

Istanbul's Position as a Financial Center: An Empirical Analysis

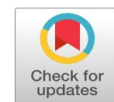
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Abstract: This study aims to determine the cluster of homogenous financial centers by using hierarchical clustering analysis and defining in which the same cluster Istanbul city takes part with other financial centers. Thirty-eight countries' financial centers and sixteen variables were included in the analysis. Ward's hierarchical clustering analysis technique was applied for analyzing data, and a Squared Euclidian distance measure was used. According to the analysis results, countries were grouped into four different clusters. Sydney, Vienna, Brussels, Toronto, Helsinki, Paris, Frankfurt, Tokyo, Amsterdam, Madrid, Stockholm, Zurich, London, and New York were gathered in Cluster 1. Rio De Janerio, Prague, Shanghai, Johannesburg, Milan, Kuala Lumpur, Warsaw, Lisbon, Moscow, Bangkok, Athens, Tel Aviv, Seoul, and Almaty were gathered in Cluster 2, and Istanbul found its place in Cluster 3 sharing with Mexico city, New Delhi, Jakarta, Cairo, and Bogota. Dublin, Doha, Singapore, and Dubai were gathered in Cluster 4. The empirical results clearly showed that Istanbul city has not homogenized with the international/global financial centers yet.

Key Words: Financial centres, Istanbul, Hierarchical cluster analysis

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INTRODUCTION

The Turkish government's target for Istanbul is to transform the city into a global financial center. According to this vision, The International Finance Center Project has found its place in the Ninth development plan covering the period of 2007-2013, and started to be carried out in accordance with the Medium Term Programme for the period of 2010-2012. The project is applied in line with the Strategy and Action Plan, under the coordination of the Turkish Ministry of Development.

In the world there are different type of cities that compete with each other for offering themselves as an attractive location for inward investments. This growing competition between cities directed them to advance themselves as financial centres. By this way, it can be possible to attract following advantages such as new job opportunities, high incomes and wealth gathering. Istanbul has an opportunity to succeed as a financial center due to its potential. The advantages such as strategical location of the city, physical infrastructure, improvements of transportation systems, flight network, the presence of international offices, labour force, domestic/regional economic growth, lower cost of doing business and attractive lifestyle make the city attractive (Yildirim & Mullineux, 2015).

The aim of this study is to determine the cluster of homogenous financial centers by the help of the clustering analysis, and to define in which same cluster Istanbul takes part with other financial centers.

In this paper, the types of financial centers were described at the first step, and then the finance center project for Istanbul city (IFC Project) was reviewed. Thirdly, the financial position of Istanbul City was tried to be found out by applying homogenous clustering analysis. The main outcomes of the empirical analysis stated and in which same clusters Istanbul city takes part with other financial centers was defined.

LITERATURE REVIEW

International Financial Centers

The establishment of the financial markets in the US, Continental Europe and Far East states became a

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global mission after the World War II. The process was supported by the institutions such as IMF, World Bank and others. The financial market's activities started to increase after the collapse of the Soviet Union at the end of the 20th century (Zkirici, 2012).

On the other hand, globalization process moved the world towards a global structure. Especially some cities became more popular and effective for financial activities in the world economy (Yildirim & Mullineux, 2015). In literature we can meet some analysis that investigates the effectiveness or the positions of cities in the world economy: e.g. Sagaram and Wickramanayake (2005) investigated the financial centers of Asia-Pacific Countries (Australia, Hong Kong, Japon and Singapore), Zhao, Zhang and Wang (2004) studied the case of China, et cetera. Berger and Humphrey (1997) applied efficiency analysis to 21 countries' financial centers.

An International Financial Center is a city or a district where financial operations of significant amount and variety take place. In this focal point, financial institutions serving products on a regional or global level are considered. International Financial Center is supposed to have great stock exchanges, capital markets, financial foundations and to be the chief organizer of regulations (Yildirim & Mullineux, 2015).

Regional financial centers give financial services to the countries in their regions. In these kind of centers, the financial size is huge and the market is advanced; but they are not accepted as international financial centers, because the domestic institutions' amount is much more than international institutions, and the legal regulations are so complex and strict. Local financial center is a city in a country where financial transactions' volume and the number of financial foundations are high (Sonmez, 2014).

If a city wants to be an international financial center, firstly it must have a strong economy and political stability. Secondly there should be a variety of financial products to attract investments of companies and the city should have a strong financial sector with its qualified employees. Thirdly, the legal system must be fair and business environment must not be too bureaucratic. Low costs of doing business and tax advantages will have a positive effect for the city. The strategic geographical location, the quality of living conditions and cultural richness of the city are also the important items for investors (Sonmez, 2014; Tangpornpaiboon & Puttanapong, 2016).

Istanbul IFC project

According to the benefits of an international financial city, Turkish government decided to transform the Istanbul city to a global financial hub. For this reason, State Planning Organization of Turkey (DPT) prepared "Istanbul International Financial Center Strategy and Action Plan" in 2009. Due to this vision Istanbul will be regional financial center in the first stage and then it will become an international one (Teskilati, 2009).

There are some strengths and weaknesses of Istanbul city to be an international financial center. The strengths: Istanbul is the capital of civilization, rich in culture, has a dynamic population, its geographical location and time zone is perfect, has modern urban life, congress, convention centers and five star hotels in the city support the international events. The weaknesses or needs to be developed: Qualified labour force number must be increased, regulation environment must be developed according to the international rules, living quality, security and transportation facilities must be improved, business environment and tax regime must be reconsidered (www.borsaistanbul.com). Terrorist attacks, refugee problems and political problems are the weaknesses of the city.

RESEARCH METHODOLOGY

The methodology of the article was designed to investigate the position of Istanbul financial center, and to find out in which same cluster Istanbul takes part with other financial centers. The hierarchical clustering multivariate statistical analysis technique was preferred for determining the cluster of homogenous financial centers. This technique helps us to group our data in a way that maximizes the similarity within clusters and minimized the similarity between the other clusters. The general target of clustering analysis is categorizing the units according to their specific features, and with this method you can observe the instant case.

There are many algorithms for clustering in literature, but we see two basic algorithm classifications preferred: Hierarchical clustering method and non-hierarchical clustering method. Hierarchical clustering method is suitable for small samples ($n < 250$) and the researchers do not know the number of the groups initially. If the researcher knows the number of groups, he can prefer the non-hierarchical clustering method (Cokluk, Sekercioglu & Buyukozturk, 2012).

In our research, sixteen variables were included in the analysis (table 1) for thirty eight different countries' financial centers. During the analysis, Ward's method was preferred as a clustering method, a Squared Euclidean distance was used for measuring the distances and -1 to 1 range standardization was applied to the variables.

Table 1: Variables of the analysis

| Variables | Source |
|----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Trade Volume (% of GDP) | World Bank - 2014 |
| Foreign Direct Investment, net inflows (% of GDP) | World Bank - 2014 |
| Inflation GDP deflator (annual%) | World Bank - 2014 |
| General Government Gross Debt (% of GDP) | World Bank - 2015 |
| Gross Domestic Product (per capita, current prices US dollars) | IMF- 2015 |
| Depth of Credit Information Index | World Bank - 2015 |
| Liveability Ranking Index | The Economist Intelligence Unit - 2015 |
| Cost of Business Start-up Procedures (% of GNI per capita) | World Bank - 2015 |
| Ease of Doing Business Index | World Bank- 2015 |
| Total of Tax Rate (% of Commercial Profits) | World Bank- 2015 |
| Strength of Legal Rights Index | World Bank- 2015 |
| City's Population density (per square) | Demographia- |
| Labour Force Participaton Rate (Age: 15-64) (%) | Intrenational Labour Organization-2016 estimated data |
| Internet Uses (per 100 people) | World Bank- 2015 |
| Stock Market Turnover Ratio (%) | World Bank - 2014 Global Financial Development Report Worldbank Period: Averages for 2009-2011 |
| Capitalization and Debt Securities to GDP (%) | World Bank - 2014 Global Financial Development Report World Bank, Stock Market Capitalization and outstanding domestic pivate debt securities to GDP % period: Averages for 2009-2011 |

RESULTS

Table 2 shows the cluster membership result and Figure 1 shows the dendrogram using Ward linkage. By the help of the cluster membership result, we found out that in which cluster the financial center exists. Financial centers were grouped into four different clusters. Sydney, Vienna, Brussels, Toronto, Helsinki, Paris, Frankfurt, Tokyo, Amsterdam, Madrid, Stockholm, Zurich, London and New York were gathered in cluster 1. Rio De Janerio, Prague, Shanghai, Johannesburg, Milan, Kuala Lumpur, Warsaw, Lisbon, Moscow, Bangkok, Athens, Tel Aviv, Seoul and Almaty were gathered in cluster 2, and Istanbul found its place in cluster 3 sharing with Mexico city, New Delhi, Jakarta, Cairo and Bogota. In Cluster 4, Dublin, Doha, Singapore and Dubai were gathered.

Table 2: Cluster membership

| Cluster 1 | Cluster 2 | Cluster 3 | Cluster 4 |
|------------------------------|---------------------------------|--------------------------|----------------------------------|
| 1: Australia (Sydney) | 4: Brazil (Rio De Janerio) | 6: Colombia (Bogota) | 15: Ireland (Dublin) |
| 2: Austria (Vienna) | 7: Czech Republic (Prague) | 9: Egypt (Cairo) | 24: Qotar (Doha) |
| 3: Belgium (Brussels) | 8: China (Shanghai) | 14: Indonesia (Jakarta) | 26: Singapore (Singapore) |
| 5: Canada (Toronto) | 13: South Africa (Johannesburg) | 17: India (New Delhi) | 32: United Arap Emirates (Dubai) |
| 10: Finland (Helsinki) | 16: Italy (Milan) | 20: Mexico (Mexico City) | |
| 11: France (Paris) | 19: Malaysia (Kuala Lumpur) | 31: Turkey (Istanbul) | |
| 12: Germany (Frankfurt) | 22: Poland (Warsaw) | | |
| 18: Japon (Tokyo) | 23: Portugal (Lisbon) | | |
| 21: Netherland (Amsterdam) | 25: Rusia Republic (Moscow) | | |
| 27: Spain (Madrid) | 30: Thailand (Bangkok) | | |
| 28: Sweden (Stockholm) | 35: Greece (Athens) | | |
| 29: Switzerland (Zurich) | 36: Israel (Tel Aviv) | | |
| 33: United Kingdom (London) | 37: Korea Republic (Seoul) | | |
| 34: United States (New York) | 38: Kazakhstan (Almaty) | | |
| 14 countries in Cluster 1 | 14 countries in Cluster 2 | 6 countries in Cluster 3 | 4 countries in Cluster 4 |
| Total number: 38 | | | |

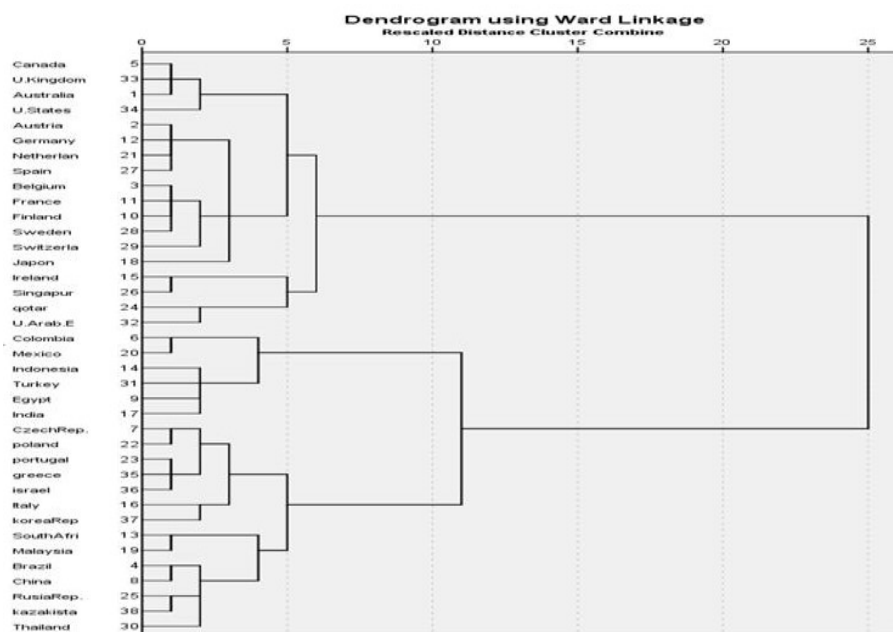


Figure 1. Dendrogram

CONCLUSION

This study has addressed investigation of the position of Istanbul city as a financial center. According to the results we see that Istanbul is sharing the same cluster with Mexico city, New Delhi, Jakarta, Cairo and Bogota. They all are developing financial centers. We can say that cluster 1 indicates mostly the international/global financial centers because London, New York, Tokyo, Amsterdam, Madrid, Stockholm, Zurich, Sydney, Vienna, Brussels, Toronto, Helsinki, Paris and Frankfurt cities are developed centers. Cluster 2 indicates mostly the regional centers. Cluster 4 shows the cities which can be named as special financial centers because of their economic wealth. Dublin, Doha, Singapore and Dubai are separated from cluster 1 and homogenized together.

To sum up, Istanbul city has been transforming to a regional financial center gradually by the help of reforms in the related fields, but it is clear that the empirical results have not grouped the Istanbul city with the international/global financial centers yet.

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— This article does not have any appendix. —