

Case

Istanbul has challenges to become the most competitive city in the Middle East and Central Eastern Europe

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Abstract

Istanbul, the capital city of several empires in history, is among the most well-known metropolises in the world. It is also identified as the most developed and competitive city in Turkey generating almost a third of the economic activities and half of the country's tax revenues. However, its new mayor will face several challenges due to the uncontrollable growth of the city as well as the deepening economic crisis in the country. The purpose of this case is to assess the current situation in Turkey and in Istanbul, introduce the most imminent challenges and compare the city to its rivals in the Middle East and Central Eastern Europe.

Keywords: Central Eastern Europe, city competitiveness, Istanbul, Middle East, Turkey

Istanbul aims to become a regional hub in the Middle East and Central Eastern Europe. Following a dubious and long process of objections and recounting of votes, Istanbul's municipal elections are set for a second time on June 23, 2019. On the other hand, the new mayor has an important duty to come up with ways and projects to rebuild the city's competitiveness as soon as he takes office in order to achieve the goal to become a regional hub.

Chosen as the capital city during three important empires across several centuries, Istanbul is among the most historic metropolises of the world. At a unique location bridging two continents, it is situated both in Europe and Asia divided by the Bosphorus. Home to more than 20 million inhabitants representing ca. 25 % of the country's population, Istanbul is identified as the most developed and competitive city in Turkey and among the fastest growing metropolitan areas in the world¹. With a high economic potential, generating almost a third of the economic activity and half of Turkey's tax revenues², Turkey's economic welfare is very much dependent on Istanbul and vice versa. As a consequence, as of 2019 Istanbul is facing several challenges due to recent developments in Turkish political situation amid unfavorable economic conditions. Furthermore, the situation is worsened by the uncontrollable growth of the city's population due to the large-scale migration from other less developed rural areas of the country and refugees from neighboring countries in recent years. This, in turn, has led to various problems such as inadequate infrastructure, heavy traffic and pollution, increasing concerns over security as well as rising costs of living. Moreover, Istanbul's

well-documented earthquake risk has been worsened due to deforestation and incessant construction works as a result of decades of unplanned urbanization. What should the new mayor do to resolve the challenges?

Turkey

The Republic of Turkey is located in the Eurasia region between the South-Eastern Europe and South-Western Asia (see Exhibit 1). The country has borders with Bulgaria, Greece, Iran, Iraq, Syria, Azerbaijan, Georgia and Armenia and has a total surface area of 783,562 km² and a population of 82.5 million people - the 19th largest population in the world³. It is a relatively young country with a median age of 31.7⁴ and a high urbanization rate of 74.6 %⁵. The country's population has increased at a very high rate during the 2015 – 2017 period due to migrations from neighboring countries, such as Iraq, Afghanistan and Syria⁶.

Turkey's favorable geographic location at the crossroads between Europe, Asia and the Middle East as well as its borders with the Marmara, Aegean, Mediterranean and Black Seas make it a natural trade hub and a popular tourism destination. The country was the 17th largest economy in the world with a GDP of USD 851.5 billion⁷ and a GDP per capita of USD 10,602⁸ in 2017. The country's purchasing power parity (PPP) adjusted GDP was USD 2.14 trillion⁹, and GDP per capita was USD 27,000¹⁰ in 2017.

With a total labor force around 31.6¹¹ million people, Turkey is among the largest workforce markets in Europe, yet there is room for improvement regarding the skills of the employees, cooperation in labor employer relations, workers' rights and female participation in the labor force¹². As of 2017, the total labor participation rate was 51.5 % (71.5% for men and 32 % for women), and the unemployment rate was 13 % (11.9% for men and 15.4 % for women)¹³. The unemployment rate among young people was higher than the country average with 24.5%, and furthermore 24.3 % of all those among 15-24 years old were neither employed nor in education¹⁴.

Turkey is rich in a variety of natural resources, such as coal, lignite, iron, chromite, manganese, zinc, lead, copper, and bauxite and there is small-scale production of oil which only provides for a fraction of the country's needs¹⁵. It is estimated that about one third of the land in Turkey is used for agriculture, and 54.1 % the total employed population is in services, 19.4 % in agriculture while 19.1% is in industry and 7.4 % is in construction¹⁶.

As of 2017 Turkey was the 31st largest exporter in the world merchandise trade with USD 157 billion, generating 0.9% of the world exports, and the 21st largest importer with USD 234 billion generating 1.3% of world imports¹⁷. The main export merchandises of the country are iron and steel, automotive products, textiles and clothing. Moreover, Turkey was the 29th largest exporter of commercial services (USD 43 billion, 0.8 % of the world exports) in 2017 with tourism being the most significant exported commercial service of the country¹⁸. On the other hand, throughout the years Turkey has been suffering from a negative trade balance as it is a net importer of intermediate goods necessary for industrial production as well as energy, as the country lacks enough natural resources to supply the home demand. In order to overcome risks related to supply and to reduce its energy bill, the country is aspiring the role of an energy trading center in the region between the producer and consumer countries in its neighborhood. As a result, there are several projects initiated to transport crude oil as well as natural gas through pipelines especially in the south eastern part of the country¹⁹. In addition to the Iraq-Turkey Crude Oil Pipeline, the Baku – Tbilisi – Ceyhan Crude Oil Main Export Pipeline and the Trans – Anatolian Gas Pipeline which are already in use, the Turkstream Gas Pipeline project is expected to become fully operational as of end 2019.

Turkey is a member of several international organizations including NATO (North Atlantic Treaty Organization), UN (United Nations), OECD (Organization for Economic Cooperation and Development), OSCE (Organization for Security and Cooperation in Europe), WTO (World Trade Organization), BSEC (Black Sea Economic Cooperation Organization) and candidate for EU (European Union) membership²⁰. According to World Economic Forum (WEF)'s Competitiveness Index Turkey ranked 61st among 140 economies in 2018, while it ranked 53rd in 2017²¹. The country is identified to have “relative strengths on infrastructure, public health and the innovation ecosystem” due to several infrastructure investments such as upgraded roads, bridges, sea tunnels, airports especially in the western part of the country within the recent years. Turkey has a competitive advantage regarding its large market size due to high and young population (ranking 13th) and has shown a good innovation performance with strong research institutions as

well as good publication record within the last few years, but “ideas generated by Turkey’s research community face many bottlenecks further down the value chain in terms of barriers to entrepreneurship and market functioning”. WEF’s report also points out to the relatively high inflation rate and negative debt dynamics and states that the country’s macroeconomic condition is worsened by trade sanctions established by the United States, which has triggered a currency crisis. Moreover, there are some problems related to the skills of the workforce and the quality of education and training. Consequently, the country was ranked 116th on the macroeconomic stability pillar, 77th on the skills pillar, and 111th on the labor market pillar²². In the Ease of Doing Business rankings Turkey is ranked 43rd economy over 190 countries, with favorable conditions regarding contract enforcement, protection of minority investors, getting credit, and registering property²³. However, there is room for improvement especially on issues related to the resolution of insolvency, and starting a business in Turkey is not easy compared to other countries despite some adjustments and improvements in this area within the recent years²⁴.

Turkey has been facing challenges on several fronts since 2015. The unrest in its southeastern border with Syria; the shooting down of a Russian military jet in November 2015 and the killing of the Russian Ambassador in December 2016; several attacks by the Kurdish terrorist group PKK (Kurdish Workers’ Party) and ISIS (Islamic State in Iraq and Syria); the failed coup attempt on July 15, 2016 followed by a change in the constitution; Turkish referendum rallies banned in Germany and Netherlands; arrests of several politicians, public and military officials, academicians, Turkish and foreign journalists, human rights activists as well as a US pastor led to deteriorating relations with the US and several countries in Europe. These in turn had dramatic consequences on both the political and economic situation of the country. Throughout these years the amount of inward foreign direct investments (FDI) started to go down from USD 18.0 billion in 2015 to USD 10.9 billion in 2017 and is estimated to be USD 10.7 billion in 2018²⁵ (See Exhibit 2). Furthermore, tourism, being an important revenue stream for the country, suffered due to all those unfavorable conditions and the number of tourists fell by 30%, from 36.9 million in 2014 to 25.3 in 2016²⁶ while the revenues fell from USD 34.3 billion to USD 22.1 billion²⁷. Following the improvement in relations with Russia and the increasing number of tourists from Russia, the neighboring as well as Caspian countries, tourism revenues started to recover with total number of arrivals reaching 32.4 million²⁸ and revenues increasing to USD 32.4 billion as of 2017, marking the return of international tourists following two difficult years²⁹.

On the other hand, as of 2018 the aggravating conditions in the political arena coupled with the government’s unwillingness to limit spending and attempts to influence the central bank’s monetary policy decisions resulted in a severe currency crisis in August when the Turkish lira depreciated by nearly 40% against the USD compared to the start of the year. This in turn triggered an acceleration in the inflation within the following months to reach a high of level of 25% in October³⁰. Turkey’s credit ratings started to fall to either negative (Moody’s and Fitch) or speculative (Standard & Poor’s) from more favorable levels in previous years³¹. Although a sharp interest rate hike by the central bank helped the currency to strengthen and stabilize up to a certain level, these high interest rates led to a slump in domestic demand and had a serious negative impact on industrial production, company revenues and employment levels in the country³².

Istanbul

Istanbul is the most well-known and developed city in Turkey. Its favorable location along the Bosphorus bridging two continents, with both natural and historic sights, suitable weather conditions and fertile land have helped the city to play a very important role in the history of Turkey. Today Istanbul is the most populated city in Turkey with an official population exceeding 15 million³³ while the unofficial number is estimated to be around 20 million. Currently the city is identified as the 8th largest in the world, and it is home to ca. 25% of the entire country’s inhabitants with 23.8% of them under the age of 15³⁴. Considering that the city’s population was around 4.7 million in the 1980s³⁵, one can see that it has more than quadrupled within the last three decades. The population density in Istanbul is calculated to be 2,849 person/km², more than 27 times larger than Turkey’s average³⁶. The increase in the population of the city is identified to be related to both births exceeding deaths and mass immigration³⁷.

Istanbul's history dates back to 3000 years with the Thracian tribes between the 13th and 11th centuries BC by the name of Lygos. It was then called Byzantium, the Greek name for Bosphorus, established as a colony by King Byzas in the 7th century BC. Following its conquest by the Persians in the 6th century BC, Alexander the Great in the 4th century BC and then by the Romans in the 2nd century AD, the city was first demolished and then renovated by Emperor Constantin in 330 to be established as the Roman Empire's capital city^{38 39}. At that time, it was given the name of Constantinople and became the Byzantine Empire's capital when the Roman Empire was divided into Western Roman and Eastern Roman (Byzantine) Empires. Throughout the 4th and 6th centuries Constantinople became one of the largest cities of the western world with its population exceeding half a million⁴⁰. In 1453 the Ottoman army led by Sultan Mehmet II conquered the city and its name was changed to Istanbul. Throughout the 15th to 19th centuries, it did not only serve as the capital city but also the cultural, political and commercial center of the Ottoman Empire. Following World War I and the defeat of the Ottoman Empire, Istanbul was occupied by the allied forces. Following the War of Independence led by Mustafa Kemal Atatürk against the occupying forces and the freedom of the country, the Republic of Turkey was established in 29 October 1923, and Ankara became the new capital city. Even though Ankara is the political capital of Turkey since 1923, Istanbul has always been considered as the financial and industrial capital of the country due to its strategic location connecting Europe and Asia.

Istanbul, known in the history as the "city of seven hills", nowadays spans a total area of 5,461 km² with 39 districts and 936 neighborhoods⁴¹ as can be seen in Exhibit 3. As of 2017, around 65% of the population were living on the European side of the city⁴², where the majority of the industrial and commercial centers are located. The Asian side which was considered as the residential part of the city till the 2000s is now on its way to host several newly established industrial zones. The city employs around 21.5% of Turkey's workforce⁴³ and generates a GDP of USD 285 billion, representing almost 30.5% of Turkey's total GDP, and its GDP per capita of USD 17,827⁴⁴ is much higher than the country's average. Elected as the European Capital of Culture by the EU in 2010, Istanbul is an important visiting place for tourists. Being the 9th top destination city in the world, it attracts ca. 35-40% of all the tourists coming to the country and generating 37-42 % of the tourism revenues^{45 46}. In addition, Istanbul is Turkey's aviation hub and hosts Turkey's leading clusters in finance, logistics, construction, textile, media, and entertainment industries. It is also the home to Turkey's most prominent public and private higher education institutes like Bosphorus University, Istanbul University, Koc University, Sabanci University, Istanbul Technical University, Marmara University, and Yildiz Technical University. As a result, Istanbul is Turkey's most competitive city, and most of the multinational enterprises in Turkey are headquartered there. Welcoming many ethnicities with an open culture for decades, Istanbul is the heart of Turkey for arts and sports as well, where the country's most reputable sports clubs Besiktas, Fenerbahce and Galatasaray are located.

In order to support the city's growing population and make it more attractive for tourists the government put special emphasis on the construction of mega projects within the last few years. Large scale investments were undertaken to renovate and reinforce the infrastructure of Istanbul, including the Yavuz Sultan Selim Bridge, the third bridge over the Bosphorus, the undersea tunnels of Avrasya and Marmaray both bridging the European side of the city with the Asian side, and several major additions to the existing metro lines. Moreover, the Galataport project including a large cruise port and recreational areas, the Canal Istanbul project, an artificial sea-level waterway to bypass the Bosphorus and connect the Black Sea to the Sea of Marmara are projected to become operational in the near future. And lastly, Istanbul's new airport, which is foreseen to become the world's largest, became operational as of April 2019. Coupled with the phenomenal growth of the Turkish Airlines within the last 15 years to become the number one airline covering more destinations worldwide⁴⁷, Istanbul is identified as the city with the fastest growing air travel connectivity, and was able to increase its score by 26 points between 2009 and 2015⁴⁸. This is an important progress for the city as it is indicated that "a 10% increase in air connectivity comes with a 0.5% increase in GDP per capita"⁴⁹. As of 2018 Istanbul Ataturk Airport was the 5th largest in Europe regarding direct connectivity, and Sabiha Gokcen Airport was the top airport in Europe regarding overall gains in direct and hub connectivity over the last ten years⁵⁰. Apart being the country's aviation hub, Istanbul is also the busiest city regarding land traffic with ca. 25,000 km of roads and close to 4 million registered motor vehicles⁵¹, i.e. one vehicle for each 5 person living in the city. Considering the fact that around one thousand new cars join in Istanbul's traffic every day⁵², the inhabitants are bound to lose a considerable amount of time in traffic jams despite all the infrastructure investments to reduce the problem.

Possible competitors in the Middle East and Central Eastern Europe

Being located at crossroads between Europe and Asia, Istanbul aspires to be a competitive trading and finance hub in the Middle East and Central Eastern Europe in order to attract regional headquarters of multinational enterprises. Competitor cities of Istanbul include Cairo, Doha and Dubai in the Middle East and Budapest, Prague and Warsaw in Central Eastern Europe (see Exhibit 4 and Exhibit 5 for the maps and Exhibit 6 for a comparison). The comparisons are based on GDP per capita, the social progress index, A.T. Kearney's 2018 global cities ranking, and The Economist's hot spots 2025 ranking. The social progress index is a tool that measures 12 indicators under the pillars of basic human needs, foundations of well-being, and opportunity⁵³. A.T. Kearney's index looks at 27 indicators under the areas of business activity, human capital, information exchange, cultural experience, and political engagement⁵⁴. Finally, The Economist's hot spots 2025 ranking uses 32 indicators across eight categories: economic strength, physical capital, financial maturity, institutional character, social and cultural character, human capital, environment and natural hazards, and global appeal⁵⁵.

Cairo is the capital of Egypt. It is located on the coast of the Nile River in Northern Egypt, quite close to the Mediterranean Sea, the Red Sea and the Suez Canal. While Egypt has a population of nearly 100 million (14th largest in the world)⁵⁶, Cairo's population is around 20 million⁵⁷. The population is quite young with a median of 24.8 years⁵⁸. Egypt, which was part of the Ottoman Empire from 1517 to 1867 and under British rule from 1882 to 1952, declared its independence in 1953⁵⁹. Egypt has a PPP adjusted GDP per capita of 10,319 USD, and it ranks 95th in the social progress index⁶⁰. Its strategic location connecting the Mediterranean Sea and the Red Sea makes Egypt and its capital a natural hub for international trade. Leading industries in Egypt include agriculture, tourism, construction, automotive, petrochemicals, and financial services. According to the social progress index, the country performs poorly in areas related to personal rights, inclusiveness, personal safety, health and wellness, access to information, and environmental quality⁶¹. While there are occasionally terrorist attacks on tourists in Egypt, the Arab Spring revolution that took place in 2011 is yet to bring a true democracy to the country⁶². Cairo ranks 65th in A.T. Kearney's 2018 global cities ranking and 106th in The Economist's hot spots 2025 ranking (see Exhibit 6).

Doha is the capital of Qatar, which is located in the Arabian Peninsula on the shores of the Persian Gulf. It is a small country with a population of 2.7 million and total land area of 11,610 km²⁶³. Qatar gained its independence in 1971 following the British rule since 1916⁶⁴. Today Qatar leads the world with a PPP adjusted GDP per capita of 118,207 USD thanks to rich oil and gas reserves; however, it ranks only 57th in the social progress index⁶⁵. Starting from the 1990s the economy has diversified from hydrocarbons into different sectors including media and financial services⁶⁶. Qatar Airways is the country's five-star airline, and the country won the bid to host the Football World Cup in 2022. To meet the economic boom the country has received significant immigration of workers over the years, and Qataris make up only 15-20% of the population⁶⁷. The Qatar National Vision 2030 targets to invest in human development (education and health), social development (family values and social safety), economic development, and environmental development⁶⁸. However, according to the social progress index, there is room for improvement in the country especially regarding personal rights and inclusiveness⁶⁹. Qatar was also accused for supporting terrorism by its neighbor, Saudi Arabia. Doha, which has a population of 1.7 million⁷⁰, ranks 63th in A.T. Kearney's 2018 global cities ranking and 24th in The Economist's hot spots 2025 ranking (see Exhibit 6). The city grew rapidly from a population of 371,000 in 1990 sheltering an inflow of south Asian immigrants⁷¹, and it was nominated as one of the New7Wonders Cities, as a city that best represents the achievements and aspirations of global urban civilization⁷². The Qatar Foundation established in Doha the Education City in 1997, a cluster of universities, research institutes, and businesses, which has attracted affiliates of world-famous universities like Carnegie Mellon University⁷³.

Dubai is a state-city. It is one of the seven emirates in the United Arab Emirates, which gained their independence from the British rule in 1971, and it is located in the Arabian Peninsula on the southern coast of the Persian Gulf⁷⁴. Despite its high PPP adjusted GDP per capita of 67,133 USD, United Arab Emirates ranks only 45th in social progress⁷⁵. Areas for improvement relate mainly to personal rights⁷⁶. While United Arab Emirates has a population of 9.6 million people⁷⁷, Dubai's population is 2.8 million people⁷⁸. Dubai ranks 28th in A.T. Kearney's 2018 global cities ranking and 23rd in The Economist's hot spots 2025 ranking (see Exhibit 6). The economy of Dubai rested traditionally on the production and export of crude oil. Its government, however, pursued a diversification strategy to make Dubai

a regional hub for trade and finance by creating free-trade zones and liberalizing the economy⁷⁹. Growing in double-digit figures during the early 2000s with huge infrastructure investments, the city became a global meeting place for exhibitions and trade shows, a financial center for the Middle East, a tourism attraction, and a re-export hub between the East and the West⁸⁰. Some of the magnificent development projects of the city were The World Islands, Palm Jumeirah, Dubai Marina, Business Bay, and Jumeirah Lake Towers. It is the home base to Emirates, the country's five-star airline. Following the global financial crises in 2008, the city, having 120 billion USD foreign currency debt (152% of GDP), faced a serious financial crisis, but it was able to recover from it already in 2012 thanks to its free-trade zone and zero tax policies⁸¹.

Budapest is the capital of Hungary, which is located in Central Eastern Europe between Romania in the East, Austria in the West, Slovakia and Ukraine in the North, and Croatia, Serbia and Slovenia in the South. The country, which was under The Ottoman Empire from 1526 to 1718 and part of the Austro-Hungarian Empire from 1867 to 1920, joined the Warsaw Pact and stayed under the influence of communism with the support of the Soviet Union from 1945 to 1989⁸². Following the fall of the Iron Curtain in 1989, the economy in Hungary adopted the principles of capitalism and transformed from its communist roots⁸³. The country joined the European Union in 2004, and this development led to an increase in inward foreign direct investments as the country's skilled but cheap labor force was a major factor for establishing production facilities of multinationals, which targeted Western European markets⁸⁴. Hungary has a population of 9.7 million people⁸⁵ and a PPP adjusted GDP per capita of 25,664 USD, and it ranks 36th in the social progress index⁸⁶. Key industries in Hungary include automotive, food processing, electrical goods, pharmaceuticals, information technology, chemicals, and machinery: however, despite the good economic performance, recent nationalist and anti-democratic behaviors of the Hungarian government led by Prime Minister Viktor Orbán has created worries on whether Hungary is moving away from European values⁸⁷. Budapest, which lies along the Danube River with a population of 1.8 million⁸⁸, ranks 62nd in A.T. Kearney's 2018 global cities ranking and 53rd in The Economist's hot spots 2025 ranking (see Exhibit 6). It is the financial center of Hungary with strengths in commerce, finance, media, research, technology, education, and entertainment⁸⁹. Budapest is not only a beautiful city attracting tourists, but it is also Europe's second fastest developing urban economy⁹⁰.

Prague is the capital of the Czech Republic, which is located in Central Eastern Europe between Slovakia in the East, Germany in the West, Poland in the North, and Austria in the South. The Czech Republic was established in 1993 when Czechoslovakia separated peacefully into the Czech Republic and Slovakia. Similar to Hungary, it was a member of the Warsaw Pact under the influence of communism from 1945 to 1989, and it joined the European Union in 2004, successfully transforming itself to a market economy. Situated in the heart of Europe, close to large markets in Western Europe, it offers a suitable business environment with a skilled labor force for multinationals to locate their European operations⁹¹. Today with a population of 10.6 million people⁹², the Czech Republic has a PPP adjusted GDP per capita of 31,339 USD, and it ranks 26th in the social progress index⁹³. Prague has a population of 1.3 million⁹⁴. Situated along the Vltava River, the city is a major tourist attraction: it is the fourth most-visited city in Europe after London, Paris and Rome⁹⁵. It ranks 47th in A.T. Kearney's 2018 global cities ranking and 54th in The Economist's hot spots 2025 ranking (see Exhibit 6). Prague accounts for 25% of the Czech Republic's GDP, and it was the fifth best performing region in the European Union in 2007 based on its PPP adjusted GDP per capita⁹⁶. Main industries of Prague include financial and commercial services, tourism, pharmaceuticals, food processing, printing, automotive, and computer technology⁹⁷.

Warsaw is the capital of Poland, which is located in Central Eastern Europe between Ukraine and Belarus in the East, Germany in the West, the Baltic Sea, Russia and Lithuania in the North, and the Czech Republic and Slovakia in the South. Poland was also a member of the Warsaw Pact from 1945 to 1989. Moving successfully from a communist economy to a market economy after 1989, the country joined the European Union in 2004 like Hungary and the Czech Republic. Today with a population of 38 million⁹⁸, Poland is the 8th largest economy in the European Union. It has a PPP adjusted GDP per capita of 26,036 USD, and it ranks 32nd in the social progress index⁹⁹. Key industries in Poland are machine building, iron and steel, mining coal, chemicals, agriculture, ship building, food processing, automotive, and glass manufacturing. Located along the Vistula River, Warsaw has a population of 1.8 million¹⁰⁰. The city was renovated from its ruins after World War II, and today with a quarter of its land covered by parks, it is one of the most dynamic and livable cities in Europe, aiming to become Eastern Europe's cultural capital¹⁰¹.

Warsaw ranks 54th in A.T. Kearney's 2018 global cities ranking and 43rd in The Economist's hot spots 2025 ranking (see Exhibit 6). Warsaw was ranked as the 4th business-friendly city in Europe in the 2016/2017 European Cities and Regions of the Future ranking¹⁰²; however, there are serious concerns that increasing nationalism in Poland under the rule of the Law and Justice Party is a threat to Europe's democratic values¹⁰³.

Istanbul's competitiveness challenges

As soon as the new mayor will be appointed it is indisputable that his job will not be an easy one. The most imminent challenges facing the new mayor are mostly related to the uncontrolled growth of the city. Istanbul, being a center of attraction was subject to continuous increase in its population due to immigrating from the poorer parts of the country as well as refugees. The uncontrollable population increase generated a high rate of construction projects and resultantly some parts of the city started to look like a concrete jungle. These construction projects alongside the informal settlements of those who could not afford them, are conveying to several problems related to the pollution of the air, of the sea, of the land as well as safety concerns¹⁰⁴.

On the other hand, the increasing number and size of the infrastructure projects mentioned above are leading to the deforestation of both sides of Istanbul, and the problem is worsened by the increase in the planned and unplanned housing developments throughout the city resulting in the tremendous decrease in the green areas and the rise in pollution levels. For instance, throughout its planning and construction phases the 3rd bridge and its roads "threaten agricultural areas, northern forest regions, waterbodies and water collection areas that form the open-space systems of Istanbul"¹⁰⁵. The 3rd airport, envisaged to become the largest in the world and thus increase the attractiveness of the city, will lead to "a great decrease in living ecosystems"¹⁰⁶ and to "the defeat of millions of migratory birds traveling between Africa and Europe annually, air pollution, climate change and drought caused by the destruction of the lungs of Istanbul so-called Northern Forests and the wetland area"¹⁰⁷. Similar warnings by experts took place regarding the construction of the Canal Istanbul, a project which "could displace thousands of people, imperil the city's tenuous water supply, and impact ocean life"¹⁰⁸, and thus cause irreversible damages. Moreover, critics have tried to attract attention to "the "heat island" effect on the microclimate that arise due to the damages on the natural environment and establishment of new settlements enabled by the upper scaled land-use and transportation projects in Istanbul"¹⁰⁹. Consequently, Istanbul became more prone to natural disasters such as floods and hailstorms that became unexpectedly frequent within the last 2 years.

Additionally, the city is well-known to have suffered some major earthquakes throughout its history and there has been several warnings indicating that the "very high rate of urbanization, faulty land-use planning and construction, inadequate infrastructure and services and environmental degradation" will increase the earthquake disaster risk even more¹¹⁰. A detailed study by Erdil and Durukal in 2008, when the total population of the city was 84.5 % of the current level, identified that 5% of the total building stock will be damaged beyond repair and 34 % of them will be either extensively or moderately damaged with a total monetary damage of around \$ 11 billion¹¹¹. The authors estimated that the number of deaths would vary between 30,000 and 40,000 and the number of serious injuries will be approximately 120,000¹¹². When one takes into consideration the substantial industrial facilities in the petrochemical, automotive, textile, and machinery production sectors with office and production buildings, storage areas and pipelines as well as cranes, tanks, silos, chimneys and towers in the city, it is not unfair to state that the consequences of such a disaster will be even more devastating.

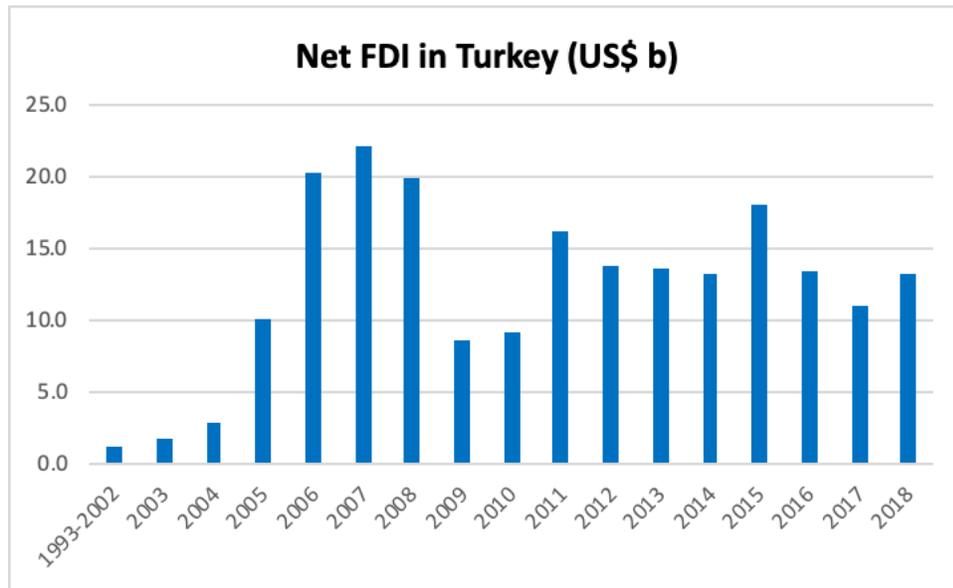
On the other hand, the deepening Turkish economic crisis is definitely expected to generate problems for the city's economy due to the high interrelationship between Turkey's and Istanbul's welfare. Nevertheless, the new mayor will be facing several problems and challenges regarding the country's most important city. Is it realistic to become a regional hub in the Middle East and Central Eastern Europe? What actions should be taken in order to achieve this goal?

Exhibit 1. Map of Turkey



Source: Adapted from Google Maps (2019)¹¹³

Exhibit 2. Net FDI in Turkey



Source: Adapted from Republic of Turkey, Ministry of Treasury and Finance (2019)¹¹⁴

Exhibit 3. Map of Istanbul



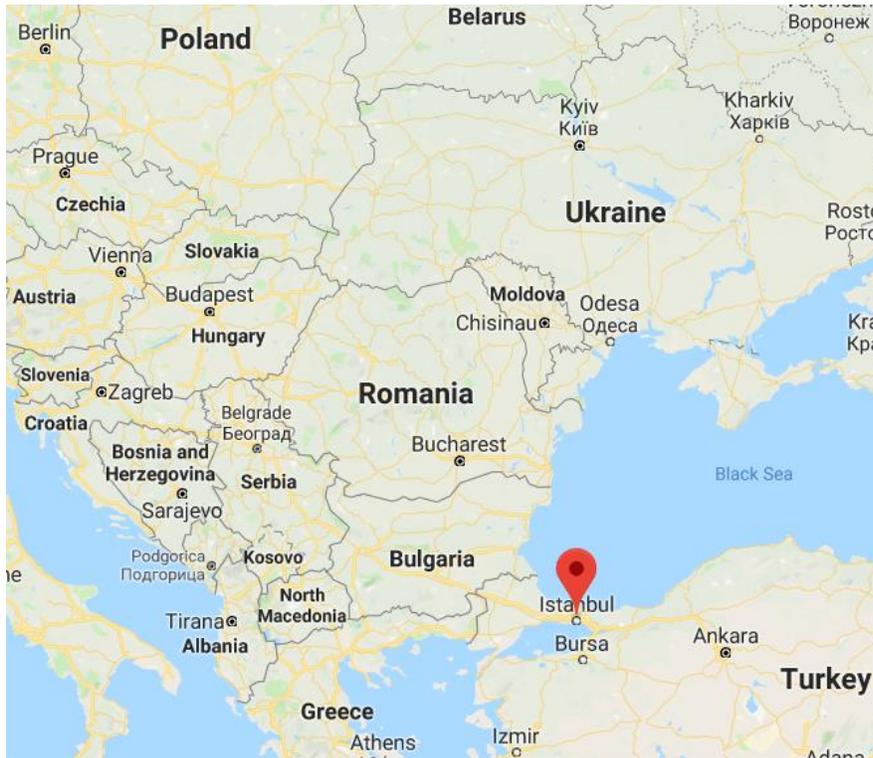
Source: Istanbul Haritasi 360° (2019)¹¹⁵

Exhibit 4. Map of the Middle East



Source: Adapted from Google Maps (2019)¹¹⁶

Exhibit 5. Map of Central Eastern Europe



Source: Adapted from Google Maps (2019)¹¹⁷

Exhibit 6. Comparative statistics of cities in the Middle East and Central Eastern Europe

City	Population (million)	PPP adjusted GDP per capita of the home country (USD)	Social progress index ranking of the home country	A.T. Kearney's global cities ranking 2018	The Economist's hot spots 2025 ranking of cities
Istanbul	14.8	27,000	41	26	70
Cairo	20.0	12,700	95	65	106
Doha	1.7	124,100	57	63	24
Dubai	2.8	68,600	45	28	23
Budapest	1.8	29,600	36	62	53
Prague	1.3	35,500	26	47	54
Warsaw	1.8	29,600	32	54	43

Sources: Adapted from Central Intelligence Agency (2019), 2018 Social Progress Index (2018), A.T. Kearney (2018), and The Economist (2013).

Endnotes

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- ¹ Avenue, T., Trujillo, J. L., & Tuesday, J. P. (2015). The world's 10 fastest growing metropolitan areas, 3, 2–12. <https://www.brookings.edu/blog/the-avenue/2015/02/10/the-worlds-10-fastest-growing-metropolitan-areas/>. Accessed 17 June 2019.
- ² Kistak, S. (2018, September 21). Analysis: Is Istanbul economically too strong. Hurriyet Daily News. <http://www.hurriyetdailynews.com/analysis-is-istanbul-economically-too-strong-137066>. Accessed 17 June 2019.
- ³ World Population Review (2019). 2019 World population by country – Turkey. <http://worldpopulationreview.com>. Accessed 17 June 2019.
- ⁴ Euromonitor International (2019). Country reports: Turkey country factfile. <https://www.euromonitor.com/turkey/country-factfile>. Accessed 17 June 2019.
- ⁵ World Bank (2017). Urban population – Turkey. <https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS?locations=TR>. Accessed 17 June 2019.
- ⁶ TUIK (2018). Uluslararası göç istatistikleri 2017. <http://tuik.gov.tr/PreHaberBultenleri.do?id=30607>. Accessed 17 June 2019.
- ⁷ World Bank (2017). GDP – Turkey. <https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?locations=TR>. Accessed 17 June 2019.
- ⁸ T.C. Hazine ve Maliye Bakanlığı (2019). Türkiye ekonomisi - Ocak 2019. https://ms.hmb.gov.tr/uploads/2019/01/Ekonomi_Sunumu-3.pdf. Accessed 17 June 2019.
- ⁹ World Bank (2017). GDP, PPP – Turkey. <https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?locations=TR>. Accessed 17 June 2019.
- ¹⁰ Central Intelligence Agency (2019). The world fact book – Middle East: Turkey. <https://www.cia.gov/library/publications/the-world-factbook/geos/tu.html>. Accessed 17 June 2019
- ¹¹ Invest In Turkey (2019). Investment guide - Demographics. <http://www.invest.gov.tr/en-US/investmentguide/investorguide/Pages/DemographyAndLaborForces.aspx>. Accessed 17 June 2019
- ¹² World Economic Forum (2018). The global competitiveness report 2018. World Economic Forum, Geneva.
- ¹³ TUIK, Turkish Statistical Institute (2017). Labor force statistics. January 2017. <http://www.turkstat.gov.tr/PreHaberBultenleri.do?id=24626>. Accessed 17 June 2019
- ¹⁴ Ibid.
- ¹⁵ Encyclopedia Britannica (2019). Turkey – Demographic trends. <https://www.britannica.com/place/Turkey/Demographic-trends#ref44470>. Accessed 17 June 2019.
- ¹⁶ TUIK, Turkish Statistical Institute (2017), Uluslararası seçilmiş göstergeler – İsgücü piyasası. <https://biruni.tuik.gov.tr/secilmisgostergeler/sorguSayfa.do?dil=tr>. Accessed 17 June 2019
- ¹⁷ World Trade Organization (2018). World trade statistical review 2018. World Trade Organization, Switzerland.
- ¹⁸ Ibid.
- ¹⁹ Ministry of Energy and Natural Resources (2019). Info bank - Oil and gas pipelines and projects - Transit pipelines and projects. <http://www.enerji.gov.tr/en-US/Pages/Transit-Pipelines-and-Projects>. Accessed 17 June 2019.
- ²⁰ Republic of Turkey Ministry of Foreign Affairs (2019). Foreign Policy – International organizations. <http://www.mfa.gov.tr/sub.en.mfa?7cafe2ef-78bd-4d88-b326-3916451364f3>. Accessed 17 June 2019.
- ²¹ World Economic Forum (2018). The global competitiveness report 2018. World Economic Forum, Geneva.
- ²² Ibid.
- ²³ The World Bank. (2018). Doing business 2019 training for reform. Washington, USA.
- ²⁴ Ibid.
- ²⁵ The World Bank (2019). Data - Foreign direct investment – Turkey. <https://data.worldbank.org/indicator/BX.KLT.DINV.CD.WD?end=2017&locations=TR&start=2008&view=chart>. Accessed 17 June 2019.
- ²⁶ Republic of Turkey Ministry of Culture and Tourism (2019). Number of arriving-departing visitors, foreigners and citizens. <http://www.kultur.gov.tr/EN-153018/number-of-arriving-departing-visitors-foreigners-and-ci.html>. Accessed 17 June 2019.
- ²⁷ TUIK, Turkish Statistical Institute (2019). Turizm geliri, gideri ve ortalama geceleme sayısı, 2001 – 2018. http://www.tuik.gov.tr/PreIstatistikTablo.do?istab_id=1609. Accessed 17 June 2019.

- ²⁸ Republic of Turkey Ministry of Culture and Tourism (2019). Number of arriving-departing visitors, foreigners and citizens. <http://www.kultur.gov.tr/EN-153018/number-of-arriving-departing-visitors-foreigners-and-ci.html>. Accessed 17 June 2019.
- ²⁹ World Trade Organization (2018). World trade statistical review 2018. World Trade Organization, Switzerland.
- ³⁰ Cooling Turkish inflation raises prospects of interest rate cut (3 January 2019). Financial Times.
- ³¹ T.C. Hazine ve Maliye Bakanlığı. (2019). Türkiye ekonomisi - Ocak 2019. https://ms.hmb.gov.tr/uploads/2019/01/Ekonomi_Sunumu-3.pdf. Accessed 17 June 2019.
- ³² Turkey recession fears grow as industrial output slumps (17 December, 2018). Financial Times.
- ³³ TÜİK, Turkish Statistical Institute (2018). The results of address based population registration system, 2017. <http://www.turkstat.gov.tr/PreHaberBultenleri.do?id=27587>. Accessed 17 June 2019.
- ³⁴ TOBB (2017). Ekonomik rapor 2017. Ankara. <https://www.tobb.org.tr/Documents/yayinlar/2018/EkonomikRapor2017.pdf>. Accessed 17 June 2019.
- ³⁵ Kaya, S., & Curran, P. J. (2006). Monitoring urban growth on the European side of the Istanbul metropolitan area: A case study. *International Journal of Applied Earth Observation and Geoinformation*, 8(1), 18-25.
- ³⁶ Istanbul in numbers (2019). <http://www.greatistanbul.com/numbers.html>. Accessed 17 June 2019.
- ³⁷ Kaya, S., & Curran, P. J. (2006). Monitoring urban growth on the European side of the Istanbul metropolitan area: A case study. *International Journal of Applied Earth Observation and Geoinformation*, 8(1), 18-25.
- ³⁸ History of Istanbul (2019). <http://www.greatistanbul.com/history.html>. Accessed 17 June 2019.
- ³⁹ Istanbul tarihi (2019). <https://www.istanbul.net.tr/istanbul-rehberi/dosyalar/istanbul-tarihi/3>. Accessed 17 June 2019.
- ⁴⁰ Ibid.
- ⁴¹ Istanbul in numbers (2019). <http://www.greatistanbul.com/numbers.html>. Accessed 17 June 2019.
- ⁴² İlçelere göre İstanbul nüfusu (2019). Compiled from <https://www.nufusu.com/il/istanbul-nufusu>. Accessed 17 June 2019.
- ⁴³ TOBB (2017). Ekonomik rapor 2017. Ankara. <https://www.tobb.org.tr/Documents/yayinlar/2018/EkonomikRapor2017.pdf>. Accessed 17 June 2019.
- ⁴⁴ TÜİK, Turkish Statistical Institute (2018). İl bazında kişi başına gayrisafi yurt içi hasıla, 2004-2017. http://www.tuik.gov.tr/PreIstatistikTablo.do?istab_id=2521. Accessed 17 June 2019.
- ⁴⁵ Mastercard. (2018). Big cities, big business: Bangkok, London and Paris lead the way in Mastercard's 2018 Global Destination Cities Index Mastercard, 1–2.
- ⁴⁶ EY Turkey (2017). Tourism market overview: Turkey & Istanbul, 2017 1st Half. EY Turkey.
- ⁴⁷ Matila, E., & Akpınar, M. (2018). Turkey and Turkish Airlines: Facing challenges of competitiveness. *Finnish Business Review*, <http://urn.fi/urn:nbn:fi:jamk-issn-2341-9938-43>. Accessed 17 June 2019.
- ⁴⁸ EY Turkey. (2017). Tourism market overview: Turkey & Istanbul, 2017 1st Half. EY Turkey.
- ⁴⁹ ACI, Airports Council International (2018). Airport industry connectivity report 2018. 27th ACI Europe General Assembly, Congress & Exhibition. 19 June 2018, Belgium.
- ⁵⁰ Ibid.
- ⁵¹ Tuvimer, Türkiye Veri İşleme Merkezi (2018). İstanbul, trafik yoğunluk ve otopark durumu raporu – Mart 2018. <http://haber.tuvimer.com/istanbul-trafik-yogunluk-ve-otopark-durumu-raporu-subat-2018>. Accessed 17 June 2019.
- ⁵² Her gün bin yeni araç yola çıkıyor (2015, September 24). Sabah. <https://www.sabah.com.tr/yasam/2015/09/24/her-gun-bin-yeni-arac-yola-cikiyor>. Accessed 17 June 2019.
- ⁵³ 2018 Social Progress Index (2018). Egypt. <https://www.socialprogress.org/?tab=2&code=EGY>. Accessed 17 June 2019.
- ⁵⁴ A.T. Kearney (2018). Learning from the East – Insights from China's urban success: 2018 global cities report. A.T. Kearney.
- ⁵⁵ The Economist (2013). Hot spots 2025 – Benchmarking the future competitiveness of cities. The Economist Intelligence Unit, London.
- ⁵⁶ Worldometers (2019). Egypt population. <https://www.worldometers.info/world-population/egypt-population/>. Accessed 17 June 2019.
- ⁵⁷ Central Intelligence Agency (2019). The world fact book – Africa: Egypt. https://www.cia.gov/library/publications/the-world-factbook/geos/print_eg.html. Accessed 17 June 2019.
- ⁵⁸ Worldometers (2019). Egypt population. <https://www.worldometers.info/world-population/egypt-population/>. Accessed 17 June 2019.
- ⁵⁹ Rithmire, M. (2016). Egypt: The end of the revolution? Harvard Business School and Case Centre, case no. 9-715-041.

-
- ⁶⁰ 2018 Social Progress Index (2018). Egypt. <https://www.socialprogress.org/?tab=2&code=EGY>. Accessed 17 June 2019.
- ⁶¹ Ibid.
- ⁶² Rithmire, M. (2016). Egypt: The end of the revolution? Harvard Business School and Case Centre, case no. 9-715-041.
- ⁶³ Worldometers (2019). Qatar population. <http://www.worldometers.info/world-population/qatar-population/>. Accessed 17 June 2019.
- ⁶⁴ Musacchio, A., Donovan, C., Mikati, S., Sarafa, R., & Almisnad, A. (2013). Qatar: Energy for development. Harvard Business School and Case Centre, case no. 9-714-003.
- ⁶⁵ 2018 Social Progress Index (2018). Qatar. <https://www.socialprogress.org/?tab=2&code=QAT>. Accessed 17 June 2019.
- ⁶⁶ Musacchio, A., Donovan, C., Mikati, S., Sarafa, R., & Almisnad, A. (2013). Qatar: Energy for development. Harvard Business School and Case Centre, case no. 9-714-003.
- ⁶⁷ Ibid.
- ⁶⁸ Ibid.
- ⁶⁹ 2018 Social Progress Index (2018). Qatar. <https://www.socialprogress.org/?tab=2&code=QAT>. Accessed 17 June 2019.
- ⁷⁰ Central Intelligence Agency (2019). The world fact book – Middle East: Qatar. <https://www.cia.gov/library/publications/the-world-factbook/geos/qa.html>. Accessed 17 June 2019.
- ⁷¹ Musacchio, A., Donovan, C., Mikati, S., Sarafa, R., & Almisnad, A. (2013). Qatar: Energy for development. Harvard Business School and Case Centre, case no. 9-714-003.
- ⁷² Business Insider (2014). These 7 cities are the new “urban wonders” of the world. <https://www.businessinsider.com/seven-urban-wonders-of-the-world-2014-12?r=US&IR=T&IR=T>. Accessed 17 June 2019.
- ⁷³ Gulf News Journal Reports (2015). Roots of American universities grow deeper in Qatar, drawing criticism. <https://gulfnewsjournal.com/stories/510548507-roots-of-american-universities-grow-deeper-in-qatar-drawing-criticism>. Accessed 17 June 2019.
- ⁷⁴ Vietor, R.H.K., & Forrest, N. (2010). Dubai: Global economy. Harvard Business School and Case Centre, case no. 9-709-043.
- ⁷⁵ 2018 Social Progress Index (2018). United Arab Emirates. <https://www.socialprogress.org/?tab=2&code=ARE>. Accessed 17 June 2019.
- ⁷⁶ Ibid.
- ⁷⁷ Worldometers (2019). United Arab Emirates population. <http://www.worldometers.info/world-population/united-arab-emirates-population/>. Accessed 17 June 2019.
- ⁷⁸ Central Intelligence Agency (2019). The world fact book – Middle East: United Arab Emirates. <https://www.cia.gov/library/publications/the-world-factbook/geos/ae.html>. Accessed 17 June 2019.
- ⁷⁹ Vietor, R.H.K., & Forrest, N. (2010). Dubai: Global economy. Harvard Business School and Case Centre, case no. 9-709-043.
- ⁸⁰ World Economic Forum (2014). The competitiveness of cities. World Economic Forum, Geneva.
- ⁸¹ Forbes, M. (2012). Dubai has recovered faster because of zero tax, economic free zones. <https://www.forbes.com/sites/miguelforbes/2012/10/22/dubai-has-recovered-faster-because-of-zero-tax-economic-free-zones/#4ff4a51a6efb>. Accessed 17 June 2019.
- ⁸² Di Tella, R., Weinzierl, M., & Kuipers, J. (2016). Hungary: Economic crisis and a shift to the right. Harvard Business School and Case Centre, case no. 9-711-051.
- ⁸³ Ibid.
- ⁸⁴ Ibid.
- ⁸⁵ Worldometers (2019). Hungary population. <http://www.worldometers.info/world-population/hungary-population/>. Accessed 17 June 2019.
- ⁸⁶ 2018 Social Progress Index (2018). Hungary. <https://www.socialprogress.org/?tab=2&code=HUN>. Accessed 17 June 2019.
- ⁸⁷ Di Tella, R., Weinzierl, M., & Kuipers, J. (2016). Hungary: Economic crisis and a shift to the right. Harvard Business School and Case Centre, case no. 9-711-051.
- ⁸⁸ Central Intelligence Agency (2019). The world fact book – Europe: Hungary. <https://www.cia.gov/library/publications/the-world-factbook/geos/hu.html>. Accessed 17 June 2019.

- ⁸⁹ Thomas White International (2019). Hungary: Emerging economic power in Central and Eastern Europe. <https://www.thomaswhite.com/world-markets/hungary-emerging-economic-power-in-central-and-eastern-europe/>. Accessed 17 June 2019.
- ⁹⁰ Hungary Today (2015). Budapest Europe's second fastest-growing urban economy, the study reveals. <https://hungarytoday.hu/budapest-europes-second-fastest-developing-urban-economy-study-reveals-29576/>. Accessed 17 June 2019.
- ⁹¹ Bulletin of the City of Prague (2009). The Prague strategic plan 2008. http://www.iprpraha.cz/uploads/assets/soubory/data/strategicky_plan/angl2008_web.pdf. Accessed 17 June 2019.
- ⁹² Worldometers (2019). Czech Republic population. <http://www.worldometers.info/world-population/czech-republic-population/>. Accessed 17 June 2019.
- ⁹³ 2018 Social Progress Index (2018). Czech Republic. <https://www.socialprogress.org/?tab=2&code=CZE>. Accessed 17 June 2019.
- ⁹⁴ Central Intelligence Agency (2019). The world fact book – Europe: Czechia. <https://www.cia.gov/library/publications/the-world-factbook/geos/ez.html>. Accessed 17 June 2019.
- ⁹⁵ Expats.cz (2017). Top 100 city destinations revealed: Prague among most visited in the world. <https://news.expats.cz/czech-tourism/top-100-city-destinations-revealed-prague-among-visited-europe-world/>. Accessed 17 June 2019.
- ⁹⁶ Eurostat (2010). Regional GDP per inhabitant in 2007. https://web.archive.org/web/20100602015332/http://epp.eurostat.ec.europa.eu/cache/ITY_PUBLIC/1-18022010-AP/EN/1-18022010-AP-EN.PDF. Accessed 17 June 2019.
- ⁹⁷ Bulletin of the City of Prague (2009). The Prague strategic plan 2008. http://www.iprpraha.cz/uploads/assets/soubory/data/strategicky_plan/angl2008_web.pdf. Accessed 17 June 2019.
- ⁹⁸ Worldometers (2019). Poland population. <http://www.worldometers.info/world-population/poland-population/>. Accessed 17 June 2019.
- ⁹⁹ 2018 Social Progress Index (2018). Poland. <https://www.socialprogress.org/?tab=2&code=POL>. Accessed 17 June 2019.
- ¹⁰⁰ Central Intelligence Agency (2019). The world fact book – Europe: Poland. <https://www.cia.gov/library/publications/the-world-factbook/geos/pl.html>. Accessed 17 June 2019.
- ¹⁰¹ New York Times (2015). 36 hours in Warsaw, Poland. <https://www.nytimes.com/interactive/2015/12/22/travel/what-to-do-in-36-hours-in-warsaw-poland.html>. Accessed 17 June 2019.
- ¹⁰² Ministry of Foreign Affairs, Republic of Poland (2019). Warsaw city. https://www.msz.gov.pl/en/foreign_policy/nato_2016/warsaw/. Accessed 17 June 2019.
- ¹⁰³ New York Times (2018). Poland's nationalism threatens Europe's values, and cohesion. <https://www.nytimes.com/2018/02/20/world/europe/poland-european-union.html>. Accessed 17 June 2019.
- ¹⁰⁴ The Economist Intelligence Unit. (2017). Safe Cities Index 2017 – Security in a rapidly urbanizing world.
- ¹⁰⁵ Geymen A. (2013) Impacts of Bosphorus bridges on the Istanbul metropolitan settlement areas. *Land Degradation & Development*, 24(2), 156-169.
- ¹⁰⁶ Karacor, E. & Korshid, D. (2015). Projectred environmental effects of the third airport in Istanbul. *Journal of Food, Agriculture & Environment*, 13(2), 223-227.
- ¹⁰⁷ Bayrakdar, M. & Durmaz, V. (2018). Environmental impacts of airports: A research on the Istanbul 3rd Airport. ISEM 2018 - 4th International Symposium on Environment and Morals. Sarajevo/Bosnia and Herzegovia 27-29 June 2018, 772–782.
- ¹⁰⁸ National Geographic (2018). Will Istanbul's massive new canal be an environmental disaster? <https://news.nationalgeographic.com/2018/03/istanbul-canal-project-bosphorus-environmental-impacts/>. Accessed 17 June 2019.
- ¹⁰⁹ UCTEA Chamber of Urban Planners Istanbul Branch (2010). The third bridge project evaluation report. http://www.spoist.org/Pdfiler/diger-raporlar/3.%20KOPRU%20RAPORU_ENG.pdf. Accessed 17 June 2019.
- ¹¹⁰ Erdik, M., Fahjan, Y., Ozel, O., Alcik, H., Mert, A., & Gul, M. (2003). Istanbul earthquake rapid response and the early warning system. *Bulletin of Earthquake Engineering*, 1(1), 157-163.
- ¹¹¹ Ibid.
- ¹¹² Ibid.
- ¹¹³ Google (2019). Turkey Map. <https://www.google.com/maps/place/Turkey/@39.3858571,32.1244359,4z/data=!4m5!3m4!1s0x14b0155c964f2671:0x40d9dbd42a625f2a!8m2!3d38.963745!4d35.243322>. Accessed 17 June 2019.

¹¹⁴ T.C. Hazine ve Maliye Bakanlığı (2019). Türkiye ekonomisi – Ocak 2019.

https://ms.hmb.gov.tr/uploads/2019/01/Ekonomi_Sunumu-3.pdf. Accessed 17 June 2019.

¹¹⁵ Istanbul Haritasi 360° (2019). https://istanbulharitasi360.com/istanbul-ilce-haritasi#.XLI_Xy-B0Us. Accessed 17 June 2019.

¹¹⁶ Google (2019). Turkey Map.

<https://www.google.com/maps/place/Turkey/@39.3858571,32.1244359,4z/data=!4m5!3m4!1s0x14b0155c964f2671:0x40d9dbd42a625f2a!8m2!3d38.963745!4d35.243322>. Accessed 17 June 2019.

¹¹⁷ Ibid.