials properly.

Istanbul became the most 8th direct foreign-investors attracting city in Europe by 70% increase in 2011 [25]. Thus, it is regional hub chosen by many international companies governing their operations in Eastern Europe, Middle Asia, Middle East and Africa. According to data in 2013, 26 multinational companies chose Istanbul as regional hub addressing large destination from Eastern Europe to Middle East. Also, Istanbul is a centre of attraction for local industry and service firms to prefer moving their headquarters. 189 foundations from Istanbul took place in the ranking of "First 500 Biggest Industry Foundation" published by Istanbul Chamber of Industry (ICI) in 2014. In the first 100, 46 industrial foundations from Istanbul took place [26]. As a result of studies conducted by Pricewaterhouse Coopers, it is predicted that Istanbul will be the 4th fastest growing city and will rise to 28th place in the world, 4th in Europe in 2025 with 367 billion GNP [27].

VI. CONCLUSION

Global City Index demonstrates that Istanbul is a global city integrated with the world city network. In indices, Istanbul is one of the most 50 competitive cities among the outstanding cities all around world. Istanbul is both affecting and affected city for other global cities. Istanbul, whose global access is very high, is not only in one affecting area. The city, geographically, has a unique location to draw its own hinterland and is capable of addressing Europe, Asia and Africa at the same time. It is seen that Istanbul has all features, which a global city needs to possess. The most outstanding advantage of the city is its "attractiveness". That is to say, with different reasons the city achieves being attractive for urban people. The number of visitors loving to spend money in Istanbul increases about 10% rate every year. Therefore, it turns into place, which is more known and wondered every year. Again, business world in Istanbul is more active and bustling than other global cities. That the human capital is wealth in Istanbul is one of the essential factor forming this aliveness and liveliness.

The weakness point of the city is global information flow management, affecting world politics, proactivity, information and communication technologies and environmental issues. In these matters there is a distance the city should cover. The buildings of city mainly do not show characteristics of green construction. In comparison with other global cities, it is seen that in environmental issues (CO₂, air, water, energy, environmental management, waste etc.) an average quality has been grabbed and in three main areas (social, natural, economical) it is in slow and balanced progress. It is significant that the progress should be maintained in a balanced and sustainable way without passing over a certain main field. There are many cities aiming to be "financial centre" same as Istanbul. Istanbul is the 47th among the most important 50 financial centres of world. It is an outstanding detail that residence prices increase approximately at 25% rate every year whereas serious increases in residence prices of prominent global cities are not seen. It is a sign that Istanbul has not reached at its real value put in action of its potentials properly yet, which means it holds promise. That the annual increase of residence prices is much higher than the level of average incomes is a treat to integrity and variety of the city.

The city is applicant to raise higher ranks among global cities by using its potentials. It is seen that Istanbul experiences instant increases and decreases year by year in global city rankings. This situation assesses the dynamic and attacking side on one hand; it is struggling with preserving its success and needs to progress consistently on the other hand.

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